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Strategic planning and the stratification of Chinese higher education institutions

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ABSTRACT

Strategic planning is an important instrument for university management. This article's objective is to reveal differences in strategic planning among universities at different levels and of different types. The article is based on the Chinese Higher Education Institutions (HEIs) Strategic Planning Survey. The study attempts to understand awareness of strategic planning, the types of strategic plans, the coverage of plan text, the main influential groups in planning and the approach to assess such planning among Chinese HEIs. A comparative analysis was performed on the basis of the differentiations of HEIs through two dimensions. There are four main findings. First, the surveyed HEIs attach great importance to a five-year plan; however, there are differences in terms of formulating a specialized plan and a medium- and long-term plan. Second, the HEIs at the higher level are more ambitious in their respective missions. Third, the university leaders, leading professors, heads of schools, and heads of university offices are the major influencers in all HEIs. Vocational colleges and private HEIs focus more on the roles of students, alumnus, and external specialists. Fourth, vocational colleges and private HEIs appear to be more action-oriented compared with HEIs at other levels and of other types. This study found that private HEIs had certain unique characteristics in strategic planning. The study concluded that a highly stratified higher education has resulted in China due to the push of Project 98/5 and Project 21/1.

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1. Introduction

Strategy defines a company's position, makes trade-offs, and forges the fit among activities (Porter, 1996). A strategy is the pattern or plan that integrates an organization's major goals, policies, and action sequences into a cohesive whole (Mintzberg et al., 1996). Strategic planning is a component of strategy; it is an active option to cope with the future. Strategic planning is defined as "the process of developing and maintaining a strategic fit between the organization and its changing marketing

opportunities" (Kotler and Murphy, 1981). Drucker (1993, p. 125) once noted that "strategic planning is the continuous process of making present entrepreneurial (risk-taking) decisions systematically and with the greatest knowledge of their futurity; organizing systematically the efforts needed to carry out these decisions; and measuring the results of these decisions against the expectations through organized, systematic feedback." In general, strategic planning may be interpreted as an organization's process of defining its mission, or goal, and making decisions on allocating its resources to pursue this mission and goal.

Strategic planning was introduced into management by non-profit organizations such as universities and foundations in the 1970s (Liu and Li, 2006, p. 4). The upsurge of strategic planning among higher education institutions (HEIs) was correlated to the

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changes in higher education in the latter period of the last century, including changing demographics, reduced funding, introducing new technology, increasing globalization and increasing scrutiny from the public sector (Leslie and Fretwell, 1996; Sporn, 1999; Keller, 2006). It became vital for a university to enhance its adaptability to its environment through innovative strategies and professional academic management in this period of change (Sporn, 1999, p. 6; Salminen, 2003). The research literature on university strategic planning correspondingly grew; many books and articles discussed the values and theoretical frameworks of strategic planning in the context of higher education, discussed the important factors in the process of formulating and implementing a plan, and provided guidelines for university planning (Keller, 1983; Shirley, 1983; Haas, 1980; Norris and Poulton, 1987; Buckland, 2009). There were also some discussions about specialized strategic plans. For instance, strategy of internationalizing universities was a hot topic in a global era (Knight, 1994; Teichler, 1999; Yonezawa et al., 2013), and paths to a world-class university in particular were discussed by scholars from different countries (Liu et al., 2011; Altbach and Salmi, 2011; Marginson et al., 2011; Shin and Kehm, 2013). Although there was also minimal literature that disputes the usefulness of strategic planning (Mintzberg, 1994; Bess and Dee, 2008) and that argues its consistency with traditional values and mores of the academic community (Schmidtlein and Milton, 1990), strategic planning is now a ubiquitous practice in U.S. government entities and nonprofit organizations, including HEIs (Bryson, 2010; Hinton, 2012). Numerous cases studies have been conducted to describe the changes generated by institutional strategic planning. In his most popular book, Keller (1983) used dozens of universities as cases to explain the management transformation and advantages of strategic planning at American universities. Certain small-scale surveys or self-assessments performed by institutional research offices have also contributed to the understanding of university strategic planning.

The Chinese literature on strategic planning was increasing at the beginning of this century. Most literature has been introductory, either focusing on applying the strategic theories in business to the management of universities and colleges, or introducing the experience of other countries, particularly American and British universities (Liu and Li, 2004; Zhang and Wang, 2007; Wei, 2006; Xu and Wang, 2009; Lu et al., 2014). Certain guidance books on university strategic planning and management were edited by the government planning departments or higher education associations (MoEDDP, 2006; USPMPT, 2007). Creating strategic plans according to the positioning of the HEI was stressed (MoEDDP, 2006). There were also studies on the practice of Chinese universities in the strategic planning process; these studies mainly focus on research universities, world-class university strategy and the function of university leadership (Liu and Li, 2006; Liu, 2006; Yu and Zhao, 2010). Through a case study, Wei (2007) found that strategic management may promote the rapid development of universities and constructed a “strategy-structure-culture” pattern for Chinese universities. In a comparative study (Chen and Li, 2009) on strategic management in Chinese and American universities, the president was deemed as key in strategic planning in research universities of both countries. Zhou (2009) discussed the importance of evaluation in university strategic planning, and recommended enhancing awareness for internal evaluation. Hu et al. (2014) provided a description of the general situation of Chinese HEIs in strategic planning. Those previous studies contributed to the understanding of strategic planning in a Chinese context and provided reference to the practice of Chinese HEIs, which laid the foundation for our further research. However, comparative research on strategic planning that is based on the differentiation of Chinese HEIs seldom appears. Most research on the strategic

planning of Chinese universities was diffused (Zhang and Wang, 2007; Yu and Zhao, 2010). These studies were primarily normative rather than empirical; the few empirical research studies were limited to specific cases rather than based on large-scale investigations (Yu and Zhao, 2010). The lack of empirical evidence is partly owing to the lack of quantitative data.

We addressed this dearth of literature by conducting a survey among 378 Chinese HEIs at different levels and of different types. The survey delved into the formulation of strategic planning among Chinese HEIs and investigated the planning procedure, the leadership, the plan text, the implementation and process of assessment. This article’s objective is to investigate differences in strategic planning among universities at different levels and of different types. Our specific research questions were as follows:

- a In the process of formulating, implementing and evaluating strategic plans, are there differences among universities at different levels and of different types? What are the differences?
- b If there are differences, what are main factors that contribute to those differences? What are the implications of those differences?

2. The context

2.1. Two differentiations of Chinese HEIs

Although there is no official differentiation of HEIs in China, two differentiations are common in practice. One is a vertical hierarchical system based on the level of tasks. This arrangement has a structure with three levels, with Project 98/5 universities and Project 21/1 universities (in this study all designated as 21/1 universities) at the top, non-project 21/1 universities (non-21/1 universities) in the middle, and vocational colleges at the bottom. This structure was formed through the establishment of Project 98/5 and Project 21/1 at the end of the last century (Zha, 2009). Project 21/1 is a project initiated in 1993 and formally carried out in 1995 by China’s central government with the objective of raising the research standards of 100 high-level universities for the 21st century. Project 98/5 was another major project, at a higher level, that was launched by China’s central government to found world-class universities in the 21st century. Both projects serve the national strategy of building world-class universities. Universities listed in Project 98/5 and/or Project 21/1 may obtain a large additional subsidy from the government. Because all Project 98/5 universities are also on the Project 21/1 list, 21/1 universities here refer to both Project 98/5 universities and 21/1 universities. Most 21/1 universities are research universities. Non-21/1 universities are essentially teaching universities. Vocational colleges focus on cultivating operational talents and conferring associate degrees.

Another differentiation is horizontal differentiation by sector, which is a historically derived arrangement based on the sponsorship and administration of HEIs. According to their sponsorship and administration, Chinese HEIs may be classified into three types: HEIs administered by the Ministry of Education (called national universities here), HEIs administered by provincial educational bureaus (provincial HEIs), and private HEIs.

2.2. Three types of strategic plans in Chinese HEIs

Strategic planning at Chinese universities and colleges mainly involves three types of plans: 1) a five-year plan, which is an institutional master plan that is synchronized with China’s national five-year economic and social development plan; 2) a medium- and long-term plan, which is also an institutional master plan with a time span of 10 years or more; and 3) a specialized plan,

which here means a plan specifically created for certain purposes, for example, a strategic plan for internationalization or a strategic plan for Project 98/5.

2.3. The Five Competitive Force Model and its application in China

Among the various theories of strategic planning introduced by Chinese higher education institutions, Porter’s theory of competitive advantage, particularly the Five Competitive Force Model, is the most popular (MoEDDP, 2006; Yu and Zhao, 2010). The popularity of Porter’s Model was confirmed by our interviews with relevant universities and government researchers and planning experts in the preparatory research stage. According to the Five Competitive Force Model (Porter, 2008), it is necessary to analyze the industry’s underlying structure in terms of the five forces before shaping strategy in an industry. The five forces are the bargaining power of suppliers, the bargaining power of buyers, the threat of new entrants, the threat of substitute products or services, and rivalry among the existing competitors. This model requires an organization to focus closely on its environment. In addition, SWOT analysis (SWOT is an acronym for strengths, weaknesses, opportunities and threats) is a very common practical application of this model (Bess and Dee, 2008; Hill and Westbrook, 1997).

3. Methods

3.1. Questionnaire design

This study is based on an independently developed “Chinese HEIs Strategic Planning Survey”. The survey, with the support of the Department of Development and Planning in the Chinese Ministry of Education, was designed to systematically collect information regarding the formulation and implementation of strategic planning by Chinese HEIs. This survey is the first major survey in the field. The questionnaire was designed under the theoretical framework of the Five Competitive Force Model, after interviewing and consulting university presidents, planning staff, government administrators, researchers on higher education, and experts on questionnaire design.

The questionnaire had six parts: the basic situation, awareness of planning staff regarding strategic planning, specialized planning departments of HEIs, planning procedures of HEIs, coverage of plan text, assessment, and assurance of plan implementation. These six parts were addressed by 73 questions. This study focuses on the awareness of strategic planning, the types of strategic plans, the influential groups in strategic planning, the coverage of plan text, and the methods of assessment. A comparative analysis was performed on the basis of the different kinds of HEIs.

3.2. Samples and data

According to the Ministry of Education website (MoE, 2012) on April 24, 2012, there were 2138 HEIs in China, among which 2099 were administered by the Ministry of Education or provincial educational bureaus. The 2099 institutions can be divided into three groups: 97 21/1 universities, 709 non-21/1 universities, and 1293 vocational colleges. Through stratified probability sampling, 795 responses were collected, among which were 97 21/1 universities (entire sample), 404 non-21/1 universities (sampling ratio, 57%), and 294 vocational colleges (sampling ratio, 23%).

To improve the response percentage of the questionnaires, the survey was conducted via post. The specific target population was the planning officer of the surveyed institutions or the vice president in charge of planning affairs. The survey process began in June 2012 and concluded in April 2013. After two rounds of survey,

a total of 378 questionnaires were retrieved. Although the number of responses was not massive, the distribution is appropriate and is strongly representative.

On the basis of the collected data, descriptive statistics were determined, and a stratified analysis was performed using the two dimensions. As noted, the first dimension was the hierarchical levels of HEIs; samples were analyzed by 21/1 universities, non-21/1 universities, and vocational colleges. The second dimension was the types of HEIs, including national HEIs, provincial HEIs, and private HEIs. A one-way analysis-of variance (ANOVA) was adopted to test the significance of group difference.

Among the 378 retrieved samples, there were 62 21/1 universities (including 18 universities on both Project 98/5 and Project 21/1 lists), 217 non-21/1 universities, and 99 vocational colleges by hierarchy. Distributed by sector, there were 44 national HEIs, 292 provincial HEIs, and 42 private HEIs (Table 1).

4. Findings

This study produced the following findings:

(A) The respondents attached great importance to strategic planning and recognized its role in university development. There were no differences among universities at different levels and of different types in terms of formulating a five-year plan, whereas there were obvious differences in terms of formulating a specialized plan and a medium- and long-term plan.

According to the survey, three respondents did not create a five-year plan. By hierarchy, two are non-21/1 universities, and one is a vocational college. By sector, two are provincial HEIs, and one is a private HEI.

Regarding the formulation of medium- and long-term strategic plans, 21/1 universities and national universities stressed plan formulation more. The percentages of 21/1 universities and national HEIs are 80.65% and 77.27%, respectively, which is much higher than the average level (Table 2). It is worth noting that private HEIs also place a high priority on the formulation of medium- and long-term plans.

In relation to the formulation of specialized plans, there is a stepped decrease in terms of hierarchy or sector. Among 21/1 universities and national HEIs, high percentages, 95.16% and 93.18% respectively, created a specialized plan. Non-21/1 universities and provincial HEIs exhibited percentages of 83.41% and 82.53%, respectively. The percentages of vocational universities and private HEIs that created a specialized plan are lowest, at 71.71% and 69.05%, respectively.

The vital motivation for Chinese HEIs to initiate a plan is the “internal needs for the development of universities”. A secondary motivation is that it is “required by superior administrations”. Whether peer institutions have strategic plans appear to have minimal impact (Table 3). It appears that vocational colleges care more about meeting the requirements of the superior government administrations.

Table 1
Distributions of valid samples.

| Higher Education Institutions (HEIs) | | Number | Percentage |
|--------------------------------------|-----------------------|--------|------------|
| Levels (by hierarchy) | 21/1 universities | 62 | 16.40% |
| | Non-21/1 universities | 217 | 57.41% |
| | Vocational colleges | 99 | 26.19% |
| Types (by sector) | National HEIs | 44 | 11.64% |
| | Provincial HEIs | 292 | 77.25% |
| | Private HEIs. | 42 | 11.11% |

Table 2
Percentages of different plans in HEIs (%).

| | Average | Levels of HEIs | | | Types of HEIs | | |
|----------------------------|---------|-------------------|-----------------------|---------------------|---------------|-----------------|--------------|
| | | 21/1 universities | Non-21/1 universities | Vocational colleges | National HEIs | Provincial HEIs | Private HEIs |
| Five-year plan | 99.21 | 100 | 99.53 | 97.98 | 100 | 99.32 | 97.62 |
| Medium- and long-term plan | 67.72 | 80.65** | 66.82** | 61.62** | 77.27 | 65.41 | 73.81 |
| Specialized plan | 82.28 | 95.16*** | 83.41*** | 71.71*** | 93.18*** | 82.53*** | 69.05*** |

***: Significance at 0.05 and 0.01, respectively.

Table 3
Motivations on plan initiating.

| Influential Factors | Total | Levels of HEIs | | | Types of HEIs | | |
|--------------------------------------|-------|-------------------|-----------------------|---------------------|---------------|-----------------|--------------|
| | | 21/1 universities | Non-21/1 universities | Vocational colleges | National HEIs | Provincial HEIs | Private HEIs |
| Required by superior administrations | 3.88 | 3.61*** | 3.83*** | 4.14*** | 3.84 | 3.89 | 3.81 |
| Other HEIs have formulated a plan | 2.93 | 2.81 | 2.91 | 3.07 | 2.91 | 2.96 | 2.76 |
| Internal needs for development | 4.84 | 4.77 | 4.85 | 4.86 | 4.75 | 4.84 | 4.90 |

***: Significance at 0.01.

There are also questions in the questionnaire about awareness of strategic planning. The HEIs surveyed generally recognized the role of strategic planning in institutional development and believed that strategic planning was important in positioning universities and colleges, mustering consensus, and increasing the efficiency of resource allocation. The HEIs surveyed strongly disputed such ideas as “unlike enterprises, universities and colleges do not necessarily need specific development goals”, “universities and colleges should not be planned”, and a “plan is just theory on paper”. In terms of their awareness of strategic planning, there is no obvious difference among HEIs at different levels and of different types.

(B) HEIs are very stratified in terms of institutional missions. Among the surveyed HEIs, the objective of the 15 national universities that are also at the 21/1 level was to become world-class universities, whereas there was only one provincial non-21/1 university that had the same target; and no vocational college or private HEI had this ambition. Excluding the HEIs that had the mission of developing into world-class universities, most of the remaining 21/1 universities and national HEIs had a passion for developing into national first class institutions. In contrast, the percentage of non-21/1 HEIs or private HEIs that targeted national first class is relatively low; most of those universities positioned themselves as first class in the region (Table 4)

(C) To determine the most influential groups in the strategic planning process, a five-point scale was employed. Nine groups were discussed, including six internal groups and three external groups. The six internal groups included university leaders, heads of schools, heads of university offices, leading professors, faculty, and students. The three external groups were government

educational administrations, alumnus and external planning specialists. The results showed that university leaders, leading scholars, heads of schools, and heads of university offices were the major influential groups. Government educational administrations also exerted significant influence on university planning. Students and alumnus exerted minimal impact. In comparison, vocational colleges attached more importance to the role of alumnus. External specialists were involved in the strategic planning process, with more weight accorded to vocational colleges and private HEIs. When private HEIs are compared with national HEIs and provincial HEIs, respectively, it is obvious that the private HEIs focus more on the role of students (Table 5)

(D) Judging by the coverage of the plan text, most HEIs attached great importance to mission description, the SWOT analysis, and the enactment of stage goals in their plan. However, some were not keen on interpreting how to fulfill the goals.

Comparing the hierarchies, the higher was the level the institution, the greater the focus on the description of missions and goals. The institutions at the lower level focused more on key programs, an annual work plan, and the enforcement of programs. In other words, 21/1 universities were more visionary, whereas vocational colleges were more action-oriented. When compared by sector, national HEIs were more visionary and less action-oriented. Private HEIs showed strong unity of vision and action; they valued the entire strategic planning process (Table 6).

In addition to the above findings, previous research (Hu et al., 2014) showed that there was a difference in the method used to assess planning, among HEIs at different levels and of different types. Three methods were observed, including internal assessment, external assessment, and mixed assessment. The

Table 4
Missions of different HEIs (%).

| Missions | Total | Levels of HEIs | | | Types of HEIs | | |
|----------------------|-------|-------------------|-----------------------|---------------------|---------------|-----------------|--------------|
| | | 21/1 universities | Non-21/1 universities | Vocational colleges | National HEIs | Provincial HEIs | Private HEIs |
| World class | 4.53 | 24.19*** | 0.93*** | 0*** | 34.09*** | 0.69*** | 0*** |
| National first class | 25.33 | 40.32*** | 16.74*** | 34.69*** | 31.82 | 24.74 | 22.50 |
| Regional first class | 31.20 | 9.68*** | 36.28*** | 33.67*** | 0*** | 36.43*** | 27.50*** |

***: Significance at 0.01.

Table 5
Influential indicators of different groups.

| Groups | Total | Levels of HEIs | | | Types of HEIs | | |
|-----------------------------|-------|-------------------|-----------------------|---------------------|---------------|-----------------|--------------|
| | | 21/1 Universities | Non-21/1 universities | Vocational colleges | National HEIs | Provincial HEIs | Private HEIs |
| Superior administrations | 4.09 | 4.10*** | 3.98*** | 4.35*** | 4.18 | 4.07 | 4.18 |
| University leaders | 4.85 | 4.81 | 4.86 | 4.86 | 4.89 | 4.85 | 4.85 |
| Heads of schools | 4.17 | 4.06*** | 4.04*** | 4.53*** | 4.07 | 4.17 | 4.30 |
| Heads of university offices | 4.17 | 4.13 | 4.16 | 4.21 | 4.11 | 4.17 | 4.24 |
| leading professors | 4.25 | 4.29*** | 4.14*** | 4.44*** | 4.30 | 4.22 | 4.41 |
| Faculty | 3.24 | 3.29** | 3.12** | 3.46** | 3.20 | 3.23 | 3.31 |
| Students | 2.86 | 2.97 | 2.75 | 3.01 | 2.75 | 2.83 | 3.18 |
| Alumnus | 2.95 | 3.06** | 2.81** | 3.18** | 2.91 | 2.94 | 3.05 |
| External specialists | 3.54 | 3.21*** | 3.47*** | 3.92*** | 3.11*** | 3.57*** | 3.85*** |

***: Significance at 0.05 and 0.01, respectively.

Table 6
Plan text descriptions of HEIs.

| Descriptions | Levels of HEIs | | | Types of HEIs | | |
|--|-------------------|-----------------------|---------------------|---------------|-----------------|--------------|
| | 21/1 universities | Non-21/1 universities | Vocational colleges | National HEIs | Provincial HEIs | Private HEIs |
| Mission and target clearly described | 4.78 | 4.73 | 4.74 | 4.76 | 4.72 | 4.87 |
| SWOT Analysis being made | 4.69 | 4.57 | 4.55 | 4.67 | 4.56 | 4.70 |
| Indicators for evaluation enacted | 4.64** | 4.44** | 4.30** | 4.53 | 4.44 | 4.33 |
| Stage targets being set up | 4.46 | 4.40 | 4.33 | 4.47 | 4.36 | 4.55 |
| Annual plans developed | 3.00*** | 3.64*** | 3.76*** | 2.95*** | 3.60*** | 4.03*** |
| Action plans for key tasks developed | 3.67* | 3.80* | 4.03* | 3.69* | 3.82* | 4.18* |
| Responsible persons for key tasks designated | 3.93 | 3.93 | 4.10 | 3.85* | 3.94* | 4.34* |
| Mechanism for assessment established | 3.73* | 3.43* | 3.68* | 3.90** | 3.46** | 3.76** |

***: Significance at 0.05 and 0.01, respectively.

Table 7
Planning assessments among different universities (%).

| Assessment | Levels of HEIs | | | Types of HEIs | | |
|--|-------------------|-----------------------|---------------------|---------------|------------------|--------------|
| | 21/1 Universities | Non-21/1 Universities | Vocational colleges | National HEIs | Provincial HEIs. | Private HEIs |
| Internally assessed by planning offices | 36.07*** | 21.50*** | 15.63*** | 44.19*** | 19.79*** | 17.50*** |
| Internally assessed by university planning specialists | 31.15 | 31.31 | 25.00 | 30.23 | 29.51 | 30.00 |
| Externally assessed by other university specialists | 0 | 3.27 | 2.08 | 0 | 2.43 | 5.00 |
| Assessed by external evaluating institutes | 0 | 0 | 1.04 | 0 | 0.35 | 0 |
| Mixed assessment | 26.23** | 28.50** | 44.79** | 20.93** | 32.64** | 42.50** |
| No assessment | 6.56 | 15.42 | 11.46 | 4.65** | 15.28** | 5.00** |

***: Significance at 0.05 and 0.01, respectively.

institutions in the higher placement by hierarchy or sector were more likely to adopt internal assessment (Table 7).

5. Discussion

(A) Why did most of the surveyed HEIs value plans and have a strong motivation to conduct strategic planning? According to the survey, respondents basically had a five-year plan, and most respondents had a medium- and long-term plan and a specialized plan. This finding is due to the following factors:

a The expansion of the autonomy of Chinese HEIs. Operational autonomy is a prerequisite for HEIs to formulate and implement plans. If Chinese HEIs remain under the strong control of governments, as occurred previously during the planned economy period, without the legal status of a corporation and a certain degree of autonomy, it is impossible for them to formulate a plan, or there may be no need to do so. *The Chinese Higher Education Law*, released in 1998, explicitly stipulates the

legal status of Chinese HEIs and decrees that HEIs shall run independently. The law also decrees that the president of an HEI is endowed with the authority to “draft strategic plans, formulate regulations and annual plan and implement the plans”.

b The massification of Chinese higher education. At the turn of the 21st century, Chinese higher education entered an era of massification. Massification profoundly changed the scale, structure and functions of Chinese HEIs, as well as their competitive circumstances. The gross enrollment ratio of Chinese higher education increased rapidly from 9.1% in 1998 to 34.5% in 2013, the number of Chinese HEIs expanded from 1022 in 1998 to 2788 in 2013, and the average student scale of an institution expanded from 3336 in 1998 to 9814 in 2013 (MoE, 1998–[MoE, 1998]2013). Chinese higher education has developed from a simplistic system that mainly focuses on undergraduate education to a pluralistic system, with a relatively well balanced mix of undergraduate education, postgraduate education, vocational education and adult

education (Pan and Xiao, 2008; Ji, 2006). Provincial universities, instead of national universities, have been the major providers of undergraduate education. Some traditional elite universities have developed into research universities; some original associate-degree granting colleges have been replaced by burgeoning vocational colleges (Zhang, 2009; Pan and Xiao, 2008). The structural changes are also accompanied by functional changes (Ji, 2006). As a result, the Chinese higher education system has become multifunctional. In addition to the traditional teaching-oriented functions, research and social services are also put on the official agenda of universities. The research universities are encouraged to assume the function of hubs for international exchange and become active participators in international competitions (HIE, 2008, p. 499). In this new and diversified higher education system, Chinese HEIs have to position themselves strategically. Strategic planning may help HEIs to correctly position and foster insightful policies to cope with challenges. Strategic planning may also assist HEIs, which are loosely coupled systems (Weick, 1976), to establish a mechanism for integrating different interests, reconciling disputes, and pooling wisdom in a changing environment.

c Promotion by government. That HEIs attached great importance to strategic planning was partly related to the country's overall planning situation. After the founding of the New China in 1949, China has been drafting economic and social development plans every five years. Since 2005, when the Eleventh Five-year Plan began, the five-year plan transformed from an upside down plan to an interactive plan, which provided institutions with space for planning. Furthermore, the Ministry of Education encouraged HEIs to create strategic plans. The Ministry of Education not only advocated the importance of institutional strategic planning but also organized a number of planning discussions, consulting, and trainings for HEIs, actively promoting strategic planning (MoECFUPF, 2002; USPMPT, 2007).

(B) What are the differences among HEIs at different levels and of different types? What are the main factors that contribute to those differences, and what are the implications of those differences?

As revealed by the findings, there are obvious differences among HEIs in the types of strategic plan, the development goal, the focus of the plan text, and the assessment.

a In the formulation of the plan, 21/1 universities and national HEIs essentially had a specialized plan, whereas other HEIs did not appear enthusiastic about this. This finding is related to the nature of specialized plans. As noted, a specialized plan is specifically created for certain purposes. It is not generally required by educational administrations, as is a five-year plan. However, the universities that applied for Project 21/1 or 98/5 were required to submit specialized plans (MoE, 2010). Accordingly specialized plans became very popular among 21/1 universities and national HEIs. Other public HEIs could also apply for special support from provincial educational administrations, in which case they also actively engaged in drafting a specialized plan. The private HEIs had few channels to obtain funds from government; therefore, the percentage of those who created specialized plans were lowest, although some created specialized plans to promote development in certain fields.

b In terms of institutional mission, most 21/1 universities had ambitions to be world-class or national first class; however, no vocational colleges and private HEIs had ambitions to be world-class. Non-21/1 universities, provincial HEIs and private HEIs were even impassive regarding possible development into a national first class institution. As noted, 21/1 universities, non-21/1 universities and vocational colleges are differentiated by

level of tasks, not by their quality of education. Vocational colleges may certainly participate in global competition and become world-class; however, no vocational college has this desire. This finding indicates that an artificial stratification of higher education does exist in China. Those HEIs that receive more government funds and favorable policies are at the top. These institutions are essentially 21/1 universities or national universities. In the process of encouraging Chinese HEIs to participate in global competition, HEIs at other levels and of other types are obviously neglected by the government. There has been criticism that the enforcement of Project 98/5 and Project 21/1 creates Matthew effects in which the strong become stronger. Currently, compared with decades ago, it is more difficult for provincial universities or vocational colleges to build a national reputation (Zhan and Chen, 2013). The survey findings suggest that the tilted policy of building world-class universities has to some extent damaged diversified Chinese higher education.

c According to the survey, 21/1 universities and national HEIs were more likely to employ internal assessment, compared with vocational colleges and private HEIs, which preferred to use mixed methods for assessment. This finding may be explained by two factors. The first is the planning capacity of the university. Previous research (Hu et al., 2014) indicates that 82% of 21/1 universities and national universities had independent planning offices, whereas the percentages were 19% and 25% for vocational colleges and private HEIs, respectively. The second factor is the status and advantages of HEIs. In comparison to 21/1 universities and national universities, vocational colleges and private HEIs with relatively few resources and prestige, are more prone to be trapped in a legitimacy crisis. Therefore they are more likely to reinforce their legitimacy and obtain more recognition through external assessment.

When the Five Competitive Force Model is applied to analyze those differences, it is clear that HEIs at different levels and of different types are placed in different competitive environments. Admission to national universities and 21/1 universities is extremely competitive, therefore these universities have very strong bargaining power. Meanwhile, national universities and 21/1 universities are guaranteed by government funding and institutional supports, which free them of domestic competitions from any new entrants or substitute services. The main rivalries for them are their international counterparts; therefore, they care more about the development of international higher education and the progress of their international counterparts. Vocational colleges have developed rapidly in the massification of higher education. The percentage of vocational colleges among HEIs increased from 25% in 1998 to 50% in 2013 (MoE, 1998–[MoE, 1998] 2013). Some of them have strong bargaining power because of the vigorous demand on high quality vocational education. Often these colleges are enthusiastic about their strategic planning, and also ambitious in setting their missions. Private HEIs that developed as a supplement for public HEIs and have operated under a market mechanism are comparatively weak in their strength. They are thus situated in an unfavorable position in a highly competitive environment. As for provincial institutions and non-21/1 public universities, they are mediocre in strategic planning because of a less competitive environment. Provincial institutions and non-21/1 public universities are provided with secure public funds and sustainable sources of students. On the one hand, they remain selective institutions, though not as highly selective as national universities and 21/1 universities. On the other hand, they are not pushed to participate in international competitions in the same way as their counterparts at the upper level.

Those differences imply that a hierarchical stratification of Chinese HEIs has occurred in China, with 21/1 universities and national universities at the top, non-21/1 universities and provincial HEIs in the middle, and vocational colleges and private HEIs at the bottom. The stratification is not only a differentiation of levels and sectors but also a differentiation of social status, self-recognition and resource allocation. Project 98/5 and 21/1 are important driving forces of that stratification.

(C) Private HEI has a long history in China. It disappeared after the founding of the New China but re-emerged at the beginning of 1980s and developed quickly at the turn of the century. Has there been any difference between private HEIs and other HEIs in strategic planning? If so, what are the implications of the differences?

From the above findings, private HEIs are shown to be a unique group in strategic planning. Private HEIs have a high degree of awareness of their development; for instance, they take strong initiatives to formulate medium- and long-term plans although they are not required to do so. Private HEIs are visionary and action-oriented and they maintain an appropriate balance in the entire strategic planning process. Moreover, private HEIs attach more importance to the roles of students and external specialists, when compared with HEIs at higher levels.

Those unique characteristics of private HEIs in strategic planning are moderately correlated to their missions, financial mechanisms and institutional governance models. In contrast with their public counterparts, for Chinese private institutions re-emerged after China's Reform, profit-making is a critically important motivation (Wu, 2007; Yan and Lin, 2010), so much as that operating private institutions is similar to running an enterprise. Therefore, for-profit business philosophy and management methods are widely employed. Chinese private institutions are mainly financed by students' tuition fees rather than government funding or social donations. Statistics from 2008 to 2010 show that an average of 85% private HEIs funds are tuition fees and less than 5% are government subsidies; while for their public counterparts, more than 50% of funds comes from government and only approximately 25% from tuition fees (MoE, 2008–[MoE, 2008]2010). Private institutions thus focus more on consumer (student's) perspectives in their strategic planning owing to the funding difference. They are more likely to employ external evaluations to testify their legitimacy and validate their educational quality in order to attract more students. The institutional governance arrangement is also an important dynamics in their strategic planning. The law requires that every private institution set up a board of directors as its governing body, however, in reality such bodies are mainly established to maintain an outward appearance of compliance with the law. The de facto decision making power resides in the hands of a few founders and administrators. Some private institutions are even operated in a style similar to that of a family business (Yan and Lin, 2010; Li, 2012; Wang et al., 2015). A survey indicates that among 43.3% of the surveyed private institutions, there are 2 or more members from the same family (usually the founder's) in a board while the average size of a board is around 8 members (Wang et al., 2015). Therefore, the leaders of private institutions are different from their fixed-term counterparts in public institutions in that they often regard the institution as their lifelong business and have a stronger sense of mission (Lin and Zha, 2011). It is not surprising that they pay much more attention to the long-term development as well as strategic planning of the institutions, and they are more powerful in the implementation of plans.

6. Conclusion

On the basis of the 2013 survey on strategic planning, this article has performed a comparative analysis based on the differentiation of Chinese higher education. The data indicates that most surveyed HEIs have a positive awareness of strategic planning and use it as a suitable tool to attract resources and integrate resources. There were certain differences in the formulation, mission, text, and assessment of strategic plans among HEIs at different levels and of different types. Those differences moderately reflect the diversified needs of different HEIs.

This article has revealed that the hierarchical stratification approach is very clear among Chinese HEIs. A highly stratified higher education system has been formed under the push from Project 21/1 and Project 98/5. The higher the level of the institution is, the more ambitious is its strategic planning. As the key universities supported by the government, 21/1 universities and national HEIs have high expectations and focus much effort on all types of strategic plans. In comparison, vocational colleges and private HEIs focus more on the roles of students, alumni, and external specialists. Private universities have certain unique characteristics in strategic planning; they are more market-oriented and action-oriented. Non-21/1 universities and provincial HEIs are non-distinct in most indicators, often average or lower.

This study shows that the strategic planning of HEIs is correlated with the current higher education situation in China. This study reveals the features of Chinese higher education at a particular stage and presents the uneven competitive environment faced by Chinese HEIs at different levels and of different types.

Distinctive from previous studies that mainly focus on strategic planning itself, this article sheds some new insights on investigating strategic planning from the differentiation of Chinese higher education institutions. It depicts the current practices of Chinese HEIs in strategic planning, provides in depth analysis on the differences of strategic planning of institutions at different levels and of different types, and more importantly, reveals the implications of these differences. It presents new evidences for the stratification of Chinese higher education from the perspective of strategic planning. The discussions are based on new data from the first nationwide strategic planning survey carried out by the research team themselves. This article will contribute to the understanding of the strategic planning of Chinese HEIs and the stratification of Chinese higher education.

The feedback on most questions was very positive. This was partly because those people who completed the questionnaire on behalf of their institutions, as noted above, were primarily plan-makers and managerial staff. Thus this study mainly investigated institutional administrators and failed to solicit views from the faculty and students. Further studies are needed to represent a comprehensive explanation that considers the awareness and understanding of different interest groups.

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