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Comparison and evaluation of performance of universities in both Japan and China

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Recently, We can find some rankings relation to university on magazines or books. Most of those works were simple comparisons by the survey results and they carried out one or two indexes only. For example, there are more 30 evaluation-indexes in the university ranking 2000 (a book, Asahi-shimbun). However, most of the survey items were separated into many research works, it hadn't a comprehensive rankings. Diamond Weekly and Weekly Toyo Keizai also had themselves surveys at small size. In the case of China, the newspaper of Science Times of China and Uniranks.edu.cn published the rankings of the number of papers and financial resources etc. An Internet site of Netbig had a questionnaire survey from presidents and lectors etc, moreover they published a comprehensive rankings combined with the number of papers and financial resources etc, but the ranking method was simple.

From System approach's view, those works maybe have some contradiction or insufficiency. In this thesis, we collect various survey results and data at first. We wish use the WSR systems approach to make the relations between the factors such as the data, evaluators and users etc clear, moreover we wish find out the culture existed in the university. We choose Wuli-Shili-Renli (WSR) system approach in this research, because many evaluation projects adopted this methodology in China. For example, evaluation of High-Technology Regions, Weapon System, Labor Market, Commerce Integrated Automation etc.

In fact, the collected evaluation indexes or the property of data is different in both Japan and China, so it is difficult for us to compare the evaluation indexes in parallel. However, it suggests that the points of view between two countries aren't same in collecting the evaluation index of university. For example, SCI were emphasized by some researchers in China, they assumed number of paper cited in SCI is a main research result for evaluating a university, but most of Japanese researchers don't assumed the SCI is a standard index. In addition, the private university of Japan emphasized the rate of employments of major company very much and they didn't care too much to the number of papers, but the national university of Japan is opposite. Some Japanese researchers assumed the CA were reflect the research activity much more than SCI, because not only CA cited the English papers, but also it cited the native language's papers. There is about 70% of total number of papers cited in CA of Japan which was written by English, but China had fewer than 30% only. Whether the quality of paper is high or not, it brushes away the works of native language because of SCI was citing the English paper only. For solving this problem in Chinese university's evaluation, we put other paper databases such as CSCD (Chinese Science Citation Database), EI (Engineering Index) and ISTP (Index to Science & Technology Proceedings) etc to evaluate university.

Now, there exists many works to rank universities, so to rank the university isn't the main purpose in this thesis. We want point out some problems on the usual evaluation work of university. Here, we just wish apply the WSR Systems approach to help the right and comprehensive evaluation of universities and through the principal component analysis to analyze the relationship between evaluation indexes, the object of evaluation (universities) and the evaluators, and finally use the tolerate order method which combines both qualitative and quantitative advantages to rank university in China and Japan. Through comparing the background of culture in the university of both two countries, we found that the university has the strong points and weak points; each university should learn from others strong points to offset its weaknesses. Although we are lacking the data for evaluating the university, however, we propose some new ideas, a working framework and some methods for evaluating university.

We will show the layer's feature of Wuli (basic data), Shili (efficiency) and Renli (effectiveness) through the comparing and statistics analysis. By WSR, we give the conclusions of university evaluation with considering the background of economics and education system over in two countries. At last, not only this work shows the validity of WSR system approach, but also we hope various responses from evaluation organizations or educators etc related with university evaluation.