Subjective performance measurement: multi-case study based on chinese corporation...

Business



SUBJECTIVE PERFORMANCE MEASUREMENT: MULTI-CASE STUDY BASED ON CHINESE CORPORATIONS Gao Chen and Tang Guliang Business School, Beijing Technology and Business University, China and Business School, University of International Business and Economics, China Abstract Subjective performance measurement is a new hotspot in recent year western management accounting and motivation theory study. However, until now, there has been little research regarding the application of this theory in China. In order to bridge this research gap, this paper provides five propositions and four in-depth case studies in Chinese corporations. By the comparison of the application of subjective performance measures in China Minsheng Banking Corporation(CMBC), China Minmetals Corporation(Minmetals), China North Industries Group Corporation(CNGC) and UFIDA Software Corporation(UFIDA), this study suggests that the use of subjective performance measures differs as the corporation's strategy, the corporation's developing phase, organizational culture and institutional background.

This study also suggests that the evaluation bias is the factor affecting the effects of application of subjective performance measures. The organizational culture is identified as the key factor that contributes to this bias. Keywords: performance measurement, incentive contract design, Chinese corporations, multi-case study Introduction Performance measurement and incentive contract design have already been one of the frontier issues of western corporate management control theory and motivation theory study. Studies of the issue widely involve and influence corporate governance, strategy implement, compensation system and

corporate culture, concerned extensively by academic and business circles (Merchant, 2004). The core of performance measurement system design lies in the choice of performance measurement.

In recent years, choice of performance measurement appears comprehensive, with the differences of financial measure and non-financial, Objective Performance Measures (OPM) and Subjective Performance Measures (SPM) (Van de Stede et al. , 2006). In recent years, subjective measures and discretionary bonus have received more and more attention of the researchers. Through theory deductive analysis, empirical research and experiment study, the in-depth research has gained plentiful academic results and valuable study conclusions. Comparatively, research documents in China focused on financial measure and some study on innovative measures, methods (as EVA, The Balanced Score Card) and introduction to their applications(Duh, Xiao and Chow, 2007) or on the application and results of nonfinancial measure based on the classification of financial and non-financial measure (Pan Fei. 2006).

However, the researchers don't pay great attention to problems in non-financial 1 measure such as the difference of objectivity and subjectivity, determinants and effects of subjective measures, and there is no academic dissertation on subjective performance measures. This study is originated from confusion regarding the following questions: to what degree are subjective performance measures actually used in China? What are the major factors influencing the application of subjective measures? What about the effects? Are there any successful experiences or problems? What are the

special influence of Chinese corporate systems and culture difference to the application and effects, etc? These questions are also the problems which management needs to resolve in performance management practice. The paper's framework and contents are as follows: Part two is literature review and research propositions including the theory background and syllogism of the proposition; Part three is research design and description of the case including the process of choosing the target corporations and data collection and also the company's application of subjective performance measures; Part four is the comparative analysis of the case and validation and explanation of the proposition; Part five is the conclusion analyzing the meaning of the research and the inspiration for further research. Theory and research proposition The definition of the subjective performance measure The subjective performance measure is a concept which is brought out compared to the objective performance measure. The objective performance measure refers to a measure method which compares the actual performance with the set performance goal based on some measures and formulas.

Objective measures can be applied to legal contracts, because they are totally observable and testable. On the contrary, subjective measure is based on the person's udgments or subjective measure method based on subjective indications. Being different from objective measures, subjective measures can't be tested by other people, usually is only observable to the superiors. Besides that, subjective performance measure is used due to some uncertain factors and unexpected accidents. It has many forms, includes subjective determined weight, evaluation system contains some

subjective measures and the factors decided by management based on the situations. Of all the forms, the subjective measure is the main one.

Theoretical basis and proposition Figure 1 is the theoretical framework of this research paper. This study finds that the application of subjective performance measures in Chinese enterprises are influenced by economic factors as well as institutional factors. Economic factors, such as the nonfinancial measures, strategies and development phases of firms, affect the degree of application of the subjective performance measures, while the institutional factors may impact more aspects other than the degree of application and the choice of the financial measure. Furthermore, the application of the subjective performance measures is influenced by both technical factors such as evaluation methods and procedures and cultural factors such as organizational environment and relationships between employers and employees. 2 Technical factors (evaluation methods and procedures) Economic factors (nonfinancial measure, strategies, developing) Application of SPM effects of SPM Institutional factors Cultural factors (organizational environment, relationships) Figure 1 Theoretical Framework According to economics theory the compensation plan should include every measure which can increase the behavior information about the certain agent.

Single measure's relative weight should be the function of its noise ratio. The model analysis demonstrates objective measures can only measure the aspects which can be measured, can't encourage much more improvement. So the subjective performance measure is the necessary supplement for the

objective performance measure. Not only making up for the disadvantage, but also playing the role of encouragement. If subjective and objective measures evaluate the different sides of the agent, then the combination of these measure can improve the encouragement for the agents.

Although subjective performance measure has made up for the lack of objective measures, it increased discretion of the performance evaluation at the same time because the subjective performance measures are based on personal judgments and there is no formulabased standard. Thus, it is possible that the evaluation person makes adjustments according to different situations after the contract. The evaluation is objective if the evaluator makes judgments honestly and fairly. But it turns out that plenty of facts seem not support this supposition. Research shows that the "favoritism" (or "preference") and "bias", which resulted from the discretion of the performance evaluation, have a negative effect on the quality of the information therefore limits the use of the subjective performance measures in practice.

Accordingly, we propose the Proposition 1: Proposition 1: Enterprises tend to use the comprehensive performance measurement which includes both objective and subjective systems, but since the subjective evaluation may give rise to bias, enterprises should add more weight to the objective evaluation. Some researches further test the determinants of subjective performance measure. (Bushman et al. , 1996; Ittner et al. , 1997; Murphy and Oyer 2003; Ittner and Larcker, 2002). Among all the factors that have

influence on the information in subjective performance measures, the strategy is one of the factors that have been tested many times.

Research shows that compared to enterprises which have a Divest or Defender strategy and a low level of specification and easy to measure, enterprises which have a Build or Prospector strategy fits better with subjective measures and long-term controls (Govindarajan and Gupta, 1985; Abernethy and Brownell, 1999); Enterprises who use the differentiation strategy pay more 3 attention to the long-term investment so it is difficult either to see efforts from employees in a short-term or to evaluate by financial measures or stock prices. That's the reason why the objective of the budget is not mentioned and it depends more on the subjective measures and controls (Govindarajan and Fisher, 1990; Van der Stede et al., 2006). Aside from the strategic factors, papers today have discussed phases of the development of the firms and how they affect the subjective performance measures. Research shows that in the growth phase when firms increase the cost of research and development to ensure a long-term growth, it is difficult to see the effect of current activities through financial measures. So the subjective measures and evaluations are more reliable in this stage (Bushman et al.

, 1996; Murphy and Oyer, 2004; Gibbs et al. , 2004). Based on that, we propose Proposition 2 and Proposition 3: Proposition 2: The application of the subjective performance measurement is affected by the firm's strategy. Firms which have a Prospector, Build or Differentiation strategy use the subjective performance measures more than other firms which have a

Divest, Defender, or Cost Leadership strategy. Proposition 3: The application of the subjective performance measures is also affected by the business life cycle. Firms in growth phase have more opportunity for further expansion and more application of the subjective performance measures.

Research focused on the effect of subjective performance measures show various results on this subject. Some find that the subjective measures have a positive effect of correcting the external factors that have negative effect on personal performance, and by the increase of individual satisfaction, employees are more incentivized. However, some researches show the opposite results. The "bias" of evaluation (Ittner et al. 2003; Moers, 2005) have negative effects on the fairness of the subjective measures and the dissatisfaction of the employees. The contradicting results indicate that the effect of the subjective performance measures may vary according to some contingency factors in the organization.

Generally, the negative effect of the subjective performance measures originated from the evaluation "bias". The factors that influence "bias" can be classified into two categories, one is technical factors and the other is cultural factors. Technical factors are related to cognitive biases and refer to the methods and processes in the implementation of the subjective performance measures. Cultural factors refer to the organizational culture, which is comprised of the assumptions, values, norms and tangible signs (artifacts) of organization members and their behaviors. Each organization has its own culture and it remains stable in the long term. Different organizational culture determines the different levels of cognitive bias and

social bias, such as the lack of sufficient trust between senior managers and employees.

Accordingly, we propose the study of Proposition 5: Proposition 4: effects of the subjective performance measures are determined by the combination of two factors: one is the method and process of the technical factors, the other is cultural factors which include the organizational environment and relationships between the individuals in the organization. Research method Since the case studies are much suitable for "how" and "why", as well as research in the dynamic relationship between the variables (Yin, 2004), this article uses a case study approach. And contrary to the single-case studies, multiple-case studies can form a better 4 heoretical structure (Eisenhardt, 1991), to enhance the study's validity of the content and conclusions. This article follows the advice that the best number of cases be 4-6 (Sanders, 1982), and we have chosen four corporations for multiple-case studies. In order to ensure the representation of the cases we chose, we believe that the selected cases should belong to four different industries, which has become a standard in this article.

The other standard is large-scale, strong management and probe in performance evaluation for a long time so it can make basis for the subjective performance evaluation analysis. The selected four corporations in this article have better performance, in which CNGC and Minmetals, the two state-owned enterprises, have been evaluated A performance for several years by SASAC. Besides, the CMBC and UFIDA listed on the finance Performance and the market price performance are at the level of industry-

leading, which determines that the practice in their subjective performance evaluation is of significance on promotion and demonstration. In this paper, the investigation on business cases is divided into three phases. In the first hase, the basic information of these business cases is gained by referring to internal and public data.

Internal data includes management system, such as performance evaluation. And public data includes some reports of the business cases on these companies' web sites, annual reports, and published journals. The second phase focuses on the investigation of basic information of evaluation and inspiration of the senior management, including overview of performance evaluation, the content, scope, methods and results of subject performance measures. The main target of the investigation is the related managers who design and carry out the performance evaluation system in the corporate cases. In the third phase, the explanation of related problems on subject performance measures is obtained through interviews which are mainly composed of open questions. The interviewed target is the issued surveys' target, and the interview time is 1-2 hours per person.

At least two researchers take part in each interview to guarantee the interview's validity. To form complete evidence chain, we would question closely according to the circumstances in the interview process to dig out the information. Company background and case information Overview of company backgrounds Corporate' names CMBC Minmetals CNGC UFIDA Nature ownership of Operating 2007 income in Listing (Y/N) Y N Y N Industry Finance Trade Manufacturing industry Software Private enterprises State-

owned holding State-owned holding Private enterprises (billion U. S. dollars) 76 169. 02 185.

21 1. 98Table 1 Basic information of business cases According to the interview, the summary of the application of the subjective performance measures in these case corporations is as follows: 5 Firm content forms Weight The applications of subjective performance evaluation purposes key measures 2 CMBC Set Subjective performance measures; To allow higher levels of subjective and objective measures to adjust the weights; ; Major accidents Minmetals CNGC UFIDA Set Subjective performance measures: Adjust the target objective measures Using the results of subjective measures to adjust the objective evaluationSet Subjective performance measures; Type of organization measures about 10% 5%-15%, Goal setting 10-40% Type of organization measures: Political knowledge, dedication and sense of responsibility, organization and management capacity; Goal ——1 20% Character style, the level of policy, decisionmaking efficiency, the ability to plan, control, coordination capability Market positioning, Significant innovation and product planning, reform initiatives whether or; Comprehensive not to evaluation of support management, major setting: Strategy, conduct and work projects in operation and ethics, etc. lace, and so management on initiatives to promote the efficiency and effectiveness To amend the the annual bonuses results of objective The performance linked to the measures, and appointment, of wages are promotion, Has little performancepromotion, job directly to do with promotion related pay changes, etc related to the indirectly promotion Table 2: the application of the subjective performance measures in case corporations 1. The evaluation

result of subjective measures in China North Industries Group Corporation has no alone weight. It is used to evaluate the result of objective evaluation.

That is to say, it is used to increase or decrease marks of objective measures, the range of which was between 5% and -5% 2. The company in this case set different subjective performance measure measures between operational units and executives in the group. Due to the limitation of the passage length, the relational table only lists the measures towards group executives. UY Shares even set different measures according to different operational characters of each executive. The table in the passage only takes performance measures towards the executive of a certain product line for example.? 6 Case study The application of the subjective performance measures Diversity of performance evaluation system With western corporations and the theory of practice, this article by the excellent performance of the four selected cases, without exception, the company also used the integrated performance evaluation system for performance evaluation of the executives, including all the financial measures, objective and non-financial measures, with a variety of features.

Moreover, from the case and evaluate the performance of the company's management practices in the development process, this trend is rising gradually, which increasing the proportion and the normative of the subjective performance measure is the focus and direction, in recent years, to improve performance evaluation system, such as Minmetals and CMBC have clearly written into the beginning of the performance of the signing of the contract. Except for the CNGC, the three other case corporations connect

the results of the integrated performance evaluation which includes the subjective performance measures closely to the incentives to the top management. Not only directly related to the level of salary and annual bonus, the results of subjective performance measure are directly connected to the change of the position (mostly demotion) in CMBC and UFIDA. It shows, to some extent, that subjective performance measures to the executives play an important role in incentives. Subjective measures vs objective measures Previous studies revealed that the weighting of subjective performance measures is about 20%-30% in Western countries(Bushman et al.

, 1996; Gibbs et al. , 2004; Nisar, 2007). This paper shows that consistent with the theory, in the company or the evaluation of executives; Objective measures continue to occupy a significantly higher proportion compared with subjective measures. However, compared to the weight the subjective performance measure of the 20%-30% of western enterprises, In addition to the Minmetals of subjective measures of the weight of relatively high(organization factor5%-15%, goal setting10%-40%. The general manager and vice general manager, two types of targets the total weight of 35%), the other three corporations have lower weight (CMBC 10%, UFIDA 20%, Group of weapons has more limited use of subjective measures about5%-5%, the main reason of limited use is concerned on the reliability of the subjective performance measure. As the Group of weapons of those interviewed said, "we are not confident in the accuracy and reliability of subjective performance measures because the rating results of the subjective performance measure are basically very close.

" Influencing factors of the application of subjective performance measures Economic determinants Research activities are taken mostly in the headquarters of the four corporations. Since it is almost impossible to imply the strategies to the subsidiaries from the headquarters, this research is based on the Prospector-Analyzer-Defender Strategy (Miles and Snow, 1997). Based on the analysis of the strategic reform and management status, we hold that among the four corporations, UFIDA focuses on the new product and opportunities and its core compatibility is marketing and R, which applies a Prospector strategy, while the other three corporations apply the Analyzer strategy, avoiding the risk and discovering new product and service at the same time. According to this analysis, UFIDA should use more subjective performance measures than those three corporations. It turns out that the subjective 7 erformance measures in UFIDA have a percentage of 20%, lower than Minmetals, although it is higher than CMBC (10%) and CNGC (5%). In a horizontal view, the strategic factors are not essential, but in a vertical view, all of the four corporations emphasize the changes of strategies which have a critical impact on the design and application of the subjective performance measures.

Before 2002, the non-quantitative measures (subjective measures) in Minmetals were mainly legal operations, implementation of rules and regulations and qualifications of bonus for management. After 2002, as strategic became the managerial core of the corporation, which requires longer and multiple perspective on management, performance management changed significantly. The weight of subjective performance measure was increased and the concept of it became rich (It set organizational and

objectivesetting subjective measures). The developing phase the enterprise is in also has influence on the application of the subjective performance measures. China North Industries Group Corporation's performance evaluation was only financial measures before 2003 and after 2003, as the development stage turned from relief to development and strategic objective turned from reversing losses to making profits, the flaws of financial measures such as superficiality became increasingly obvious; thus performance evaluation began to integrate some subjective measures such as important innovation, reformation action and evaluation of comprehensive managerial evaluation. Mingsheng Bank has changed and improved its management pattern and methods according to the characteristics and strategy of the company's development stage.

For instance, during the rapidly expanding period from 1996 to 2003, non-quantitative measures mainly aimed at inner management of each branch. When it went into adjustment and improvement period after 2004, as the direction of the operational structure was adjusted, the use of non-quantitative subjective measures were carried out around inner control and control operational risk control, etc. UY Shares indicated that the use of subjective performance measure is correlated with the different demands in different development stages. Due to various reasons, detailed information has not been obtained. Institutional factors In addition to the economic factors listed above, the research shows that institutional factors have an obvious influence on the application of subjective performance measures, especially on the choice of subjective measures. Previous studies mainly

focus on the weight of subjective appraisals in motivation covenant, that is, the using extent of subjective appraisal system.

However, there is nearly no paper working on the content of subjective appraisals. In fact, the appraisal content or indication is also a critical dimension for researching appraisals system. Through our survey, the four case corporations have great differences when choosing subjective measures. The measures reflect the company's background and characteristics, mainly about whether the company is a state-owned enterprise or not. The choice of subjective measures and weights obey the assessment standards of the SASAC. For example, Minmetals has a statement it in its own evaluation standard that the assessment standards of the SASAC should be the principle.

It indicated that the subjective measures were mainly concerning about safety, legality and spiritual civilization, which reflected the role of government officials. Taking Minmetals as an example, the group managements' organizing measures are mainly about: politic ideologies, ambitions and responsibilities; Operational managements' measures are spiritual civilization, legality, contribution to stockholders. Compared to state-owned corporations, measures of subjective performance measures seem to be simple and direct in private enterprises. Measures are mainly designed according to its own operation style and culture. For example, UFIDA designs its subjective measures according to its operation style. Taking product-line manager for example, the subjective 8 indicator includes market position, product specification and big program support, etc.

CMBC's subjective measures are not so easy and specific as UFIDA, but it is still connects with operation and business straightforward. Just like what the interviewee from UFIDA said, the more the measures connect to business, the easier it can be understood, and the more obviously the results are. On contrary, the measures like politic ideology, ambition and responsibilities seem a little bit abstract, which is difficult to quantify. In the end, the abstract measures may end up with "appearance over subjectivity". Effects and influencing factors in the subjective performance measures Research on the effect and function of the subjective performance easures in the four enterprises show different results.

UFIDA finds the evaluation very effective while the other three corporations find "basic objectives achieved", "better than none", and "so so, only for reference". The reason for this is the "deviations" of the evaluation. Except UFIDA, three of four case corporations in this paper agreed that the subjective evaluation of the company got too high scores, the gap was small and the superior' partiality as well as subordinate' please existed at different levels. These problems affected the objectiveness and fairness of the subjective evaluation, such as in the Weapons Group, the subjective evaluation "high scores, especially the management-scoring, basically, no difference". Basically, this is the same as the results of what proposition three expected and western literature. UFIDA is an exception, which believes "Basically, the results of subjective evaluation are objective and fair.

"There never incurred doubt on results of evaluation. This may be related to specificity and operability of subjective measures-design as above

mentioned. Or we use the respondent in UFIDA to explain, that is "This is a characteristic of private enterprises. Executives of private enterprises are of working-type, performance at a glance, can not be vague." As for the formation of "deviations", three corporations out of four mention the impact of the leadership style, superior-subordinate relationship, and other cultural organizations. For example, The Minmetals and CMBC also referred that, when the superior mark, they will take some problems into account, such as "who will see the scores, whether the scores will be informed to others, and whether it will affect the relationship with the person being evaluated".

UFIDA raises the score is usually psychological, "In any case, the money for reward is not private, the point system would be lenient, try to mark a higher score to the subordinates, so that the relationship will be harmonious. The corporations in the case consider organizational culture to be an important factor when using subjective appraisals. The advantages of subjective appraisals can be used greatly only if there is a fair and equal atmosphere and if members trust each other. Or else subjective appraisals may turn out to be "casual appraisals", which are full of bias and flattery. In this case, subjective appraisals should be restricted since the harms caused by subjective appraisals may outweigh the benefits. Besides, technical factors should be paid attention to.

CNGC mentioned, the reason that evaluation was too broad and focused was mainly due to the superior" lack of evaluation evidences and failure to get scores". Despite the organizational culture gives an obvious impact on evaluation " deviation", organizational culture reflects the long-term

business development and accumulation of sediment, it is not able to be changed in the short-term. From a more pragmatic point of view, managers of case corporations pay more attention to technical problems (including information gathering and evaluation procedures, etc). They also try to design more scientific subjective evaluation methods and procedures to minimize the culture impact caused by the "random" and "artificial". The detail problems concerned by case corporations include: who will score, who is going to aggregate data, does each indicator has specific meaning and clear support? How to handle scoring scale, and how to disclose the information etc.

They believe "The omission of any details of the evaluation system as a 9 whole will lead to the failure", "implementation details are very critical". The Minmetals implement an anonymous scoring targets on the type of organizational measures; Weapons Group requires the evaluation unit was involved in the subjective evaluation of the content of the major issues "day-to-day account" so that at the end of the score of "evidence-based" information to reduce search costs; CMBC not only give a clear definition on each of the subjective measures, they also cited each of the measures relative to the general standards of conduct projects as well as scoring. The case corporations believe carrying out proper design for every detail of the evaluation will help to improve the ease of "too broad evaluation", "focus on the results of the evaluation". Conclusions and limitations Subjective performance measures are one of the topics that are neglected in China. It is the first paper to investigate systematically and comprehensively into

Chinese corporations practice and it's meaningful for further academic research and management practice.

Through analysis on fourChinese corporations we can see that, financial and non-financial, objective and subjective and other comprehensive performance evaluation system are included in the application of management performance evaluation and contract incentives, which is also more or less in line with the current performance management theory and practice and management development trend advocated by western enterprises. The weight of subjective performance measures (nonquantitative measures) in management performance evaluation is gradually increased, and the methods and procedures have constantly improved in order to enhance the effects of the results. Application of the subjective performance measures by the case corporations is mainly influenced by the strategy, development phase, organizational culture and other organizational characteristics and also significantly influenced by China's specific development phase and institutional background, which shows that the specific factors of Chinese corporations can not be ignored when studying the classical western research. As a whole the application of subjective performance measures in Chinese corporations is not ideal, this is rooted in the arbitrary use of subjective evaluation which leads to evaluation bias such as broad evaluation, management "Favoritism", and so on. The impacts to effects of the subjective performance evaluation are a more prominent problem in Chinese unique "Relation culture" background than in western enterprise. Culture will not change overnight, but the case shows that the

evaluation bias can be reduced and mitigated by the technical design on subjective performance evaluation.

Subjective evaluation does not mean "arbitrary" evaluation, and the key issues regarding how to make subjective performance measures objective and qualitative performance measures quantitative through design of evaluation contents, standards and procedures. It is useful for management to know that any management methods or tools have no distinction of good or bad and the key is how to use and under what conditions to use. Compared to previous literature which does descriptive statistics and factors analysis of subjective performance evaluation mainly based on large sample analysis, this paper focused on the issues about how and why corporations use subjective performance evaluation through case study which is informative and detailed. What's more, compared to western literature concentrated solely on the impact of economic factors (organizational characteristics such as the quality of objective measures nd strategy) on the application extent of subjective evaluation, this paper finds out particularly for Chinese corporations which are in special institutional and cultural background, the impact of culture and institution is equally important. 10 The following limitation of the present study should be noted: ? the limited sample scale. Though multi-case study enhances validity of the contents and conclusions, the internal and external validity and credibility of the four cases can't be overestimated.

? limitations of "interview" method. The four cases are acquired mainly through face-to-face interview. We believe that, compared to solely " letters", "telephone" and other indirect interview, face-toface interview will ensure the objectivity and adequacy of materials. But we can't prevent the inherent drawbacks of interview method such as "too much flexibility" and "hard to copy". In particular, the interviewees mostly are designer, operator or management of subjective performance evaluation system, so this research lacks of direct interviews with employees who are evaluated though every interviewee admits he is also evaluated. The comprehensiveness of materials needs improving.

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