

Study for Governance Models of Alliance Standardization and Influencing Factors in China under the Perspective of Government

Liu Hui^{1,2}

1. China National Institute of Standardization Beijing, China

2. Department of Industrial Engineering, Tsinghua University Beijing, China

e-mail: liuhui@cnis.gov.cn

Abstract—This paper will divide the government's governance models for standardization of into high intervention model and low intervention model. The selection of the governance model is affected by three factors, which are from the government, the market and the alliance. This paper will make an in-depth analysis on the influence of the governance models of alliance standardization from six aspects: government role positioning, industrial policy, industrial technical determinacy, market competition, industrial strategic position, and the influence of alliance on industrial development.

Keywords- Alliance Standardization; Governance models; Influencing Factors; Government

I. INTRODUCTION

The governance of alliance standardization is aroused wide concern in the academia and business world, and processed the initial exploration both in theory and practice. Kenneth Abbott and Duncan Sindal (2001) compared the governance models of the standardization that are dominated by enterprise and coordinated by government, and they thought that each model had its advantage and disadvantage[1]. Jacques (2001) thought that one reason for the success of GSM standard of European Union (EU) was the coordination of EU in the standardization process[2]. Jane Winn (2009) thought that although the market coordinating model of EU was helpful for EU to seek advantage in international competition in virtue of the power of government, as market distortion existed in this model, it was less efficient than the liberal model of United States from a long term[3]. Wegberg (2004) started with the analysis of the subject of communication industry, and thought that the existence of the competitive standardization alliance might block the formation of a unified standard, and a game playing model was established to discuss the influence of competition among alliances on decision-making and the speed of standardization[4]. Andrew Lim (2003) thought that applying alliance standard could reduce cost and risk, promote the alliance standard to be an actual standard through the influence of the alliances as well, thereby being capable of saving considerable time and capturing the market rapidly, when analyzing the

establishment of the bluetooth standard. In China, there are little research documents and results for alliance standard specially. ZHAO Chaoyi (2008) made an introduction to the background, the formulation process and promotion, the patent problem in alliance standard, and the characteristic contrast of the alliance standard and the formal standard, etc[5]. Additionally, WU Wenhua (2006) thought that the enterprise alliance could support relevant enterprises to develop the complementary products, which can play roles in affecting the customer anticipation, and applying a pricing strategy beneficial to market penetration, thereby being helpful to take the lead in establishing a large scale user installed basis, and occupy the leading advantage in the market competition of technical standards[6]. By comparing the current standard supplying model, LI Baohong and LV Tingjie (2003) though that technical standard alliance resolved the conflicts between the patent private right and the public interest of standardization effectively as a kind of system; as the alliance was composed of many enterprises and the standard was proposed by them, the interests of each party was balanced relatively, thereby having a strong market competitiveness, and also saving the dealing cost for the next-step standard design paradigm[7].

II. RELEVANT CONCEPTS

Standardization is an activity that jointly and repeatedly used documents are formulated towards the practical or potential problems, aimed at the achievement of the optimum degree of order in a given context. And the alliance standardization is an activity that jointly and repeatedly used documents are formulated towards the practical or potential problems in order to get the optimum degree of order in the scope of alliance and promote common benefits. From the view of the subjects of the alliance standardization, not only the enterprises in the alliance are included, but also the research institutes, universities and other organizations are included.

One of the major creators of the Governance Theory, James N Rosenau, defined the governance as: the management systems in a series of activity fields, which could play roles effectively despite not obtaining formal authorization" Different from domination, the governance was an activity that was supported by a common goal, and the subjects of these management activities perhaps were not

This paper is sponsored by "Central Basic Scientific Research Project (59126Z-2728)" and "Public Sector Specific Research Project (201310239) "

the governments, nor need to be achieved by national enforceable power[8]. The governance of alliance standardization is a motivating, constraining and controlling system which is adopted in the activities of alliance standardization in order to ensure the interest of each party participating in the alliance standardization and prevent the failure of the alliance which is caused by the behaviors of opportunism of the single party. The governance for alliance standardization in this paper specially refers to a kind of system arrangement to optimize the allocation of resources and abilities which are mastered by the subject of the alliance for the government departments to standardize the activities of the alliance standardization, promote the whole competitive capability of the industry, effectively organize and coordinate the process of the alliance standardization, however, different ways of this kind of system arrangement cause different models of the governance of alliance standardization.

III. TYPE OF THE GOVERNANCE MODEL OF ALLIANCE STANDARDIZATION FOR THE GOVERNMENT

We divide it into a high-intervention-type government governance model and a low-intervention-type government governance model. For the high-intervention-type government governance model, the government intervenes in the activities of alliance standardization positively, and provides direct support from capital and policy. For example, in the process of TD-SCDMA alliance standardization of our country, from the development of technical standards to the R&D of products, till the implementation of the standards, the government provides overall powerful support to each stage of the whole process. LI Yizhong, Minister of Ministry of Industry and Information once said "For the development of TD-SCDMA, Ministry of Industry and Information will provide supporting policy for relevant departments from the aspects of the allocation of resources, financial and tax policy, extension of TD value-added business and perfectness of network construction, etc." Actually, the government provides the policy supports fully under the forced promotion.

The low-intervention-type government governance model is that the government does not provide direct support from capital and policy for the activities of alliance standardization, but gives indirect assistance and support to the activities of alliance standardization from macroscopic industrial policy and the establishment of good market competitive order. Under the low-intervention-type government governance model, the role that the government mainly plays is a fair and impartial market guider and a market order maintainer, and the operation of the alliance is conducted by the alliance enterprises. The R&D of technical standards of alliance, and the promotion and implementation of the standards are achieved by its own strength of the alliance, relying on the market. The government

intervenes in the activities of alliance standardization very little or not during this period.

IV. THE INFLUENCING FACTORS OF GOVERNANCE MODEL OF ALLIANCE STANDARDIZATION

What kind of governance model will be adopted by the government to the governance of alliance standardization is mainly influenced by three factors, namely, the government, the market and the alliance. The composition of each influencing factor and its influence on the governance model of the government are showed in Figure 1.

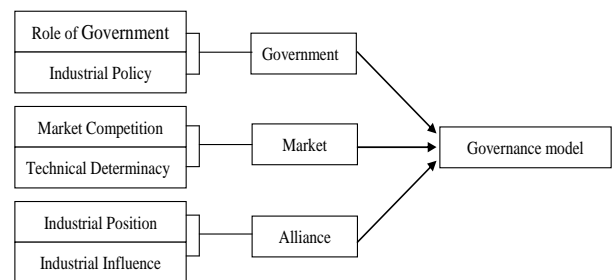


Figure 1. The Influencing Factors of the Governance Model of Alliance Standardization

A. The role poisoning of government in alliance governance

Different roles of government in economical operation will influence the governance model of alliance standardization. We classify the government into a management-orientated government and a service-orientated government according to different roles of the government in economical management.

The governance model of the management-orientated government was adopted in China on the condition of planned economy. The government controlled the economy completely, and implemented economic and social management through mandatory plans and administrative measures. Under the function positioning of the management-orientated government, enterprise is a subordinate agency of government; the producing plan, the high-level appointment and dismissal, and the sale of products are all controlled by the government. Although our economic system is being transferred to socialist market economy at present, due to the influence of the governing concept of traditional planned economy, the governing concept of considerable government departments still belongs to the governing concept of the management-orientated government and all-round government, where the governments intervene much in the operation process of the economic field, some even intervene in the production and operation process of the enterprises. Therefore, the management-orientated government adopts the high-intervention-type government governance model more towards the governance of alliance standardization.

On the condition of socialist market economy, the role positioning of the government in our country is gradually transferred from the management-orientated government to be the service-orientated government which mainly provides public services. The service-orientated government meets the needs of the post modern industrial and social development, with its core governing concept of “people centered” and the function positioning of public service. The service-orientated government is a kind of limited type of government which adopts a governing model that takes the service guide as the subject and the management intervention as the supplementation towards the social economic activities. In the governing process, the government can consider fair and service firstly, devotes to creating a good operating environment for the enterprises, and takes the providing of public service as its major functions. Therefore, the service-orientated government applies the low-intervention-type government governance model of alliance standardization.

B. Industrial policy

Industrial policy is the sum of various policies from the government to intervene in the industrial formation and development for achieving a certain economic and social goal. Positive industrial policy demonstrates the attitude of government to encourage and support some industry. For instance, our government issued many policies to encourage and support the development of strategic emerging industries; actually, under these policies to encourage and develop the strategic emerging industries, the shadow of the government participating or intervening in the policies positively can be seen. In the development of the information industry, our government gives direct support to the R&D and commercial implementation of the first domestic 3G telecom international standard, including the capital investment in the R&D stages and the release of 3G licenses in commercial implementation stage, deep intervention of the government in this industry all can be seen. Therefore, if the government implements positive industrial policy towards the industry of the alliance, the government is more likely to take the high-intervention-type government governance model of alliance standardization.

C. Industrial technical determinacy

In different industries, the maturity and determinacy of technology are different. The maturity and determinacy of technology reflect the maturity level for the development of one industry to a certain extent. Compared with the emerging industries (new energy and material), the producing mainstream technology of the products in traditional industries (such as textile, steel& iron) is more mature and stable. In traditional industries, the producing mainstream technology of the products in the industries is applied by most enterprises. Although technological innovation is constantly carried out in the traditional industries, on the whole, the quantity of annual invention patents for the producing mainstream technology of the products is less than

those in emerging industries. Actually, the adjustment of China's government organizations in recent times, such as revocation of Ministry of Metallurgical Industry, Ministry of Textiles and Ministry of Machine-Building Industry, and the like, reflected the less intervention of the government in traditional industries. For those alliances with higher maturity and determinacy of technology, the government mostly processes the governance to the alliance standardization from the aspects of policy guiding, good outside competitive environment and public service providing, etc. Therefore, we can conclude that the higher maturity and determinacy of technology, the less intervention of the government in alliance standardization, and then the government may apply the low-intervention-type governance model.

D. Market competition

We have introduced competition in some industries since reform and opening-up. After joining WTO, complete reform and opening-up is gradually achieved in some domestic industries, such as construction and textile industries, etc. The markets of these industries basically show the characteristics of full competition. The market environment with full competition is mainly embodied in lots of competitors in the industry, fierce price competition and sales competition. Full market competition means that competition must be enough to show more advantages in efficiency than disadvantages. Some scholars think that in the industries with full competition, the privately-owned enterprises are more efficient than state-owned enterprises or state-holding enterprises, and are more likely to achieve long-term development. Therefore, the government should try to reduce intervention and apply the low-intervention model to the governance of alliance standardization in the industries with full competition.

E. Industrial strategic position

Strategic emerging industries can play the general and leading role to national economic development, such as new energy and new-generation information industry, etc. It's definitely stipulated in The Decision of the State Council Concerning Speeding Up the Cultivation and Development of Strategic Emerging Industries that for the strategic emerging industries, it's required to “enlarge the policy support degree on fiancé, taxation and financing, and the like, guide and encourage social capital investment, set up special capital for the development of strategic emerging industries, and establish a stable financial investment increase system.” Visibly, the government implements the high-intervention governance model to the strategic emerging industries, including that the government directly contributes capital to sponsor the research & development activities of the emerging industries, or introduces a risk investment mechanism for the strategic emerging industries, or provide

interest subsidies, interest-free loan and financing guarantee and the like for the development of the emerging industries.

F. *The influence of alliance on industrial development*

In some industries, the market share of the alliance is very high, even can occupy 70-80% of these industries (such as The Photovoltaic Industry Alliance of China). When one alliance can control the market price and supply of this industry, and the technology of the alliance represents the highest technological level of this industry, it means that this alliance has momentous influence on this industry, however, such alliance generally belongs to an interregional national alliance in our country. In order to cause these alliances to have stronger international competitive capability, the government will provide project and capital support, etc. For instance, in order to promote the industrial technological innovation ability our country, Ministry of Science and Technology associated with Ministry of Finance and five other ministries and committees to issue Guidance Regarding the Promotion of the Construction of Industrial Technology Innovation and Strategic Alliances, in which it was definitely stated that encourage and support will be provided for those alliances with momentous influence in industrial development in the aspects of assuming momentous industrial and technical innovation mission and executing national indigenous innovation policy, etc. Therefore, for those enterprise alliances with momentous influence on industrial development, the government often applies the high-intervention-type standardized governance model.

V. CONCLUSION

For different governance models of the two kinds of alliance standardization, we can not simply judge which one is the best. What kind of governance model the government should adopt is not only affected by different factors, but also adapts to the special stage of social and economic development. The high-intervention-type alliance standardization governance model of the government is applicable to the alliance organizations with momentous guiding role in national economic development at current

stage of the strategic emerging industries of our country. By concentrating resources into the alliance development of these industries, the government can cause the alliance to become larger and stronger, and have considerable international competition to compete with foreign alliances or enterprises in international market. However, along with the mature of the industries and alliance, the government should change its governance model from high-intervention-type participation to low-intervention-type participation, let the alliance to develop with its own power and market rule and improve its own competitive capacity by technological innovation, but no longer relying on the resource investment of the government. What's more, the development model based on the market is more powerful for the alliance. In addition, this paper just analyzes the influencing factors of the governance model of alliance standardization by theoretical logic deduction, which is lack of argumentation from the side of research. In the future, the above logic judgment will be further examined in an empirical way so as to enrich the research in this filed.

- [1] Abbott, Kenneth. and Duncan Snidal, "International Standards and International Governance", *Journal of European Public Policy*, 2001, (8), pp: 345-370.
- [2] Pelkmans, Jacques. "The GSM Standard: Explaining a Success Story," *Journal of European Public Policy*, 2001, (8), pp: 432-453.
- [3] Winn, Jane. "Globalization and Standards: the Logic of Two-level Games", *I/S: Journal of Law and Policy for Information Society*, 2009, (5), pp: 185-218.
- [4] van Wegberg, M. "Standardisation and Competing Consortia: The Trade-off between Speed and Compatibility", *International Journal of IT Standards & Standardisation Research*, July-Dec., 2004, 2(2), pp: 18 - 33.
- [5] ZHAO Chaoyi. "Noteworthy Enterprise Alliance Standards" . *Global Standard Information*. 2008,(5),pp:22-26
- [6] WU Wenhua, ZHANG Yanfei. "The Research of the Influence of Technical Standard Alliance on the Establishment and Diffusion of Technical Standards" *Science and Scientific Technical Management*, 2006,(4), pp:44-48
- [7] LI Baohong, LV Tingjie. "Analysis of the Economic Nature and Effective Formation Model of Technical Standards" *Journal of Beijing University of Posts and Telecommunications*, 2005,7(2) .pp:25-29
- [8] YU Keping. "*Governance and Satisfier Governance*". Beijing: Social Science Literature Press, 2000.