

Study on Main Mode of Management in Pharmaceutical Technology Brokerage

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Abstract

The rapid development of the pharmaceutical industry gave birth to the needs of pharmaceutical technology brokerage. At present, brokerage in China on the management of pharmaceutical technology is more vague and confusing. Also construction of its management is still empty. In view of this, the authors make a comprehensive analysis on contemporary social influential factors and comprehensive management mode related, and put forward a realistic selection for comprehensive management mode of pharmaceutical technology brokerage by taking into consideration of the theory of "choice club". That is, the main mode of management of "hexagon" which is centered by self-discipline, with supplement of internal restraint, government regulation, ethical standardization, social supervision and legal control in pharmaceutical technology assisted brokerage.

Keywords: Pharmacy, Technology brokerage, Management, Main mode

As one of the largest global industries, pharmacy industry plays a role in people's daily life and world economy that can not be ignored. Under the new circumstance in China, exploration and reformation of management mode in a continuous way is required in pharmacy industry, especially management of pharmaceutical technology brokerage that involves pharmaceutical technology transfer and more in-depth and meticulous study is required too. Establishment of a pharmaceutical technology brokerage that fits with Chinese national situation needs in-depth analysis of the overall social environment and general management modes, consideration of industrial features of pharmaceutical technology brokerage, and borrowing successful experiences of other brokerage industries. Then, it is possible to realize rationality and feasibility of management and to play an important role in escalating China pharmaceutical industry, improving research and development level of pharmacy and promoting healthy development of pharmaceutical industry.

1. Analysis of social factors affecting management mode of pharmaceutical technological brokerage

The pharmaceutical technology brokerage industry in China is encountered with the major social environment influential factors in the aspects of economy, law and technology, etc, which brings both excellent conditions and new challenges to development of pharmaceutical technology brokerage.

1.1 Economic environment

Economic environment mainly refers to economic policies and the level of economic development. In terms of economic policies, the economic policies issued by the government not only decide the developmental space of pharmaceutical technology brokerage industry, but their perspectiveness, continuity, stability and integrity all have obvious effects upon the management mode of pharmaceutical technology brokerage industry. Growth of pharmaceutical technology brokerage industry originates from the national (regional) economic development level and the development degree of pharmacy industry and technology brokerage industry. The higher the national (regional) economic level and the more advanced pharmacy industry and technology brokerage industry, the more demands upon pharmaceutical technology brokerage. Rudiment in pharmaceutical technology brokerage institutions has emerged in such metropolises as Shanghai and Beijing due to their high economic level, rapid development of pharmacy industry and earlier starting of technology brokerage industry.

1.2 Legal environment

The essence of market economy is legalized economy. At present, the legal environment of pharmaceutical technology brokerage industry mainly refers to legal regulations of technology brokerage. For instance, the following several national and local regulations play a rule-based role in standardized administration of

pharmaceutical technology brokers: “Technology Contract Law”, “Measures for the Administration of Brokers (2004)”, “Interim Methods for Recognition of Technology Brokerage Qualifications” and “Measures for the Administration of Technology Brokers in Shanghai”, etc. However, so far, there hasn’t had any management regulation on pharmaceutical technology which has quite distinct industrial characteristics.

1.3 Technical environment

Technical environment not only refers to development of pharmacy technology, but also includes information technology environment and its development affects from every perspective the organizational pattern and behavioral characteristics of pharmaceutical technology brokerage institutions and restrains their management and activity means. In face of the fast changing technical environment, only if pharmaceutical technology brokerage institutions adopt appropriate strategies and offer pertinent service, can they take an initiative to respond to technical changes in a fast and flexible way, maintain competitive advantages, deal with risks in dynamic development of technology and make progress stably in the long run. However, such information technology environment has no means to satisfy demands of pharmaceutical technology brokerage industry.

Thus, it can be seen, although we have good economic development environment at present in China, our legal and technical environment still needs further improvement, which has certain constraint effect on development of pharmaceutical technology brokerage and will necessarily affect the management mode.

2. Analysis of industrial integrative management mode related with pharmaceutical technology brokerage

Integrative management mode refers to a dynamic system constituted by management subject, management means and mechanism. Due to different management subjects and means, different management modes also have different systematic structures and action flows (Liu Wei & Li Chengang, 2005).

2.1 Summary of integrative management mode in pharmaceutical technology brokerage industry

As an important component of technology brokerage industry, the integrative management mode in pharmaceutical technology brokerage industry mains includes “competent administrative mode, industrial self-administration mode and parallel management mode of administrative and industrial self-discipline”.

2.1.1 Competent administrative mode

This management mode means that competent government administrative department assumes a large majority of functions of management in pharmaceutical technology brokerage industry. The management subject of this kind of mode is the competent administrative department of the government and the management means is centered by administrative order. For example, government department conducts practice qualification authentication to pharmaceutical technology brokerage, provides registration and annual check system and unifies the charging standard and administrative supervision, etc. Under this mode, the organizational management functions of pharmaceutical technology brokerage industry are weak, and restraint force of industrial associations on their members’ behaviors is weak, mainly coming into play in industrial education, academic exchange and government communication.

2.1.2 Industrial self-administration mode

This kind of management mode means that, entrusted by government functional departments and even legislative bodies, pharmaceutical technology brokerage industry associations exercise the administrative management functions to pharmaceutical technology brokerage and meanwhile carry out the self-discipline management functions. Under this management mode, the intervention degree and vigor of the government is the minimum, almost in a state of nonintervention. The management subject is pharmaceutical technology brokerage industrial associations, and the management means are relatively various, including legal means, administrative means, economic means and self-discipline means, with concentrated management rights and obvious management effects.

2.1.3 Parallel management mode of administrative and industrial self-discipline

Under this mode, both government administrative management department and pharmaceutical technology brokerage industrial associations are powerful management subjects, and both have substantial management functions, but the two have different management functions. The management functions of competent administrative department are to formulate relevant management rules, control release of practicing qualification license, examine content of practicing qualification exams and educational training and approve qualification of schools involved in practicing course education, etc. by contrast, pharmaceutical technology brokerage industrial association offers training and education opportunities and formulates model text of a contract by promoting coordination and communication between brokers and legislative body and administrative body and

communication between broker association and other industrial associations of pharmacy industry as well as communication between brokers and by formulating industrial technical standard and code of professional ethics.

Insert Table 1 Here

2.2 "choice club" of integrative management mode in pharmaceutical technology brokerage industry

According to the new GB/T475 "Industrial classification for national economic activities" by the State Statistics Bureau in 2002, the national standards include 20 industrial categories, 95 general industrial categories, 396 medium industrial categories and 913 small industrial categories. Furthermore, four major categories are got according to different attributes: I related with the national security; II related with the daily life guarantee of people; III related with competitive fields of people's daily life guarantee and IV natural monopoly or policy monopoly fields.

Accordingly, there are three types of industrial management modes: 1) industries within the scope of I exercise administrative industrial management, in which the country formulates development plan and offers specific direction for implementation; 2) industries within the scope of II & III may exercise different types of corporate industrial management, in which nationwide corporations uniformly carry out industrial management functions. According to different rates of government capital, we can classify these functions into five categories: A) wholly state-owned; B) absolute state-holding; C) superiority state-holding; D) relative state-holding and E) State-participating; 3) industries within the scope of IV all exercise intermediary industrial management, in which industrial associations and all sorts of trade associations jointly organize for industrial management.

Considering the above three types of industrial management modes, the Chinese government can adopt the following four different management modes for industrial development (Liu Li, 1999):

Insert Table 2 Here

In pharmaceutical technology brokerage industry, relevant competent government department and pharmacy industrial association should conduct management to the subjects and operation means of pharmacy technology transaction activities, with the purpose of standardizing pharmaceutical technology brokerage activities and coordinating relationship between all kinds of parties involved in pharmacy technology transaction activities. Thus, from the point of view of authors in this article, in industrial categorization, pharmaceutical technology brokerage industry ought to fall within the scope of "the competitive field related with people's daily life guarantee". Based on the "choice club" in competitive industrial management mode (Cheng Q, 2006), we regard the following horizontal axis as the development phase of pharmaceutical technology brokerage industry and the vertical axis as the integrative management mode of pharmaceutical technology brokerage industry to confirm the "choice club" in integrative management mode of pharmaceutical technology brokerage industry (shown in Figure 1).

Insert Figure 1 Here

According to different degrees of control over pharmaceutical technology brokerage industry, the government may adopt four different management modes, namely, absolute control, relative control, guide and support and nearly open. Thus, as to pharmaceutical technology brokerage industry, selection of appropriate industrial management modes during different development periods depends on the realistic degree of control over the industry or the control to be conducted, while different industrial management modes are selected according to different degrees of control. Here, it has to be emphasized, the essence of competitive field of pharmaceutical technology brokerage industry determines that the industry will finally adopt "associational" industrial management mode. The above four different management modes adopted by the "choice club" according to different degrees of control over pharmaceutical technology brokerage industry are all transitional.

2.3 Realistic choice of integrative management mode in Chinese pharmaceutical technology brokerage industry

Since Chinese pharmaceutical technology brokerage industry will have to be in an initial stage in a quite long period of time in the future, considering the theory of "choice club" in competitive industrial management mode, authors in this article believe that, at present Chinese pharmaceutical technology brokerage industry should adopt the double management mode of administrative department and industrial association.

At the initial and middle period of the starting, the constraint and public trust of competent government administrative department is far more effective than industrial associations. That is to say, competent administrative mode is more effective, and industrial association can merely play a role of assistant management temporarily, while the government occupies the first place and play a role of absolute control. At the later period

of the starting, the mode of the government playing a monodrama should be transferred to the double management mode of administrative management and industrial self-discipline. The government should care for, support, foster and develop pharmaceutical technology brokerage industrial association, whereas the latter should pay attention to self establishment, improve its organizational framework and operation mechanism according to requirements of the reforming targets of industrial associations and by fully depending on enterprises and strengthen its management capacity. During this period, the government plays a role of relative control.

When the pharmaceutical technology brokerage industry evolves from the initial phase to the development and even mature and standardized phase, the administrative management mode of government absolute control and relative control can no longer provide motive to development of the industry, and may even bring about obstruct to its development. At this time, only if pharmaceutical technology brokerage industry breaks away from the administrative management of government department, can this industry guarantee justice and efficiency of its service. Then, the government should complete the shift of its functions, and should pay attention to the integrated planning and guide to its development so as to coordinate its development with the market scale, market structure and industrial structure. The government ought to establish the development platform suitable for competition of pharmacy technology brokers' benign competition, gradually improve its policies, organize research on issues of the significant pharmacy technology related with national welfare and people's livelihood and standardize management on macro public affairs, such as market behavior, etc., while the government should leave it to the pharmaceutical technology brokerage industry to assume lots of matter-of-fact problems that can be resolved through market mechanism and the function of micro management and coordination. With the common efforts of the government, industrial association and pharmaceutical technology brokerage industry, the industrial self-discipline mode is finally taken as the target mode of management in pharmaceutical technology brokerage industry.

3. The main management mode of "hexagon" in Chinese pharmaceutical technology brokerage industry

Main mode of management refers to the dynamic system constituted by management subject, management means and mechanism. As for different management modes, their systematic structure and operation flow also differ due to different management subjects and means. Borrowing the main mode of management in real estate brokerage industry (Chen Yingcun, 2007) and taking into consideration of the above analysis, authors of this article believe that the main mode of management in Chinese pharmaceutical technology brokerage industry should be a management mode of hexagon centered with industrial self-discipline and supplemented by internal constraint, government supervision, moral norm, social supervision and legal supervision (Figure 2).

Insert Figure 2 Here

Firstly, considering technology brokerage industry in western developed countries the development process of relatively mature real estate brokerage, culture brokerage and stock brokerage in China, self-discipline management in industrial association will be a development tendency in the future. Thus, Chinese pharmaceutical technology brokerage industry ought to focus on self-discipline of industrial association ever since its initial stage, convert as early as possible from competent administrative mode to the parallel mode of administrative management and industrial self-discipline, attempt to set up brokerage association with Chinese characteristics and make a clear partition between management functions of government department and industrial association. Government competent departments should direct and support industrial associations to strengthen self-establishment, better foster the operation mechanism of industrial self-discipline management in the process of transferring or entrusting relevant management functions to industrial associations and take an initiative in stimulating high-efficiency and standardized operation of industries. By contrast, industrial associations should abide by national legal regulations and policies on the basis of obtaining enough authorization support from the government, set up and improve industrial standards and quality supervision systems with the core of service quality and professional ethnics, carry out qualification verification, business training, quality assessment and reputation examination among intermediary institutions and their employees, encourage association members and employees to be able to consciously follow and maintain the above tasks and stimulate legalization and standardization of industrial development.

Secondly, internal constraint is the internal factor of main mode of management. Internal constraint refers to behavioral standards formulated by members with independent will of an industry after independent negotiation. Compared with rigidity of laws and regulations, internal constraint has strong flexibility and self-control and can offer high behavioral standards for the industry within the framework stipulated by laws and regulations. In the mean time, internal constraint can be adjusted and updated according to market demands and industrial

development level. Cooperated with the market mechanism of fair competition and survival of the fittest, internal constraint may have the effect of pushing forward industrial progress and improving the overall industrial level (Cheng Qi, 2006). We can effectively resolve issues of poor professional service level and rent-seeking or nonfeasance of brokers in development of pharmaceutical technology brokerage industry by referring to internal constraint to strengthen standardized service flow, intensify internal elimination mechanism and standardize complaint and dispute disposal flow.

Thirdly, government supervision and legal supervision are the external hard constraint of the main mode of management. Pure government supervision and legal supervision are not simply the main mode of management in pharmaceutical technology brokerage industry, since in competent administrative mode, the government has a low management efficiency as a result of the status of information asymmetry of various factors in time, space and professions in industrial self-discipline management. Besides, so far, an initial framework system has not been formed in laws and regulations and department regulations and normative documents for establishment and operation of pharmaceutical technology brokerage institutions and for qualification verification and behavioral management of employees, let alone improvement of these documents. Thus, government supervision and legal supervision are the external hard constraint of the main mode of management, but not the main management mode.

Fourthly, social supervision and moral norm are the external soft constraint of the main mode of management. Pure social supervision and moral norm are not simply the main mode of management in pharmaceutical technology brokerage industry since social supervision and moral norm ought to be regarded as particular supplement functions of pharmaceutical technology brokerage. We can fill up the gap left by self-discipline supervision, internal constraint supervision, government supervision and legal supervision of industrial associations through the social supervision approaches of the public, social public opinions and social public organizations and through the moral constraint and professional ethnics standardization of the industrial association and give full play to their functions of prevention, correction and punishment.

To sum up, the management system in Chinese pharmaceutical technology brokerage industry should be a highly structured main mode of management of hexagon centered with self-discipline and supplemented by internal constraint, the external hard constraint of government supervision and legal supervision and the external soft constraint of social supervision and moral norm. Functions of their respective management subjects are shown as in Table 3.

Insert Table 3 Here

4. Research conclusion

This article studies the comprehensive social environment affecting establishment of management mode in Chinese pharmaceutical technology brokerage, borrows the overall management mode of industrial development, employs the theory of “choice club” in a comprehensive way and puts forward the main management mode of “hexagon” in Chinese pharmaceutical technology brokerage industry at present, a comprehensive mode with industrial self-discipline as the development direction, internal constraint as the internal factor, government supervision and legal supervision as external hard constraint and social supervision and moral norm as external soft constraint.

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Table 1. Advantages and disadvantages of main management modes in pharmaceutical technology brokerage industry

Main management mode	Advantages	Disadvantages
Competent administrative mode	Capital is guaranteed, risks are burdened by the government, with strong government intervention favorable to coordinate relations of all parties involved and macro-control, having the characteristics of authority, concentricity and unification.	Too much government intervention, lacking in flexibility and not favorable to stimulate vigor and innovation.
Industrial self-administration mode	Functions of subjects of pharmaceutical technology brokerage industry, which makes the industry filled with vigor and vitality; resource allocation can attain optimization and high efficiency under the power-driven effect of profit maximization.	Intervention of the government is weakened, with weakened efficiency and direct effect, which is not favorable for supervision.
Parallel management mode of administrative and industrial self-discipline	It is favorable for all parties to give full play to their roles and enthusiasm and is convenient to coordinate relationship between all parties involved, which can better combine effect of the government and power of industrial associations. The government mainly adopts economic means to indirectly intervene in operation of the market, which is favorable for real play of government functions.	It, to a certain degree, makes up for disadvantages of competent administrative mode and industrial self-administration mode, with unobvious disadvantages.

Table 2. The four industrial management modes adopted by Chinese government

Modes of industrial management by the government	Industrial categories
Absolute control	A & B in I , II & IV
Relative control	C & D in II & IV
Guide and support	D & E in II & IV
Nearly open	E in III, II & IV

Table 3. Major functions of all management subjects in pharmaceutical technology brokerage industry

Industrial association	Legal interests of agency and brokers, with the functions of representation, maintenance and service; to formulate and carry out industrial self-discipline treaty and industrial service standard; to organize activities, such as industrial training, to perform functions of representation, service, communication and coordination, and to be competent assistant of the government and enterprises.
Internal constraint	Standard service flow, internal mechanism improvement, honesty and sincerity of brokers; to set up quality check department or customer service department and to strengthen honesty establishment supervision and service quality supervision on all departments and brokers.
Government supervision	To exercise the administrative rights as social public rights, to assume such functions as economic regulation, market supervision, social management and public service, etc, and to accredit or entrust functions to industrial associations.
Legal supervision	Special industrial management regulations define the professional status of pharmaceutical technology brokerage and its standard professional requirements; to make clear critical basic concepts and make clear definitions; partition of functions of pharmacy technology brokers, industrial associations and government supervision

	departments; conditions of market access and market withdrawal to pharmacy technology brokers and qualification authentication of brokers and registration of practicing, etc.
Social supervision	To fulfill functions of prevention, correction, punishment and health care through such social supervision means of public supervision and supervision of public opinions (interest expression and maintenance)
Moral norm	To improve code of professional ethics and standards, to set up special institutions for management of professional ethics, to intensify its self-discipline and supervision functions, to improve its authoritativeness, to strengthen training specially for personal integrity of professional ethics and to set up and improve moral education mechanism and professional ethics evaluation mechanism for pharmaceutical technology brokerage industry.

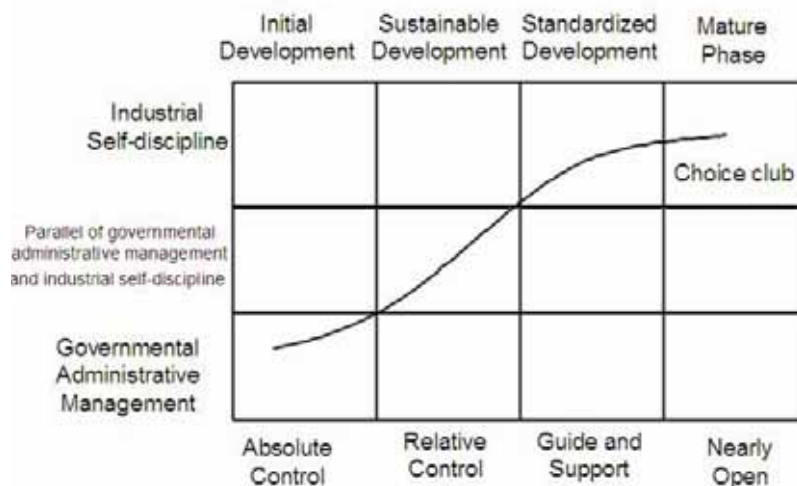


Figure 1. “Choice club” in integrative management mode in pharmaceutical technology brokerage industry

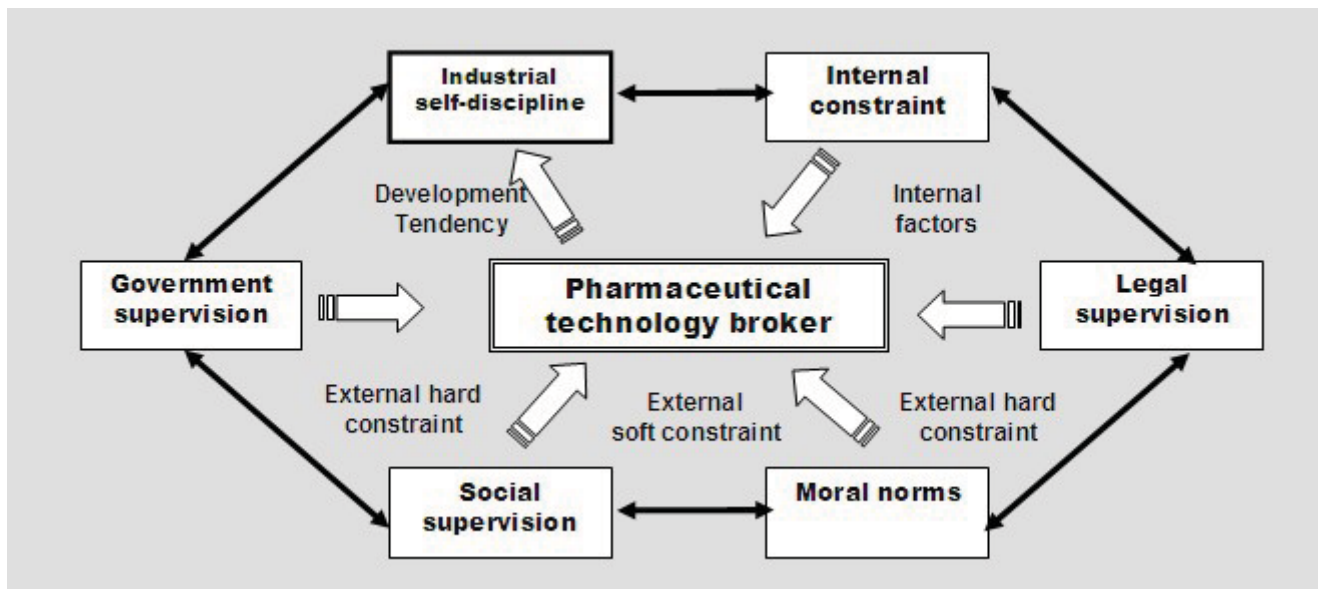


Figure 2. The main management mode of hexagon in pharmaceutical technology brokerage industry