

# Analysis on Inherent Law of Competitive Advantage of Modern Higher Vocational Colleges and Its Formation Mechanism

Lei Fang

Ningbo City College of Vocational Technology  
Ningbo, China

Xiaojie Li

Ningbo City College of Vocational Technology  
Ningbo, China

**Abstract**—The popularization and internationalization of higher education, the establishment of colleges' independent status of legal person and the varied social demands for higher education make the competition between colleges increasingly fierce. At present, Chinese higher vocational education has weak competitive advantage. Competitive advantage of higher vocational colleges is contributive, particular, integrated and extensive, including resource advantage, strategic advantage, technical advantage, cultural advantage and self-renewal advantage. It materializes core competitiveness, integrates strategic resources, brings public praise and improves adaptability of higher vocational colleges to objective environment. The formation mechanism of competitive advantage of higher vocational colleges is based on contractual relationship of higher vocational colleges, with institutional arrangement as interior driving force, relations among higher vocational colleges and government and market as exterior driving force.

**Keywords**—higher vocational colleges; competitive advantage; inherent law; formation mechanism

## I. INTRODUCTION

In recent years, higher educational institutions enlarge school size and improve teaching quality. Chinese higher education becomes increasingly strong. The reform of higher vocational education makes gratifying achievements. Besides, higher vocational education has become increasingly important in higher education. However, in constant reform, problems exist in higher vocational education. The current situation is unoptimistic.

After the college admission in 2016, different higher vocational colleges form sharp contrast in enrollment. Some higher vocational colleges fail to enroll any students, while the enrollment mark of some higher vocational colleges exceeds the lowest admission mark of colleges of the "third enrollment batch". It indicates higher vocational education has prospects and space for sustainable development. Higher vocational colleges should regard it as the start for reform of higher vocational education, and improve core competitiveness via improving professional curriculum provision, talent training objective, direction and process. How to make higher vocational colleges more competitive in higher education field needs deepen discussion. Therefore, it

has become a topic with theoretical research and practical guidance value to clarify structure of competitive advantages of higher vocational colleges and exert its competitive advantages, in order to better improve higher vocational colleges and the integral level of Chinese higher education.

## II. INTERNAL LAW OF COMPETITIVE ADVANTAGES OF HIGHER VOCATIONAL COLLEGES

### A. Concept and Characteristics of Competitive Advantages of Higher Vocational Colleges

Burton Clark [1] addresses relation between colleges depends on internal market of colleges, property of labor market, consumers and the position of them. Reputation becomes main product for exchange. Therefore, competitive advantages endow colleges with distinctive advantages. Colleges make the best of competitive advantages and get affirmation, so that other colleges will imitate them and superior administrative departments will pay attention to them. When schools are prestigious, they have more opportunities to integrate and occupy educational resources, and then have more prominent competitive advantages. At the meantime, in the formation of competitive advantages, they become increasingly renowned, and then enter virtuous circle.

1) *Connotation of competitive advantages of higher vocational colleges*: According to attitudes of academic circles toward competitive advantages, the competitive advantages of higher vocational colleges should include the following connotations: (1) Competitive advantage is comprehensive, referring to the accumulation of varied advantages at all levels in different directions (aspects). (2) Competitive advantages are dynamic with constant development, and means long-term accumulation and efficient integration of ability, vision and organization. (3) Competitive advantages are not once for all, because except for internal excellence, competitive advantages are influenced by environment and external factors. (4) Establishment and development of competitive advantages do not accomplish in an action but need accumulation.

2) *Analysis on extension of competitive advantages of higher vocational colleges*: We must avoid the following

thoughts in understanding extension for competitive advantages of higher vocational colleges:

*a) Equate superior resources of schools to competitive advantages:* Although the development of higher vocational colleges is inseparable from superior resources, the competitive advantages of higher vocational colleges with more superior resources than others may not be improved obviously. Therefore, superior resources are only necessary condition but not sufficient condition for higher vocational colleges to form and strengthen competitive advantages.

*b) Equate core competitiveness to comparative competitive advantages:* Core competitiveness is a kind of comparative competitive advantage, but it is continuous and the embodiment of internal comprehensive strength [2]. Comparative competitive advantage is the competitive advantage of a higher vocational college that compares with other colleges of the same type. It has no continuity and embodies comprehensive strengthen of higher vocational colleges.

According to the characteristics of higher vocational education and the analysis on connotation and extension of competitive advantages of higher vocational colleges, competitive advantages of higher vocational colleges refer to the comprehensive advantage that higher vocational colleges base on existing resources and capacity, organically integrate components according to theory on school management and existing core competitiveness, play a role through constructing and implementing action system, at the same time continuously improve via evaluation by stages, in order to stimulate potential and obtain sustainable development.

*c) Characteristics of competitive advantages:*  
(1) Contribution. It reflects competitive advantages provide good educational opportunity, tackle key problems in scientific research and serve local areas, and provide values of all aspects at all levels in social and economic development.

(2) Particularity. First, the contents cannot be copied. Second, the ways cannot be repeated. Third, monopolize assets specificity. Assets depend on some industry. The monopoly produces when colleges establish long-term strategic partnership with leading enterprises to realize mutual benefit and double win.

(3) Integration. After higher vocational colleges integrate and optimize educational resources and teaching elements of different majors, the comprehensive competitiveness improves, so the competitive advantages gradually establish.

(4) Extension. Higher vocational colleges should have pre-judgment ability and pre-warning consciousness, in order to precisely observe subtle changes on and off campus, seize opportunities to develop competitive advantages as well as extend in length and breadth.

### *B. Components of Competitive Advantages of Higher Vocational Colleges*

From the perspective of system theory, competitive advantages have varied components via integration and recombination. Components of competitive advantages refer

to origin of force and growth points in accumulation of advantages, including advantages of resource, strategy, technology, culture and self-renewal.

Resource advantage is the premise to realize competitive advantages. Resource advantage refers to raw material advantage accumulated by higher vocational colleges in education, scientific research, social service and cultural inheritance, including advantages of searching, affirming, developing, integrating, allocating, operating and transforming material and immaterial resources.

Superior resources include knowledge resource, human resource and market resource. First, knowledge resource refers to intellectual property, including title to patent, lecture issuing right, journal issuing right, book publishing right, rights to design school badge and school image. Second, human resource refers to abilities of school staff, including knowledge structure and depth, cognitive level, decision-making level, innovation ability, and awareness of management and service, which are foundations for higher vocational colleges to establish competitive advantages. Third, market resource refers to the relation between school and market or customers, including school reputation, students' selection (filing the intention for university after college entrance examination), and graduates' employment situation.

Strategic advantage is the key to realize competitive advantages. According to characteristics of social and economic development and actual resource advantage, schools design schemes to adapt to social development. Strategic advantage includes strategic thinking and decision-making, cooperation with strategic partner, strategy implementation, information collection and processing, organization and coordination, control and correction, innovative thinking and self-improvement. "Elements" of strategy are institutional rules. The innovation of institutional level and effective executive capacity should be put on the agenda.

Technical advantage is means to realize competitive advantage. Technical advantage refers to the ability advantage for schools to transform superior resources into competitive advantages according to overall development strategy, including teaching organization, design and implementation of professional courses, teachers' quality, student cultivation, integrative competence in scientific research, organization of scientific research, theoretical innovation of scientific research, quality of scientific researchers, and abilities in application and transformation of scientific payoffs and output of social service.

Cultural advantage is implicit condition and spiritual basis to realize competitive advantages. Cultural advantage of higher vocational colleges refers to value advantage to support resource refining, strategy construction and technical improvement, the essence of cultural elements accumulated in long-term development, including conception culture, norm culture and material culture.

Self-renewal advantage is soft advantage to realize competitive advantages. Self-renewal advantage means self-renewal of talents and maintenance of advancement, including

improvement of efficiency and evaluation in self-management, update of organization members' learning.

### C. Structure of Competitive Advantages of Higher Vocational Colleges

Five components of competitive advantages of higher vocational colleges can integrate along with the structural change of competitive advantages. They are explicit, independent and steadily with integration. The formation for structure of competitive advantage depends on interwork of components, which are changeable, complex, integral, diversified and backward. Different structures make competitive advantages flexible, so that higher vocational colleges show only one advantage. Competitive advantages of higher vocational colleges are organic combination between components of advantages and advantage structure, or the optimum structure of advantage components.

The relations between competitive advantages and components including resource advantage, strategic advantage, technical advantage, cultural advantage and self-renewal advantage are shown in figure 1:

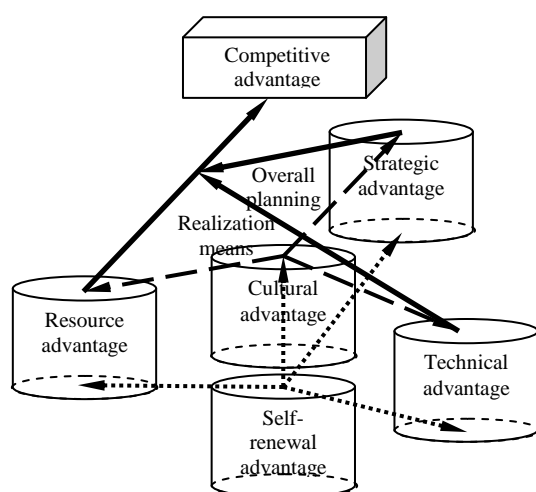


Fig. 1. Formation of competitive advantages of higher vocational colleges

Fig. 1 consists of three layers on the top, middle and bottom. Competitive advantages are on the top layer of the conclusion, referring to the integration of components. Cultural advantage, resource advantage, strategic advantage and technical advantage are on the middle layer with core operation, referring to the key to obtain competitive advantages. Self-renewal advantage is on the bottom layer and maintains the operation of middle layer and development. Cultural advantage is in core layer in the middle and plays dominant role; resource advantage, strategic advantage and technical advantage exist in external layer. In the formation of competitive advantages, the key is to transform resource advantage into competitive advantage. Strategic advantage plays a role in overall planning, and technical advantage serves as realization means. Cultural advantage is surrounded by resource advantage, strategic advantage and technical advantage in the same layer and supports the three. Self-

renewal advantage on the bottom layer maintains and keeps other four advantages updated.

### D. Functions of Competitive Advantages of Higher Vocational Colleges

Components and structure of competitive advantages and its operating environment will inevitably influence higher vocational colleges, embodying in:

1) *Materialize core competitiveness of higher vocational colleges*: The formation of competitive advantages depends on core competitiveness. To form components and structure of comparative competitive advantages, higher vocational colleges need the establishment and growth of core competitiveness. Besides, the improvement of competitive advantages is inseparable from continuous enrichment of components of competitive advantages.

2) *Integrate strategic resources of higher vocational colleges*: Competitive advantages of higher vocational colleges manifest its substantive characteristics. Highly active activation mechanism of competitive advantages is needed to activate energy of components instead of simple accumulation of components, in order to release maximum energy. Resource advantage, strategic advantage, technical advantage and cultural advantage of higher vocational colleges improve competitive advantages. Self-renewal advantage supports and maintains it. Higher vocational colleges can integrate governance mechanism and efficiency and further take advantage of resources to embody competitive advantages.

3) *Improve reputation of higher vocational colleges*: Society, government, employers, parents and students attach great importance to brand of higher vocational colleges. Brand awareness supports the development of higher vocational colleges. Students choose schools and majors according to school brand. The promise for society forms brand of higher vocational colleges. The promise embodies the contractual relationship between colleges and students. Higher vocational colleges should seriously fulfill obligations and shoulder corresponding responsibilities in formulating teaching objectives, planning teaching contents, determining training standard and practice experience.

4) *Improve ability of higher vocational colleges to adapt to objective environment*: With increasingly deepening of market economic system reform, management and investment system of higher vocational colleges also changes. The proportion of non-public sectors of the economy increases rapidly. Economic components involved in higher vocational education present diversified development. Comprehensive competitions for future survival and development are fierce. Competitive advantages make colleges more adaptive.

### III. FORMATION SYSTEM OF COMPETITIVE ADVANTAGES OF HIGHER VOCATIONAL COLLEGES

Research on competitive advantages of higher vocational colleges is part of research system of competitive advantages and belongs to economics. Therefore, the intrinsic economic property of competitive advantages of higher vocational colleges will not disappear. Organization characteristics and

competitive advantages form logic relationship. Economics will be theoretical basis to research organization characteristic of higher vocational colleges.

#### A. *Organizational Contract Is the Foundation for Higher Vocational Colleges to Form Competitive Advantages.*

1) *Nature of contract of higher vocational colleges:* From the perspective of new institutional economics, higher vocational colleges unite contracts. At the micro level, the reform of education organization and system refers to the reform of exchange way and contract choice in higher vocational colleges. It is more understandable in non-governmental higher vocational colleges. Public higher vocational colleges are funded by the government and provide education services for the public. The complex contractual relationship involves individuals, public colleges and the government. Principal-agent theory is used to explain the contractual relationship, showing four relations [3]: Government and individual, government and principal and internal management of school, education provider and consumer.

2) *Organizational system carriers competitive advantages of higher vocational colleges:* Organization carries system of higher vocational education, refers to the implementation institution to realize training objective of higher vocational education. Institutional choice of higher vocational colleges closely relates to four functions of higher vocational colleges. Modern higher vocational colleges have attached great importance to rules and regulations of scientific research and social work. They provide talents for enterprises and transfer scientific payoffs to high and new technology industry, providing all-round service for the society. Nowadays, higher vocational colleges are entity of modern economic society and exchange with many organizations. In specific reform and development, higher vocational colleges must choose contract, so as to effectively enforce rules of education system.

3) *Relation between higher vocational colleges and competitive advantages:* Production and efficiency of competitive advantages will be influenced by organization efficiency. The operation efficiency of higher vocational colleges will be under the direct influence of “four elements” (property right, institutional change, exchange cost and principal-agent) under new institutional economics. First, human capital property right is the foundation to produce competitive advantages. Teachers are independent, spontaneous with values, so schools can arouse their enthusiasm to strengthen competitive advantages. It is distinctly important to stimulate enthusiasm of teachers. Second, institutional arrangement is the key to produce competitive advantages and the necessary link for governance of higher vocational colleges. However, except for institutional documents, “meta-institution” is also required. As system implementation and the regeneration of internal system, “meta-institution” is indispensable but easily ignored when institutions take effects. In new institutional economics, great importance is attached to institutional change, but in practice, research on executive force is ignored. Meta-institution connects institution and implementation effect. Organization efficiency cannot do without and must be prior

to “four elements” of system resolution, which have indirect but tremendous influence on the formation of competitive advantages. As subject of exchange, higher vocational colleges must deal with relation with property right, exchange and principal-agent and research how to stimulate staff via exchange. These elements must be clarified in top-level design. If relations between elements are vague, it will greatly increase exchange cost in construction, influence organization efficiency and have negative influence on formation and development of competitive advantages of higher vocational colleges.

4) *The quality of principal is the key for higher vocational colleges to form competitive advantages:* Principals are legal representative of colleges and thought leader of higher vocational education. Their way of thinking and theory on school management are of vital importance for formation of competitive advantages and determine school development. First, principals’ quality includes the assumption of theory on school management. Most renowned higher vocational colleges have famous principles. Excellent principal can improve the level of school even make it prestigious, because principals’ thoughts and executive force will provide timely help in first moments. Principals must accumulate knowledge for long, know internal structure of higher vocational colleges and have the courage to take responsibilities and participate in fierce competition. Meanwhile, they must consider the situation and devise strategies in competition and deal with changes to adjust and reform as well as make prompt decisions. As representative of school, principals must seek opportunities for staff and students. If the principal-agent relation between principal and school investors (government or other) is insufficient, it means principals who connect investors’ investment with school output in modern economic society fail to furthest stimulate enthusiasm of all links, and will bring inevitable implicit loss for schools. Second, principals’ quality includes organization and coordination quality to complete tasks. When receiving financial support from government (or investors), except for pursuing development of higher vocational colleges, principals must first consider the agency level of government.

To sum up, institution restricts characteristics and internal structure of school. Organization of colleges is the externalization of institutional goal in higher vocational education and reflects the nature of educational system. Institution and organization have different functions in higher vocational colleges and supplement each other. They are material and spiritual foundation for higher vocational colleges to form competitive advantages.

#### B. *Institutional Arrangement Is Interior Driving Force for Higher Vocational Colleges to Form Competitive Advantages.*

From the perspective of new institutional economics, institutional arrangement of higher vocational colleges is analyzed from property right (material resources, manpower, and intellectual property), institutional change, exchange cost and principal-agent. Institutional arrangement is the premise for effective development of organization. Functions of institution consist of two levels: Core function is to stimulate



and restrict exchange subject. Specific function is to provide effective information, reduce instability and exchange cost and solve external problems internally. Institution takes effects through four ways: First, reduce the opportunity to appear opportunism (such as the fake and poor quality commodity, swindle by false pretences) and provide effective information; second, reduce the disturbance from uncertain factors on subjects and save exchange cost; third, directly reduce exchange cost; fourth, internalize external problems (such as patent system, incentive system and fiscal subsidies). New institutional economists observe institutional efficiency is the ratio between institutional revenue and institutional cost, namely  $E=R/C$  [4]. Specifically speaking, institutional revenue (R) refers to the degree of stimulating and restricting exchange subjects through reducing uncertainty, exchange cost and external problems. Institutional cost (C) includes expenses produced in institutional establishment, affirmation, design, enforcement and operation [5]. Institutional design restricts nonstandard opportunism, reduces uncertain factors and exchange cost and stimulates the enthusiasm of school-running entity. Analysis on comprehensive institution indicates competitive advantages of higher vocational colleges depend on institutional arrangement of organization.

### *C. Relations between Higher Vocational Colleges and Government, Market Are Exterior Driving Force to Form Competitive Advantages.*

The most important function of higher vocational colleges is to train talents for social and economic development, indicating colleges are inseparable from government and enterprise. Higher vocational colleges don't always comply with government and market. The three depend on each other.

Most of higher vocational colleges are funded by government. To form competitive advantages, higher vocational colleges must get policy support from government. However, if government intervenes in excessively, it will influence enthusiasm, energy and creative inspiration of colleges, weaken competitive advantages of them, leading to "government failure" in higher vocational education.

Similarly, the formation of competitive advantages needs suitable regulation of market system. Market system meets demands of higher vocational colleges. For example, major setup, resource collection and configuration and brand effect have attracted numerous students and effectively regulate. However, if higher vocational colleges separate from support and restrict of government and completely depend on market system, it will inevitably lead to "market failure".

Government and market are necessary for realization of competitive advantages. When government support and market regulation only occupy limited proportion, the governance of higher vocational colleges shows more complicated problem. In internal governance, the types, contents and structures of affairs, ways and channels of fund flow, scale and property of human resource, structural pattern of organization will be directly influenced by different proportion of government and market; in external governance, direct influence of macro-environment and implementation effect of function won't be predicted and controlled. It is

impossible to determine physical truth of competitive advantages but explicitly proposes high difficulty and efficiency of institutional operation. In the establishment of competitive advantages, it is crucial to roundly consider the relation among higher vocational colleges, government and market according to different proportions of government and market, and flexibly and precisely implement institution.

## IV. CONCLUSION

According to the current development environment of higher vocational colleges, this paper analyzes characteristics of competitive advantages of higher vocational colleges and its components and reveals its inherent law, especially analyzing the formation mechanism of competitive advantage from the perspective of new institutional economics. However, how to develop competitive advantage and the realization of long-term advantage through constant consolidation haven't been researched yet. Higher vocational colleges shoulder heavy responsibilities in development. The primary motivation of competitive advantages has been established, but its destination and development direction need further exploration.

## REFERENCES

- [1] Burton Clark, Higher Education System—Cross-national study of Academic Organization [M], translator Wang Chengxu. Hangzhou: Hangzhou University Press, 1994: 181
- [2] He Xuetao, Guo Yaobang. Theory and Practice of Educational Assessment of Vocational School [M], Hangzhou: Zhejiang Education Publishing House, 1999
- [3] Chu Hongli. Analysis on Relations between Public Universities and Government, Personal Agency and Problems [J], Journal of Higher Education, 2004, (1): 43-46
- [4] Zheng Xingshan, Tang Yuanhu. Property Rights System and Enterprise Performance [J], Reform of the Economic System, 2001(1): 77-80
- [5] Yuan Qingming. New Institutional Economics [M], Fudan University Press, 2012