A Proposal Research Framework of Competitive Advantage for Vocational Colleges in Undeveloped Areas of China

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Abstract. Competitive advantage is one of the most important and valuable advantage that ensure an organization to achieve success, and to keep a long-term prosperity. Competitive advantage plays a vital role for an organization within the market competition as it is resulting from an interaction of the crucial resources and dynamic capabilities. This paper aims to present a new perspective of researching competitive advantage via specific knowledge-based resources for vocational colleges in undeveloped areas of China. The new perspective research framework integrated three traditional theories in terms of knowledge-based view, Porters’ generic competitive advantage, and dynamic capability view, and qualitative findings of perceptions from 10 experts in vocational education or strategic management field. Eventually the paper reoriented the components of tangible and intangible resources, dynamic capabilities, also sheds light on how these independent variables effect on competitive advantage of vocational colleges in undeveloped areas of China. Accordingly, the results support a proposal empirical structured model of competitive advantage that would contribute for managers of vocational college or further empirical study.

Introduction

Competitive advantage (CA) is frequently defined the best indicator of an organisation’s sustainable prosperity and strength to keep long-term competitiveness [1, 2, 3]. The theory of CA originated in the 1950s, and gained popularity in the 1980s. Currently, CA is constantly evolving as both an academic discipline and as a reflection of an organisation’s management practice. In general, the fundamental question for CA is how organizations compete in order to achieve and sustain competitive advantage in the marketplace that is not only unique and valuable but also difficult for competitors to copy or substitute. Top mangers confront this question by developing the dynamic capabilities and renewing relevant resources in circumstance of rapid change [4, 5].

Dating back to the 1980s, colleges and universities began to notice the importance of resources and capabilities as rational sources for gaining CA [6]. Interestingly, technical and vocational colleges (TVC) now widely utilize multidisciplinary sciences to gain CA and maintain sustainable development in very dynamic higher vocational education world [7, 8]. When turned the spectrum on Chinese vocational colleges, since 2009, Chinese higher vocational education has greatly developed with the large-scale expansion of TVCs, especially in undeveloped areas. The 2013 statistical report by the National Bureau of Statistics of China (NSBC) showed that the number of TVCs reflected a growth rate of around 10% per year. Moreover, the growth rate of TVCs and TVCs enrolments in undeveloped areas was relatively higher than in developed areas.

However, in most undeveloped provinces (e.g. Guizhou, Qinghai, Yunnan, Sichuan etc.) of China, the competitiveness compared with developed provinces(e.g. Shanghai, Zhejiang, Shandong, etc.) was still very low [7]. On the other side, based on the newest national development plan, by
2020, Chinese TVCs are expecting to expand their influence, acceptance and prestige among the general population, and achieve international status among TVCs globally. Thus, one of the important mandates of Ministry of Education (MOE) is to improve the CA of TVCs, especially the CA of TVCs in undeveloped areas. Researchers have extensively elaborated on the idea that in order to achieve a high level of CA, the TVCs must invest in and give priority to their crucial resources and dynamic capabilities \[7, 9, 10\]. Simply stated, TVCs are still under constant pressure to enhance CA. Records from the Education Development Report of China (2014) \[11\] indicate that more and more government funding, facilities and infrastructure invested in TVCs of undeveloped provinces in order to improve competitiveness. However, most TVCs in undeveloped areas, their tangible resources such as government funds, tuition fee income, and fixed asset valuation did not translate into CA effectively; likewise, the potential of the intangible resources such as human capital, college’s culture, policy, information technology (IT) skill etc., was underestimated; and policy makers and leaders lacked a deep understanding of TVCs and their dynamic capabilities in term of knowledge management capability, collaboration capability, and innovation. This lack of understanding could be linked to the lack of a specific CA model. Fathi and Wilson (2009) emphasized that the traditional or general CA models, which had been successfully utilized in business management, might not be suitable for TVCs in undeveloped areas \[12\]. In this sense, this study integrated traditional strategic management theories of CA, particularly the knowledge-based view, the dynamic capabilities view, and territorial view were applied into vocational education field. Thus, the present research blended with CA theories and perspectives from a sample of 15 expects in undeveloped areas of China aims to propose a research CA model that focus on specific tangible resources, intangible resources, and dynamic capabilities for vocational colleges in undeveloped areas of China.

Strategic CA Theories Applied in TVC

Resource-Based View (RBV)

The RBV concentrated on firm-specific resources which include assets, capabilities, organisational processes, attributes, information, and knowledge \[2\]. RBV theory asserted that resources were actually what help a firm exploit opportunities and neutralize threats \[1, 2\]. Managing strategically according to the RBV involved developing and exploiting an organization’s unique resources and capabilities, and continually maintaining and strengthening those resources \[8\]. Particularly, Penrose (1959) offered a descriptive logic to demonstrate the causal links between resources, capabilities, and competitive advantage, which later transfer to a resource-based theory of competitive advantage \[13\]. In summary, The RBV has continued to grow in popularity and continuous to seek a better understanding of the relationship between resources, capabilities and sustained competitive advantage (SCA) in strategic management. Understanding both resources and capabilities, and more importantly, understanding the relationship between resources and capabilities, between resources, capabilities and CA, were the key to effective achieving and maintaining success \[8\]. Since recourses and capabilities continually change in global knowledge economy era \[14\], strategy makers saw to identify and take advantage of positive changes and buffer against negative changes in a continuing effort to gain and sustain a firm’s competitive advantage \[9, 14\], and this was the essence and challenge of strategic management, and oftentimes survival of the firm hinged on this work \[12\].

Knowledge-Based View (KBV)

In order to sustain competitive advantage, Many researchers advocated that knowledge-based resources as important intangible resources with characters of original, difficult to imitate, and non-substitutable, did not readily obtain by rivals \[2, 15\]. The rapid growth in information and communication technology, together with the high speed knowledge revolution and science advancement, worldwide competition and the variations in the demand of globalization are the
reasons that made knowledge a highly important object. Knowledge is thought to be the most powerful tool of product development. In order to compete in the rapidly growing knowledge based economic environment, transformation towards knowledge based view is important because knowledge and information are considered as assets that not only generate prosperity but also make organizations more competitive [15]. In the larger perspective, the overall social economy is based on the knowledge especially which can increase the competitiveness [2]. Highlighting the significance of internal organisation’s knowledge-based intangible resources as sources of competitive advantage remains no doubt about the popularity of the RBV in the CA studies.

Dynamic Capability View (DCV)

Many researches indicated that organizations evolved their abilities of renewing skills and developing new competences [1, 2, 4]. Such efforts of developing dynamic capabilities were beyond the general realm of RBV. Teece et al. (1997) developed the concept of dynamic capabilities (DC) from the RBV [4]. The dynamic capability view (DCV) has improved the value of the RBV as they transform what is essentially a static view into one that can encompass competitive advantage in a dynamic context [2]. A dynamic capability was defined as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. Teece, Pisano, and Shuen (1997) developed a dynamic capabilities framework which indicated that developing DC based on three key factors inclusive assets positions, processes, and paths, as path dependencies and market positions [4]. Assets positions referred to current assets such as knowledge, technical skills, competences, etc. supported the future capabilities expansion and relatively constrained the future development of capabilities [2,4]. Processes revealed that organization could reconfigure their asset positions by high level performances of strategic management, and those performances of integrating, building, and reconfiguring internal and external resources and competences to address rapidly changing environments underlie the capacities that called “dynamic capabilities” in Teece and Pisano (1994) [4]. Paths was more important for DC formation, due to most capabilities were cumulative and develop over time through a series of coordinated activities, they have path dependencies rather than discrete projects.

In summary, seeking CA as a fundamental requirement for organizations caused the knowledge evolution of strategic management. The dynamic capability view derived from RBV, but improved RBV and extended the dynamic capabilities as important factors that impact on CA. The different managerial way of selecting or identifying paths along with the various existing resources and processes lead to dynamic characters of firm’s capability, eventually generate CA. The dynamic capability view was essential for enhancing strategic management level, informing managers to pay attention to those capabilities which had dynamic development features [4]. Therefore, the key issues of CA in strategic management could convert to identify the path for capabilities creation that lead to CA, and the dynamic capability view has drawn comprehensive attentions in CA study.

Methodology

The qualitative research was conducted mainly in three undeveloped provinces (i.e. Sichuan, Guizhou, and Yunnan), involving experts in vocational education or strategy management field. The purpose of qualitative research was to collect the enough information or experts perspectives in order to explore key tangible/intangible resources, dynamic capabilities, and specific competitive advantage for vocational colleges in undeveloped areas of China. Due to time and financial constraints, this study only consulted experts in vocational or managerial categories and only 15 experts were involved in this research. Therefore the results may have only been interpreted for TVCs in those undeveloped areas.

Findings and Discussion

Reviewing those 15 experts in qualitative research, 5 of them were professors in university and have more than 20 years academic experience in strategic management field; among them 8 experts
were top managers with more than 10 years working experience in vocational colleges; the rest 2 person were working in ministry of education with top position. In summary they had revealed a number of different definitions and perspectives on specific CA, dynamic capabilities, tangible and intangible resources for vocational colleges.

The vocational colleges who act in one same segment and have similar profiles, characteristics and products or services can consist in a competitive group. These 15 experts’ views stated that one common sense in vocational colleges was CA derived from the resources of surrounding. they citing Porter’s theories to assessment of CA. 1) vocational colleges as knowledge product factory as their activities of strategic management were more relevant with knowledge; 2) Cost leadership (Porter, 1998) were more acceptable for vocational colleges, but it was oriented to creation best value for stakeholders (students, lecturers, enterprise, etc. in vocational education system) and low cost for service; 3) Perform value chain activities more efficiently in vocational colleges hinged on the knowledge-based resources level and knowledge management capability level; 4) It was more essential to consider both knowledge based resources and capabilities to enhance CA by generating low cost differentiation or high value differentiation; 5) Collaboration and innovation were also important for vocational colleges to achieve CA. Accordingly, in this study, building on Porter’s generic competitive strategies and value chain [1], CA for vocational colleges stands on two main constructs which are ‘cost differentiation’ and ‘value differentiation’.

Tangible resources (TR), it may more relate to the TVCs’ property that has a physical existence. In higher vocational education, there were many resources such as capital, land, building, labs, books in library, instructional facilities, computers, etc. could be seen as tangible resources. They further argued that there were tow major dimensions of tangible resources suggested for vocational colleges when concerned with improving CA. They are capital and educational infrastructures.

On the contrary, intangible resources (IR) were defined as an identifiable non-monetary asset without physical substances, such as reputation, brand-name, intellectual property. Intangible assets are the long-term resources of an entity, but have no physical existence. The experts note that these identifications of IR premised on seeing IR as key enabler of constructing knowledge management capability, collaboration capability, and innovation. Finally, this study combined broad literatures and experts’ perceives of IR for TVC in undeveloped areas, IR could be categorized four dimensions inclusive human capital, college’s culture, policies, and information technology(IT) skills.

For dynamic capabilities, the experts advocated that considering the reconfiguration, building, learning and integration attributes, many researches strongly proposed knowledge management capability as one of important dynamic capabilities for firms, specifically for educational institutions [5, 6, 7]. The others researchers conducted empirical studies related vocational colleges and enterprise collaboration, suggested that the capability of college/enterprise collaboration or partnership were distinctive aspect of getting CA compared general university [5, 10]. Recently, innovation also was paid more attention as important dynamic capabilities for vocational colleges [8, 9].

Proposed Research Framework of CA Study in TVCs

Based on RVB, it is clarity that there is a causal link between resources, capabilities and competitive advantage. Porter (1998) further claimed that resources grouped as tangible resources and intangible resources could directly effect CA [1]. Barney (2010) explained that intangible resources such as reputation, human capital, culture have peculiar characters of rareness and inimitability which led could directly represent value differentiation [2]. Interestingly, Wu (2009) found that the tangible resources of TVCs such as building and campus environment highly affect enrolment rate and became one benchmark of CA for vocational colleges [7]. Dynamic capabilities such as knowledge management as core capabilities that create major value that make the most significant contribution to CA [4]. Bringing out the new perspective of the knowledge-based resources, dynamic capabilities, and CA to the educational context, this view can contribute to
improve CA level in TVCs. The important point in TVCs is the knowledge based resources and capabilities. Managers of TVCs should adopt appropriate approaches to construct their knowledge-based resources and capabilities. Besides the knowledge-based resources and capabilities, other relevant point was their relationships. It is noticed that knowledge based intangible resources could support to dynamic capabilities, finally, guide to CA.

To sum up, the main theories were used to support this new research framework included Porter’s theories of CA [1], the resource-based view (RBV) [1,2,13], the knowledge based view [15], the dynamic capabilities view [4]. Integrating together the main thrusts of these theories was to reveal the proofed relationships between knowledge-based resources, dynamic capabilities and CA, and to help identify the dimensions of variables, and then to support to developing a CA model scientifically. Combining with the perspectives of experts view about CA in TVCs, the new proposed research framework formed. Figure 1 shows the diagrammatic representation of the proposed framework that may be used to guide for future research of enhancing CA.

![Figure 1. The proposed research framework of CA for TVCs.](image)

**Conclusion**

This research proposed a new framework to explore the competitive advantage based on knowledge based resources and dynamic capabilities in vocational colleges. This proposed research framework reoriented the popular theories of CA, and blending with the local experts views. The new research framework could facilitate the top managers in vocational colleges to identify their knowledge-based resources, and knowledge based capabilities such as knowledge management capability, collaboration, and innovation. It also could be used for further research as guideline. The limitation of this framework is that as a generic framework, it not considered the specificities of each vocational college. For future researches, it could be used as initial framework for the empirical study of CA for TVCs in undeveloped areas of China.

**References**


