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A comparative study between Chinese and Swedish Universities

- Performance Measurement Systems in Non-profit Organizations

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Abstract

Title: A comparative study between Chinese and Swedish Universities - Performance Measurement systems in Non-profit Organizations

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Five key words: Performance measurement system, university, internal performance measurement system, external performance measurement system, non-profit organization

Purpose: The study explores and analyzes the performance measurement systems in public organizations, in particular, universities in China and Sweden. The research focuses on understanding the internal performance measurements in place and the external factors which shape its internal performance measurement system.

Methodology: The authors used both the qualitative and quantitative approach, but more emphasis was put on the qualitative method, such as case study and interviews.

Theoretical perspectives: The theoretical references are from academic literature, professional articles and books pertaining to performance measurement systems, mainly in non-profit organizations. Material downloaded from the internet is also included.

Empirical foundation: In the empirical section, the authors gathered information from face-to-face interviews, telephone interviews and questionnaires sent to Business Schools in Shandong Economic University, Nanjing Forestry University, Blekinge Institute of Technology and Lund University concerning the application and main indicators of its external and internal performance measurement systems.

Conclusion: The performance measurement systems in place within Swedish universities are more developed as compared to Chinese universities. There is a greater need for accountability due to the relatively open Swedish Higher Education system while there is little to motivate Chinese Universities to account for their performance.

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Chapter 1: Introduction

1.1 Background

In a highly competitive environment prevalent in the 21st century, all organizations must ensure that they fully utilize their given resources efficiently to survive in the competitive market. Therefore, an efficient control system is essential for organizations which strive to monitor and to improve on their performance.

According to Rotch (1993), a management control system is made up of six different components: strategy, organization structure, performance measurement, direction, motivation and incentives. Simons (1995, 2000) has reformed and improved the concept of a management control system into "performance measurement and control systems". Performance measurement is regularly being highlighted and has arguably become the most important element in the management control system.

As a key component in the management control system, performance measurements can be applied throughout an organization to help fulfil its goal and to evaluate both the organization's and its staffs' performance. Performance measurement has been recognized to be a critical tool for motivating personnel, supporting decision making, fostering organizational learning and continuous improvement. Thus, performance measures are tools to understand, manage, and improve organization activities (Franceschini ,Galetto,Maisano, 2007). Due to its increasingly important role in the last few decades, academic and managerial literatures have paid growing attention to the area of measuring business performance.

All organizations, no matter public or private, require an effective evaluation of their performance for its development, growth, and stability in today's competitive world. Through this evaluation, they can assess the efficiency and effectiveness of their organizational plan, processes, and human resources (Toraj Mojibi et al, 2007).

Performance measurement systems have traditionally been developed for use in private corporations. However, in the recent years, other public and non-profit organizations have increasingly adopted the use of performance management systems to manage performances and to enhance efficiency. Due to the inherent different needs of corporate and non-profit organizations, performance management systems have been modified to suit different needs.

As international competition intensifies, numerous countries have enthusiastically invested in higher education in an effort to enhance their competitiveness (Chen, Shun-Hsing et al. 2009). The competitive nature for funds and scare resources in the higher education field is increasingly similar to the situation which private corporations face. While universities play a progressively important role in today's society, there is a lack of research in regards to the performance measurements within these universities. The increased competition for funds and accountability in universities has resulted in a need for an efficient performance management system in place to meet these new demands. Thus, we chose to focus on universities to represent public organizations, so as to understand the use of performance measurements in our study.

For a performance measurement system to be successfully implemented and utilized in universities, we would need to understand how external and internal indicators are chosen, and also how this information helps in maximizing the efficient allocation of scare resources. Through our research, we hope to identify the factors which affect the performance measures used, and how various components of the performance measurement system enable the university to monitor its performance and to ensure the efficient utilization of its resources.

1.2 Problem identification

Performance measurement systems are widely used today. Research and literature about performance measurement for private organizations are extensive. Researchers such as Robert Kaplan have advocated the use of performance measurements as a tool for strategic management. Many other models have also been created to help organizations to measure their performance. Comparatively, less attention and less research has been done for performance measurements in non-profit organizations, specifically, universities.

However, we would like to argue that more attention should be given to performance measurements in universities. Universities provide in-depth knowledge, seek academic development, educate students, and coordinate national development demands. The core functions of a university are basically education, research and service. In the last decades, there is an increasing pressure on states to gain control over higher education resources as societies throughout the world are requiring an ever changing combination of highly skilled workers and knowledge that only education can provide (Alexander, 2000).

In recent years, there has been a new economic motivation, driving states to pressurize institutions to become more accountable, more efficient and more productive in the use of publicly generated resources. Society increasingly requires universities to become more responsive to national economic needs and governments also demand increased performance. The relationship between governments and higher education is changing. State governments are placing an increasing burden on higher education to play a pivotal role in augmenting the skills and workers' ability to develop and use technology. This results in the enhancement of productivity and the strengthening of the state's economic position (Alexander, 2000).

Alexander (2000) has highlighted that higher education provided by universities has become an essential component of national economic investment strategy. In a competitive and global environment, investments in universities play a vital role for future economic growth. In nations with comparatively sophisticated higher education systems, governments are adopting new economic and managerial strategies to assess and compare college and university performance. Government reporting and funding mechanisms for higher education are in the midst of a major transformation from complete input-based systems to the adaptation of more competitive outcomes-based approaches (Barnett & Bjarnason, 1999; Brennan, 1999; Ewell & Jones, 1994; Gilbert, 1999; Layzell, 1998; Schmidtlein, 1999 in Alexander, 2000).

Taking a broad view of the European continent, it is evident that higher education is in the midst of an immense transition period during which performance based accountability reforms are widespread. There is a need to monitor and assess institutional performance among European nations with mature higher education industries (Alexander, 2000). While nations with comparatively sophisticated higher education systems would have already adopted fairly comprehensive performance measurements, other nations with a less sophisticated higher education system may lack behind in the adoption of such performance measurements. Thus, we could infer that the use of performance measures in universities differ considerably between different societies and cultures.

In order to understand the factors which affect the choice of performance measures in universities and how it could contribute to enhanced efficiency, we chose universities which have different backgrounds.

China is one of the largest countries in the world and it is a rapidly developing country. Sweden is a western developed country, which was ranked the 4th most competitive

economy in the world by the World Economic Forum 2009-2010 competitiveness index (http://www.weforum.org).

As China is still at its developing stage, we could anticipate that Sweden has a relatively more sophisticated higher education system characterized by an extensive use of performance measures when compared to universities in China. We would like to study the distinction between the uses of performance measures within universities in these two different environments, and to understand the factors which affect the use of, or a lack of use of performance measures. At the end of the study, we hope that a comparison between the different performance measures in these different environment contexts could result in learning outcomes for a more efficient performance measurement model which could give a holistic picture of its educational quality and productivity.

1.3 Objectives

In our study, we explored the performance measurement systems in public organizations, in particular, universities in China and Sweden. Our research focuses on understanding the internal performance measurements in place and the external factors and actors which shape its internal performance measurement system.

1.4 Scope of the study

We aim to understand the performance measurement systems being used in two Chinese universities and two Swedish universities, and to compare these different systems. The chosen universities are Shandong Economic University, Nanjing Forestry University, Blekinge Institute of Technology and Lund University. Our study is mainly concentrated on the business school level of these four universities. Extensive information is collected about these business schools through many different channels, internally and externally, before a comparison and analysis of the different performance measurement system is made.

1.5 Outline of the study

Our study is disposed as below:

Chapter 1: Introduction

First, the subject matter of this thesis and its development is briefly introduced in the background. The main developments in performance measurement within the management accounting field is also highlighted before we narrow down the discussion to focus on the development of performance measurements for non-profit organizations,

specifically universities. The main driving force behind this topic of research is due to the lack of attention given to performance measurements in schools and the many new developments and challenges universities face today.

Chapter 2: Literature Review

In this section, we have reviewed literature in three main areas: performance measurements, a comparison between the performance measurement in public and private organizations, Asian (China) and European (Sweden) sectors and performance measurements in public sectors and universities. This section highlights the main developments of our research subject in detail and the background around which we have developed our research question.

Chapter 3: Case Methodology

Our research methodology is introduced in four phases where we decide on the required information and research method needed, justifying our choice in using the case study, interview approach and the selection of our cases and collection of data. In addition, the trustworthiness of the study is also discussed. This section highlights the thought process behind the execution of our research and recognizes the limitations behind our research method.

Chapter 4: Empirical Research

Upon the extensive collection of data, we describe the performance measurement systems in place and the factors which influence them. The data of the four different performance measurement systems are presented after a short introduction of the universities. We have further divided the information into 'external' and 'internal' which represents the different natures of these performance measurement systems.

Chapter 5: Analysis

This section focuses on the analysis of the data collected and a comparison between the different performance measurement systems is made. We focus on the different factors and actors involved which results in the difference performance measurement system used and also try to identify factors which contribute to an efficient performance measurement system for universities.

Chapter 6: Results and Conclusion

Here, we highlight our main findings and compare our results with the general trend of the literature. We also discussed our findings in regards to our research parameters and the learning outcomes of this study.

Based on our research and the resultant findings, we also suggest various areas which could be explored further to contribute to the development of performance measurement systems for universities. As our research is restricted by the small sample size and a lack of resources, we believe that more in-depth studies of universities' performance measurement systems could result in benefits for the higher education field and the society in general.

Lastly, we draw our conclusions based on the information collected and our analysis.

Chapter 2: Literature Review

2.1 Performance measurements

Performance measures are influenced by organization's size, industry, structure, culture and leadership. Performance measurement is the process of quantifying the efficiency and effectiveness of action, where measurement is the process of quantification and action leads to performance. A performance measure can be defined as a metric used to quantify the efficiency and/or effectiveness of action and a performance measurement system can be defined as the set of metrics used to quantify both the efficiency and effectiveness of actions. (Neely, Gregory, & Ken, 2005)

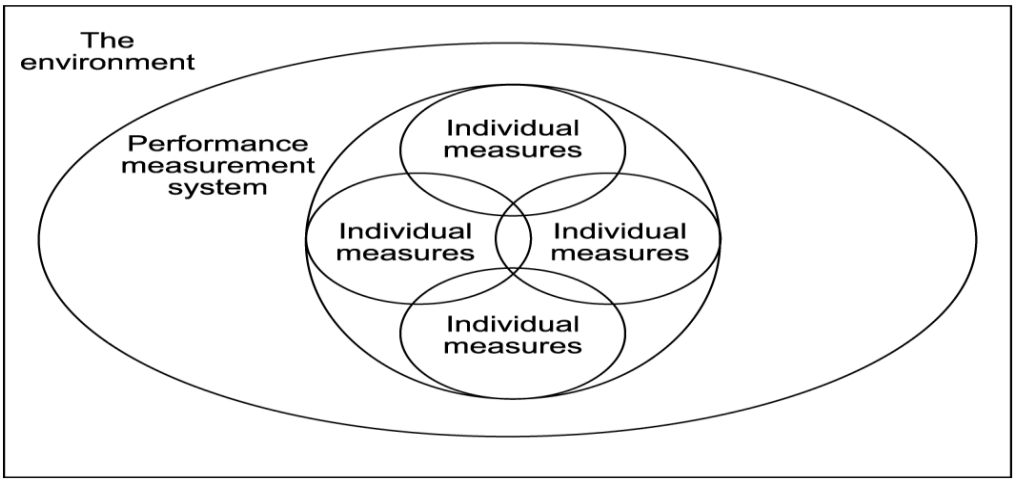
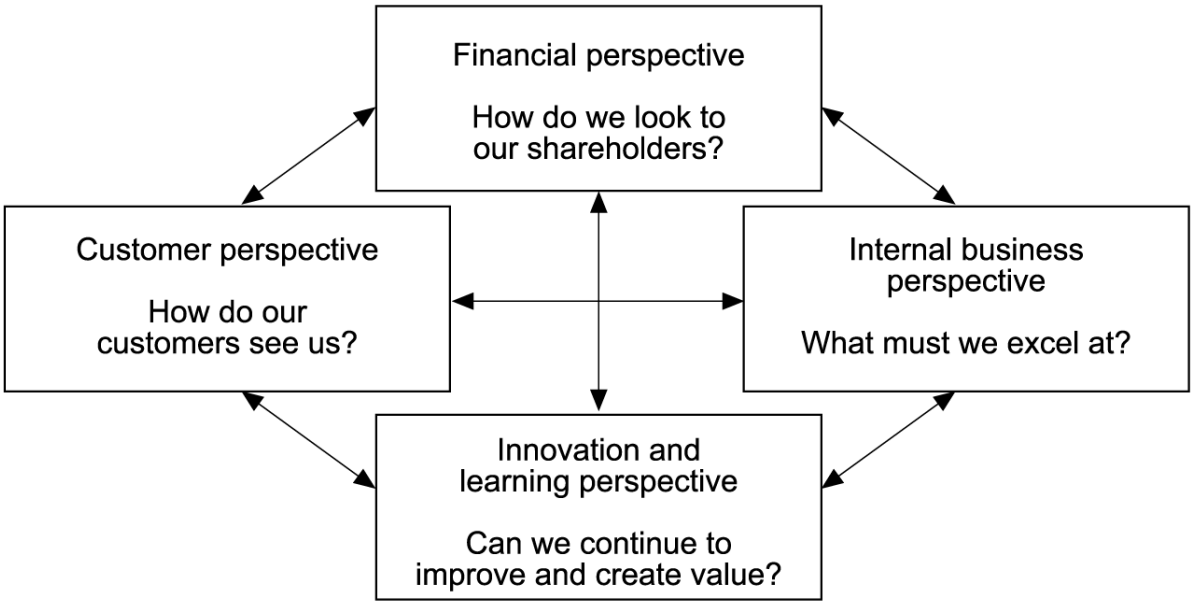


Figure 1: Performance Measurement System (Source: Neely, Gregory, & Platts, 2005)

As Figure 1 shows, all performance measurement systems consist of a number of individual performance measures. Performance measures need to be positioned in a strategic context, as they influence what people do. One of the problems with the performance measurement literature is that it is diverse and the focus has been on many different aspects (Neely, Gregory, & Platts, 2005).

Performance measures can be used to influence behaviour and such management control systems can also be used as a means of surveillance, motivation, monitoring performance, stimulating learning, sending signals or introducing constraints (Neely, Gregory, & Platts, 2005).

Upon the development of a performance measurement system, it has to be implemented and to interact with a wider environment – internally within the organization and externally, within which the organization competes. Thus, consistency with the organization's culture is a pre-requisite for success. A truly balanced performance measurement system would also provide managers with information relating to two distinct aspects of its external environment – customers and competitors (Neely, Gregory, & Platts, 2005).



Source: Adapted from Kaplan and Norton (1992)

Figure 2: Balanced Scorecard (Neely, Gregory, & Platts, 2005)

Neely, Gregory, & Platts (2005) has pointed out that one of the best known performance measurement frameworks is Kaplan and Norton's (1992) "balanced scorecard" (Figure 2). Its strength lies in the way it seeks to integrate different dimensions of performance and it is based on the principle that a performance measurement system should provide managers with sufficient information to address the following questions:

. How do we look to our shareholders (financial perspective)?

. What must we excel at (internal business perspective)?

. How do our customers see us (customer perspective)?

. How can we continue to improve and create value (innovation and learning perspective)?

There is an extensive literature concerning performance measurement for private organizations to facilitate efficiency. However, not all of them are relevant for public organizations as they have different objectives. Different performance measurements are needed and they would be further examined in the following sections.

2.2 Comparative review of performance measurements

2.2.1 Comparative review in public and private sectors

The lines for dividing for-profit and not-for-profit organization with respect to performance measurements are blurring. However, issues of performance measurement for non-profit organizations are complicated by the absence of an overarching measure like financial performance and by the mission-directedness of the organization. Thus, non-profit organization faces the dilemmas of knowing when it is doing well, being able to make changes or to redirect resources when members of the organization suspect it is not doing well with respect to its 'market' as they can still attract resources by non-market means from nostalgic or believing donors (McKevitt and Lawton, 1994). Forbes (1998) noted that non-profit organizations lack the simple elegance of a financial measure – such as profitability or shareholder returns – used for profit organizations to assess their performance (Kaplan, 2001).

While the performance management systems have been widely used and researched about for private corporations, it is not as widely used and researched about for public and non-profit organizations. Higher education is one major service sector that has been slow in

transition into quality management. Universities and colleges generally have had a superficial awareness of TQM (McCarthy and Keef, 1995:185 in Turk, 2001). Unlike private corporations which are profit-maximizing, universities seek to maximize its teaching quality. Thus, it makes performance management more challenging as financial indicators such as revenue and profits are not meaningful to universities. Other non-financial measures and indicators have to be in place to manage performance in universities.

Appraisal and management of performance has recently attracted much attention in European universities and colleges (Turk, 2001). Thus, we would like to study how performance management systems are being used and implemented in European universities. In addition, as Asian universities are gradually gaining prominence, we would like to make a comparison to understand how different or similar the performance management systems in Asian (China) and European (Sweden) universities are.

2.2.2 Comparative review between Asian (China) and European (Sweden) sectors

For our comparative research study, we chose universities in China and Sweden, and it is important to understand the economic backdrops.

China has mostly completed the first transition from a command economy to a market economy and it is currently inching towards a second transition, which involves building national rather than regional markets. The transition from regional to national markets is imperative so that Chinese firms capable of competing nationally and, ultimately, globally can emerge (Marshall W. Meyer 2008). As a result of this trend, organizations need to improve themselves in every aspect to meet the new competition ground and this includes improving on their performance measurement systems.

Sweden is a highly developed country with many characteristics of a developed society. Its social structure and organizational system is relatively matured in comparison to China's economy. In 1995, Sweden became a full member of the European Union. Becoming a member of the European Union has, together with the general trend towards globalization, further increased Sweden's internationalization and foreign Trade (Oxelheim, 1996; Black and Gilson, 1998).

In the context of Sweden's economy, it is under the political economy of Scandinavia, which is characterized by economic transparency (in both governments and firms), high taxes, and an extensive public sector. In such an economy, strong demand-side intervention on the part of consumers is accompanied by limited supply-side intervention on the part of

producers. While direct public involvement in companies is moderate, poorly performing companies are generally forced into bankruptcy, or pressured to restructure. This is also the case for public traded companies with partly government ownership (Trond Ranoy and Jim Nielsen, 2002).

On the other hand, Chinese non-profit organizations have developed a bureaucratic management system under the centralized economy. Their operating procedures were mainly established to meet policy and/or reporting requirements, and there is a lack of a market-driven culture. However, the limited success of its commercialization efforts showed that market demand alone is not sufficient in bridging the gap between technological potential and commercial exploitation (Ronald Zhao, 2003).

Management control systems based on clearly defined property rights is of critical importance to management in a transition economy, and market-based financing is the key to an effective control system. The difficulty of obtaining funds and budget constraints differentiates the centralized and decentralized models of management (Ronald Zhao, 2003).

In contrast, in regards to the development of performance measures in Sweden, the mainstream forms of management control portray management control mechanisms as value-neutral and an instrumental means for coordinating organizational activities (Edenius, Mats; Styhre, Alexander, 2009). However, more recent studies of management control have emphasized the more normative, cultural, ideological and subjective aspects of management control (Mir et al., 2003).

There is little literature portraying the application of performance measurements in China, and important ones are the OEC (O stands for Overall; E stands for Everyone, Everything, and Every day; C stands for Control and Clear) management control system which helped Haier Group achieve competitive advantage (W. Lin, Thomas, 2005). The Balance Scorecard is also applied in manufacturing firms that demonstrate their impacts on product development on the whole firm and its utilization for the motivation of people, especially product development staff (ZhongHang Bai; Peng Zhang; Fang Liu; RunHua Tan, 2007). On the contrary, much literature demonstrates management measures relating to profit, service efficiency and effectiveness in Sweden. Researchers such as Mosad Zineldin, and Torbjorn Bredenlow, (2001) described the use of performance control system to develop competitive advantage that supplies customers with superior value.

2.3 Performance measurements for non-profit organizations and universities

There is a growing interest in performance measurements for the public sector due to the pressures on public sector expenditure (Higgins, 1989). Non-profit organizations are increasingly focusing on accountability and performance measurement as there is an increased competition for scare donors, foundation and government funding. However, many public performance reports and internal performance measurement systems of these organizations focus only on financial measures even though their success is contingent upon how effectively and efficiently they meet the needs of their constituencies. While financial considerations can play an enabling or constraining role, it is rarely the primary objective (Kaplan, 2001).

Traditionally, universities' primary objectives were the pursuit and transmission of knowledge. However, in recent years, there has been an emphasis on effectiveness and efficiency. This has resulted in the proliferation of the use of performance measurements within universities. In recent years, regardless of terms being used, all universities will have carried out some sort of strategic appraisal of their position in terms of internal and external factors (Higgins, 1989).

According to Layzell (1998), developing performance measurements to access and monitor the effectiveness of universities is based on the desire for greater accountability. Owing to an ostensible concern for improved public-sector performance, outcomes indicators have emerged as an instrumental economic rationality devised to improve institutional efficiency and effectiveness. Performance-based policies have clearly emerged as a critical tool for resource allocation to public colleges and universities as governments expect performance-based accountability. Tools such as scorecards are being developed by governing officials to compare institutional performance measurements (Alexander, 2000).

Today, universities with educational missions are required to address the necessities of a national economy in a competitive global marketplace. While governments scrutinize the overall progress and performance of universities in addressing the economic needs of the state through the use of fiscal incentives and disincentives; universities are expected to compete intensely for additional resources based on pre-determined performance objectives. Thus, such performance-based system places responsibilities on the universities and individual departments for improvements (Alexander, 2000).

The main objectives for universities could be regarded as teaching; research and scholarship; and providing various other social benefits, in particular contributions to 'national culture'

and perhaps making useful contributions to the lives of their local communities. Thus, the organizational effectiveness of a university differs from private organizations for which performance measurements were originally designed for (Higgins, 1989).

Universities could be seen as offering three major categories of output: (i) highly qualified manpower; (ii) research and scholarship; (iii) various other social benefits such as contribution to 'national culture' or valuable contributions to the life of their local communities. However, some of these outputs could be difficult to measure (Higgins, 1989).

Due to the recent developments in the public sector, there is a need for a good management system that must be capable of indicating how resources are deployed and to measure the outcomes that have actually been achieved. In other words, performance indicators which help us in accessing both inputs and outputs within the university in relation to its objectives are needed (Higgins, 1989).

Drucker (1990) argued that educational institutions are non-profit organizations that should learn from businesses for effective management models and that businesses should also learn from non-profit organizations for models of how to manage with a mission (Chen, Shun-Hsing et al. 2009). Non-profit organizations have no survival pressure and external competition is limited. Thus, it is not easy to establish certain measurement performance system while the society becomes increasingly pluralistic and competition increases; service organizations typically limit their focuses on mission, strategy, and performance management.

Higher educational establishments continually need to re-evaluate course offerings, testing/grading procedures, admission requirements, student services, and the employee skills and personal traits required by hiring firms (Willis, 1999: 997 in Turk, 2001). Teaching quality is very much dependent on the qualifications and research of academic staff. Research output and quality teaching is also important for the future success of a university as it enhances its reputation and helps attract students. As such, new performance targets such as number of doctoral students, graduate students, MBA students, research contracts and publications become important (Pratt, 1999: 49-50 in Turk 2001). More non-financial indicators are needed to manage performance in higher education establishments. Thus, the more criteria presented, even without rigid detailed scoring scales, the better the evaluation will be. Statistical performance indicators should inform judgment, not replace it (Turk, 2001).

The overall approach to performance measurement in universities clearly differs from traditional private organizations and possesses considerable implications for the whole philosophy and culture of universities and for individual members. Performance indicators can be categorized under three major categories (Higgins, 1989):

- Internal – e.g. first degree graduation rates, success rates of higher degrees, attraction of research funds

- External – e.g. acceptability of graduates in employment, staff publications, patents

- Operating – e.g. unit costs, staff/student ratios, staff workloads.

Table 5
Performance indicators recommended by Jarratt committee (UK, 1985)

Internal performance indicators
- market share of undergraduate applications (by subject)
- graduation rates and classes of degrees
- attraction of masters and doctoral students
- success rate of higher degrees (and time taken)
- attraction of research funds
- teaching quality

External performance indicators
- acceptability of graduates (postgraduates) in employment
- first destination of graduates (postgraduates)
- reputation judged by external reviews
- publications by staff and citations
- patents, inventions, consultancies
- membership, prizes, medals of learned societies
- papers at conferences

Operating performance indicators
- unit costs
- staff/student ratios
- class sizes
- course options available
- staff workloads
- library stock availability
- computing availability

Table 1: Performance Indicators for universities (Higgins, 1989)

The above table shows a list of suitable performance indicators for universities. They are classified according to whether they are internal, external or operating performance indicators. Input indicators relate to resources, human plant and financial employed by universities; process indicators relates to the deployment of resources by the university; output indicators measures what have been achieved and the products of the university (Higgins, 1989).

Universities might also regard wastage rates of undergraduates as important measures of non-performance. Other external performance indicators such as editorships of journals, officers of learned bodies, membership of research councils could also be included. Internally, utilization of plant in the context of classrooms could also be an important measure. While some indicators are relatively straightforward to measure, others present some interesting problems (Higgins, 1989).

Chapter 3: Research Methodology

We will introduce the research methodology in four phases. In the first phase, we focus on the required information and research method. In the second phase, we elaborate on our decision of using case study and interview approach. In the third phase, we select the cases and data collection methods. In the last phrase, we evaluate the trustworthiness of the study based on our research method and limitations.

3.1 Phase One - Required information and research methods

The aim of the thesis is to explore the performance measurement systems within universities in China and Sweden and try to identify the factors which contribute to an efficient performance measurement system, and factors which cause the different performance measurement systems being used upon comparison. Thus, we need to examine empirical data in order to discuss and analyze how performance measurement systems are used currently.

There is a vast array of information about performance measurement from articles, books, journals, internet and many other sources. However, these are all secondary data from previous researches. In addition, there is a lack of researches about performance measurement in public organizations such as universities. Thus, to be able to understand how performance measurement systems are used within universities, first-hand information from the people working with performance measurement in the universities, such as controllers or accountants, is required. We have selected two universities in China and two

in Sweden as our case studies and would interview people who are in charge of or work with performance measurement systems in these universities.

Two different methods/research strategies are commonly being used when doing business research: the quantitative method and qualitative method. It depends upon the nature of the task and the preference of the researcher to use either one of these methods, or a hybrid of both can be put together in order to achieve the desired goal (Flick, 2006).

Qualitative research can be construed as a research strategy that usually emphasis words rather than quantification in the collection and analysis of data. It emphasizes an inductive approach to the relationship between theory and research, and embodies a view of social reality as a constantly shifting emergent property of individual's creation (Alan, Emma, 2007). The main purpose of the qualitative approach is to describe a situation in detail to gain an in-depth understanding of a certain subject. Qualitative research is also about producing and analyzing texts, such as transcripts of interviews or field notes (Flick, 2006).

On the other hand, the quantitative method emphasizes quantification in the collection and analysis of data and exhibits a view of the relationship between theory and research as deductive, embodies a view of social reality as an external, objective reality (Alan, Emma, 2007). This method is used in measurements with the help of numbers, graphs, tables and other statistical tools.

In our research, we use a combination of these methods, both the quantitative and qualitative methods. Although we need the quantitative method to analyze the performance measurement in universities, more emphasis is put on the qualitative method, through the interviews and the case study approach in order to explore the research question in greater depth. This choice was made due to the character of our research topic, since the case study approach could better enable us to analyze how performance measurement systems are actually used and developed within universities. In-depth interviews with people who work in universities are the best avenue to obtain primary and relevant information for our research question.

Before deciding upon the methodology for our research question, we have also considered other research methods, such as focus group. A focus group may be defined as a form of organized discussion and it is a well-established methodology in social research (Klaus, 2005). The focus group technique is a method of interviewing that involves more than one, usually at least four, interviewees. There is an emphasis on questioning a particular fairly

tightly defined topic and the accent is upon interaction within the group and the joint construction of meaning (Alan, Emma, 2007).

The advantage of using the focus group approach is that the analyst can make observations of the participants' feelings, attitudes and reactions and understand why people feel the way they do in a way which is often hidden in the use of other methods such as surveys or telephone interviews (Klaus, 2005). While it is a good way to collect information, it is difficult to organize and select many professionals to come together at the same time due to time and distance constrains. Being merely master students, it might be beyond our ability to put together different professionals just for the purpose of our master thesis. It is also not economical to do field work in China for our research study due to time constraints. As the choice of a focus group is not viable, the case study and interview approach was chosen instead.

3.2 Phase Two - Case study approach and interview approach

According to Robert Yin (1984), the case study research method is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 1984). The most common use of the term associates the case study with a location, such as a workplace, group, community or organization. In our study, our case study is done in universities. Case study design often favours qualitative methods, such as participant observation and unstructured interview (Alan, Emma, 2007).

We would like to make in-depth observations using the case study approach to answer our research question. The research process with a qualitative approach and detailed examination will help us have a deeper understanding about the cases and our research questions. The case study approach also provides a systematic way of looking at events, collecting data, analyzing information and reporting the results. This could result in a sharpened understanding of why the instance happened as it did, and what might be important to look at more extensively in future research.

The data collected from our cases is mainly from interviews. As we are studying the performance measurement systems in Swedish and Chinese universities, we singled out the key people in both Sweden's and China's universities. Subsequently, we use both face-to-face and telephone interviews to collect our empirical data.

The interview is a common occurrence in social life; an interview is a conversation between two or more people (the interviewer and the interviewee) where questions are asked by the interviewer to obtain information from the interviewee. All interviewees are given exactly the same context of questioning about the topic. Telephone interview is the interview through telephone which involves the collection of first-hand data. The characteristics of the information obtained through the telephone interview are quick, targeted and rich.

According to Alan, Emma (2007), telephone interviews also have other advantages such as: on a like-for-like basis, they are far cheaper and also quicker to administer, easier to supervise, avoid the passive affect by the characteristics of interviewer. However, there are limitations in telephone interviews as telephone interviewers are unable engage in observation which may result in communication barriers and misunderstandings and the interviewees may not be as active without face-to-face interactions.

We have made preparations before the interviews, which include designing a questionnaire around the topic which we are to discuss. Before conducting an interview, we have sent out a basic questionnaire to give the interviewee an idea of the direction of the interview and the type of information we require. Subsequently, we posed more specific questions to guide the interviewees to answer the questions in an appropriate way.

3.3 Phase Three - Case selection and data collection

With a case study, the case is an object of interest in its own right and the research aims to provide an in-depth elucidation of it. When selecting the case, unique features, reliability, replicability and validity are needed. According to Alan, Emma (2007), there are five types of cases: the critical case, the unique case, the revelatory case, the representative or typical case and the longitudinal case. Any particular study can involve a combination of these types, which can be viewed as rationales for choosing particular cases.

To make a comparative analysis between Chinese universities and Swedish universities, we have to choose universities from China and Sweden as case studies. However, it is extremely difficult to choose from so many universities, especially in China which has almost two thousand universities. Also, we are aware that it could be difficult to make fair comparisons between Swedish universities and Chinese universities due to the difficulty in choosing universities with similar characteristics. For example, a ‘small’ university in China could easily be bigger than the ‘biggest’ university in Sweden. Thus, problems like this, among many others, make it difficult to make an ‘apple-to-apple’ comparison and might lead to unfair results at first glance.

We are also aware of the small sample size, which implies that the results could not be generalized. However, we hope to use the case study approach to understand the performance measurement system in place and examine the factors which causes their differences. We believe that increased understanding of universities' performance system could be a platform for further research in this less developed area. Therefore, before choosing universities for our case study, we gathered information about the universities, and also the background of the higher education field, both in China and Sweden.

By 19th June 2009, there were 1983 regular universities, 334 regular non-public institutions of higher learning, 387 institutions of higher adult education, and 2 non-public institutions of higher adult education nationwide within China (http://www.moe.edu.cn). However, only 7 top Chinese universities are accredited by EQUIS in November 2009 (Tsinghua University, Fudan University, Shanghai Jiao Tong University, China Europe International Business School, The University of Hong Kong, Hong Kong Polytechnic University, Hong Kong University of Science and Technology) (http://www.moe.edu.cn).

Sweden has 14 universities, 22 higher education institutions whose principal is the state and about ten private education providers (http://www.eui.eu/). Sweden is part of the relatively open Scandinavian university system. All Swedish institutions of higher education fall under the jurisdiction of the Ministry of Education and Research (except for the Swedish University of Agricultural Sciences) (http://www.eui.eu/).

Taking these factors into consideration, we chose two universities in China: Shandong Economic University and Nanjing Forestry University, as they are representative of most average Chinese universities. We have chosen them as case studies to understand the performance measurement systems in place within an average Chinese university without the EQUIS accreditation.

We also chose two universities in Sweden: Blekinge Institute of Technology and Lund University. One of the main reasons for the choice of these universities is that we have studied in these universities before and it is easier for us to contact the crucial people to obtain relevant information for our study. Moreover, they are unique and representative universities which are highly reputable.

In Shandong Economic University, we contacted people such as the vice president, coordinator and financial staff. All of them belong to the Faculty of Accounting and we sent them questionnaires through emails. In Nanjing Forestry University, we contacted the director of the Accounting Programme by telephone and two staffs in the financial

department through emails. For Lund University, we conducted face-to-face interviews with the vice-dean and controller. The head of Dean's office in the School of Economics and Management was contacted by email. In BTH, we contacted the Deputy Vice Chancellor in the business administration department at the School of Management through emails and telephone. As BTH is currently moving campus, we faced difficulties contacting the relevant people and we only managed to interview the Deputy Vice Chancellor. However, we managed to obtain information about the performance measurement system it uses currently and this has a relatively negligible impact on our research study as a whole.

The main emphasis of the collection of data is to answer our research questions. Thus, our focus would be on the collection of both primary and secondary data.

3.3.1 Primary data

Primary data is very important in business studies. It can be relied on because you know where it came from and what was done to it. It is also collected based on your experience, observation, communication and research. In research work, primary data from questionnaires, interviews, or case study is significant in providing answers to the research questions. However, the disadvantage of primary data is that it could be extremely time consuming and expensive to collect (Alan, Emma, 2007).

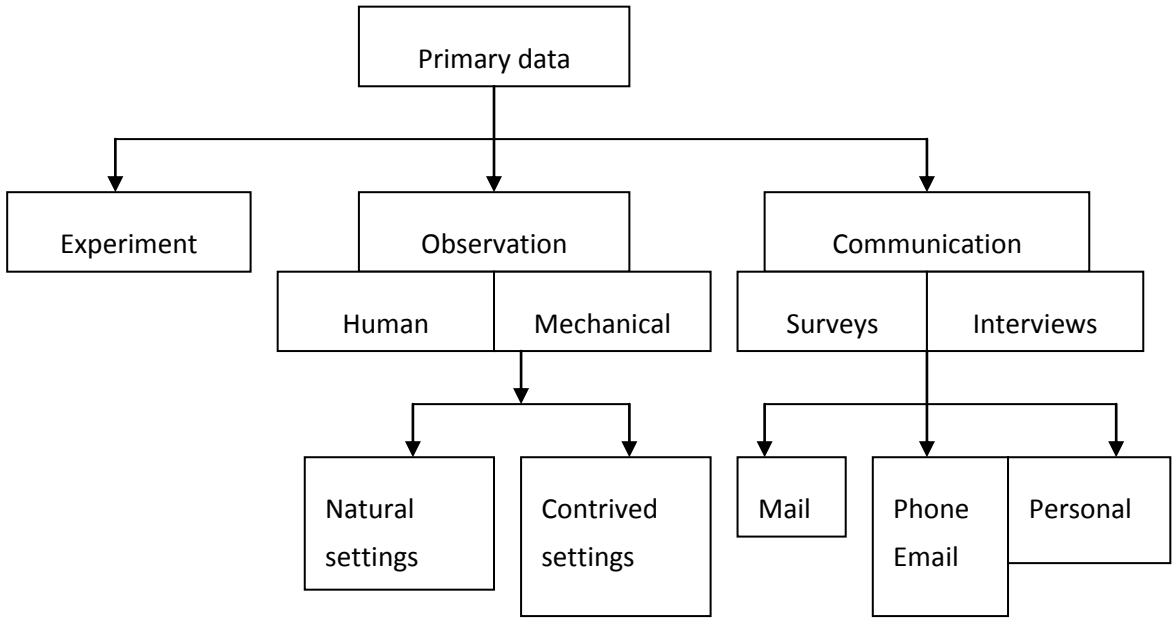


Figure 3: Primary Data Source

Source: Ghauri, P. & Gronhaug, K. (2005) "Research Methods in business Studies", 3ed. Prentice Hall

We gathered our primary data mainly through communication, such as face to face and telephone interviews, questionnaire with people who work in universities to obtain the relevant information needed. Comprehensive data was collected through these channels. In order to understand what indicators the schools use and the importance of these indicators, we listed some indicators in a table and used the "Expert scoring" method. This method requires the interviewees to grade the indicators between a score of 1 to 10 (1-not important at all, 10—most important) to point out the relative usage and importance of different indicators.

3.3.2 Secondary data

Secondary data is the analysis of data by researchers who will probably not have been involved in the collection of those data, for purposes that in all likelihood were not envisaged by those responsible for the data collection (Alan, Emma, 2007). A good way to begin the research is to collect secondary data to further support your concept, and to clearly define the goals of your research and the design that you anticipate using (Schutt, R., 2006). Using secondary data is cost and time saving. Moreover, secondary data is high-quality data from previous research. Secondary data can be divided into internal sources and external sources. We collected secondary data in many ways, through books, articles, journals, websites, and internal reports of universities.

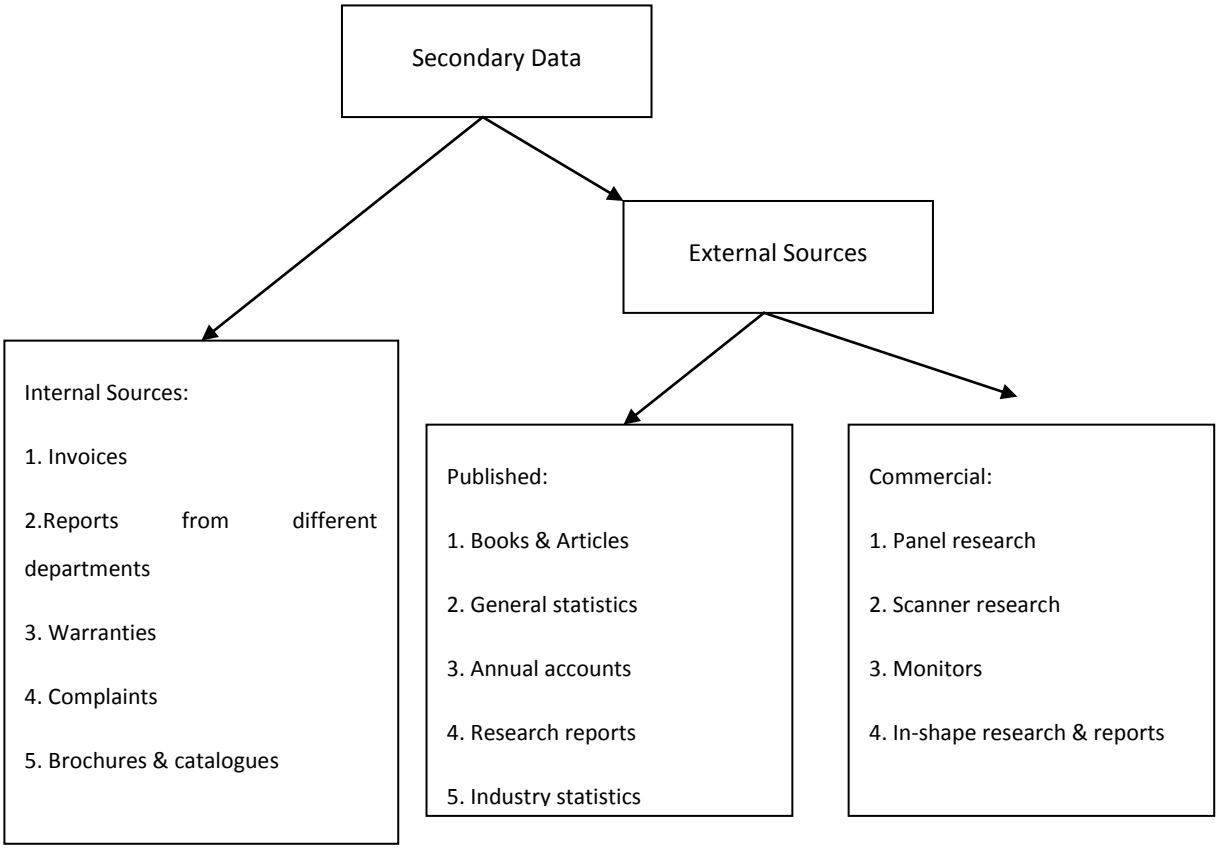


Figure 4: Secondary Data (Source: Ghauri, P. & Gronhaug, K., 2005)

In short, both primary data and secondary data are important and have their unique characters, both methods were used in combination when collecting data in order to gather the relevant information needed in our study.

3.4 Phase Four- Trustworthiness of the study

3.4.1 Limitations of the study

In our study, we have selected four universities in China and Sweden as the basis of our empirical research. These four universities represent the typical university within their respective society in the use and design of performance measurement systems. While great care has been taken during the selection stage, the limited sample size does not enable the results to be generalized. Moreover, the large number of universities in China implies that differences between the performance measurements systems used could be large.

In the chosen Chinese universities, data is collected by telephone interviews and e-mails. Data collected through such avenues could be questionable because of various factors.

Firstly, Chinese universities are reluctant to disclose much information, even non-financial figures and the general situation. It is difficult for us to ask in-depth questions during the interviews and throughout our research. Secondly, the interviewees might not be familiar with certain areas and there is a lack of concept and knowledge of some questions and indicators, such as social responsibility and some financial indicators. Also, the data collected through the research is mainly the interviewees' perspective. However, they answered the questions to their best knowledge. Thirdly, the interviews are performed by telephones and e-mails as the respondents were residing in China. Thus, due to limited time and resources, face-to-face interviews were not feasible. Lastly, the information of the two Chinese universities, Shandong Economic University and Nanjing Forestry University, is quite limited on the websites, especially in English. There is a possibility that some information is lost through translation as there might not be equivalents in both languages.

On the other hand, the information collected from Swedish Universities is relatively more comprehensive. Being students of Lund, much help has been given by the management through in-depth interviews and access to relevant documents. Key persons have extended extensive help and resources for our research study. Although information from BTH was comparatively less comprehensive, we had access to the current 'Balanced Scorecard' used. Also, key information was also obtained through interviews.

Thus, on the whole, given the various limitations, the information collected was comprehensive and sufficient for the purpose of our research study.

3.4.2 Quality of the study

Reliability and validity of the study are the main concerns of a qualitative research. According to Seliger and Shohamy (1989) any research can be affected by internal or/and external factors, the internal factor, such as the interpretation of the data, may affect the results. The external validity, such as interviewees and number of interviewees, influences the findings.

As Bell (2005) describes, reliability is a crucial part in the thesis. We have designed reliable questions to fit the purpose of the thesis, and chosen four representative universities in China and Sweden to interview the people in-charge. When we conducted the questionnaires, we clearly stated the purpose of our thesis and kept records of the interviews. Although the interviewees have different positions and backgrounds, we tried to organize the answers and put the emphasis on people who were the experts to ensure the reliability of the study. Utmost effort was put into ensuring the reliability of our study based on the tight time schedule given. Despite a lack of in-depth research experience in this field and some methodological limitations in our empirical research, measures are taken to ensure the reliability of our research study.

Chapter 4: Empirical Research

4.1 Performance measurements in Chinese universities

4.1.1 The Higher Education Environment in China

The Ministry of Education of People's Republic of China is the only external organization which measures the performance at the national level for all universities in China and it has been around for many years. The organization evaluates and compares performance measurements between different universities using indicators such as the amount of Doctoral sites, research funds and students' enrolment grades. The evaluation system is called 'Undergraduate education evaluation' which excludes the Masters and Doctors Programmes.

The evaluation of higher education performance is based on certain educational goals and the school's education quality. Evaluation is meant to accurately understand and analyze the actual situation, the educational level of universities, through the scientific and systematic collection of key information from universities. The purpose of this evaluation is to assess the quality of the schools in order to improve their work, to carry out educational reform and to provide the basis to improve the macro management of education authorities.

There are three basic forms of performance evaluation among universities: qualified assessment (identification), educational level evaluation and excellence assessment. Various forms of assessments have the appropriate assessment programmes (including evaluation criteria, evaluation index system and assessment methods). The programme should be scientific, simple, practical, results-oriented, and be able to arouse the enthusiasm of all universities in ensuring the quality of education, according to the basis of their characteristics (http://www.moe.edu.cn/).

General processes of evaluating university performance are: the university's applications; an Assessment (identification) Committee which examines the application; university's self-evaluation and written self-evaluation reports. Firstly, the Assessment Committee sends inspection teams to the university to investigate and write inspection reports about the university based on their findings. The Assessment (identification) Committee then reviews the inspection report and these results in a formal assessment of the university. Lastly, the findings are released to the Ministry of Education, administrative departments, government and the public (http://www.moe.edu.cn/).

Every five years, one organization named "Higher Education Evaluation Center of the Ministry of Education" which is governed by Ministry of Education in China evaluates institutions in various aspects such as the mission of universities, college infrastructure and other basic facilities, quality and quantity of teachers and quality of research. The evaluation result can be divided into four levels: excellent, good, pass and fail. In order to get an excellent evaluation from the organization and to get more funds, some Chinese universities are increasing the amount of enrolments and the scale of campus to get a better performance evaluation and to get more financial support from government. This actually induces a heavy debt burden on universities and lowers the quality of education.

4.1.2 Shandong Economic University (SEU) and School of Accounting

4.1.2.1 Background of Shandong Economic University (SEU) and School of Accounting

Shandong Economic University (SEU), originally known as Shandong Institute of Economics, is a full-time comprehensive institution of higher learning and was founded upon approval by Shandong Provincial Government in 1952. It is one of the earliest established ordinary advanced Institute of finance and economics in the Shandong Province. It was renamed as Shandong Economic University in 1978. SEU consists of two campuses. There are 15 academy schools, 1 college and 1 school of audit education. SEU has an enrolment of 24,601 students, including undergraduates, postgraduates and 3-year degree students. SEU also has a teaching and administrative staff of 1371. Building on the strategy of running a university with an open and internationalized vision, SEU is developing comprehensive communication and cooperation with both domestic and overseas universities. Moreover, SEU cooperates extensively with Shandong Academy of Social Sciences and Zhangqiu Municipality Government on talent training, subject construction, knowledge innovation, social services and teaching practice. (http://www.sdie.edu.cn/)

The School of Accounting dates back to 1952. Now the school is running 4 different undergraduate majors – Accounting, Financial Management, Auditing and Asset Evaluation. There are 120 students in the master program, 2860 in the undergraduate program, and 540 in the associate degree program. The School of Accounting has trained a host of excellent professional finance, accounting and auditing talents for the socialist construction. Now, the school is comprised of 7 teaching and research sections (Foundation of Accounting, Financial Accounting, Financial Management, Cost and Management Accounting, Auditing, Network Accounting, and Asset Evaluation) and 4 research institutes. There are 78 full-time teaching staff, among which 15 are professors, 22 are associate professors, 15 are PhDs, 12 are PhD candidates, and 4 have overseas education experience. The school of accounting actively conducts international cooperation and exchange programs with several universities and institutions such as La Trobe University Australia, Unitec Institute of Technology in New Zealand and KTH in Sweden. (http://www.sdie.edu.cn/)

4.1.2.2 Performance measurement system in SEU

We sent questionnaires to the vice president, Sun Wengang, who is responsible for most of the performance measurements and two other staff, one coordinator named Wang Meichun who calculates students' employment rate among other indicators and one financial controller, Wang Maochun from School of Accounting in SEU. According to their response, we summed up the performance measurements in the School of Accounting as follows.

An overview of the performance measurement system

Performance measurements play a significant and primary role in the School of Accounting, because the allocations of funds from the university and staff's promotions are based on these performance measurements.

External performance measurement system

The external performance measurement system is based on the typical evaluation system in China. While an external performance measurement system exists, the emphasis appears to be on how to get more financial support from the government. Also, the evaluation is merely on the undergraduate level. There is no evaluation system for the master's and doctorate levels. Thus, the external performance measurement system plays a limited role in monitoring and enhancing the schools' performance.

Although SEU had a good evaluation which was graded by the Ministry of Education in the year 2007, like most Chinese universities, SEU did not get direct benefits from government. The only advantage is that a good evaluation enhances SEU's reputation.

Internal performance measurement system

Developments

Currently, the school's internal performance measurement system is still at its infancy stage. Following the external performance measurement system, there is no independent system or indicators for the School of Accounting itself. The school follows the university's performance measurements standards. "Liang Hua Kao He" which means the grading of certain behaviours or ratios, both financial and non-financial, is used in the School of Accounting. However, more emphasis is put on non-financial measures in teaching assessment and research assessment.

Despite not having a holistic performance measurement system currently, the school has the advantages of a flexible and comfortable atmosphere in regards to performance measurements in the School of Accounting. Even if the staff could not achieve the standards and goals of the performance plan, both financial and non-financial, they are not being punished. As a result, all the staff finds it easy to teach and work, and are not always under pressure.

The vice president of the School of Accounting believes that the university needed to think about the educational environment which it is in and its development when it further develops its performance measurement system and decides on what should be taken into consideration. In the long run, he anticipates that performance measurements will become more comprehensive and more categories will be taken into consideration for performance measurements in universities. Universities will also strive to provide better education for the students and society.

Reflecting on the developments within the higher education sector, the interviewees think that the main difference between the performance measurement systems in private sectors and universities is the emphasis on financial performance evaluation. Financial performance measurements play a more important role in private sectors while universities concentrate on non-financial measures, due to the different roles they play.

Being in the educational sector, universities need to take into account its social responsibility through performance measurements. SEU is working hard on improving its internal processes through improving teaching quality and its social reputation. When choosing performance measurement indicators, the universities take teaching quality, research standards and social services to account for its social responsibilities.

Roles and Uses

From the financial perspective, there is no independent department that oversees performance measurements in the School of Accounting. Usually, SEU makes a plan for all the Schools and allocates the financial budget based on some performance measures. In addition, the financial performance measurements are conducted from the top to bottom to make sure that each school's performances are planned and easily controlled. The financial performance measurements in each School are merely evaluated based on the financial department's measures given by the university, for each financial period which usually begins on 1st January each year. There is no freedom given to the schools to change their financial plans, but the school can bring up its financial difficulties and request

for more funds before budgeting. In reality, this actually exerts no influence on the university, since all the schools claim that they have difficulties and require more funds. All the Schools in SEU are competing on these fronts in order to excel in the university's performance evaluation.

From a non-financial perspective, performance measurements are conducted in different groups which consist of teachers, coordinators and administrative assistants, from top to bottom, from university level to School level. The performance measurements are evaluated at the end of every academic semester.

Key Indicators

As described above, the School focuses on non-financial performance measurements, teaching assessment and research assessment. Besides, the number of students' enrolment, students' grades, and research funds and other indicators are also taken into consideration. The details of such financial indicators and non-financial indicators are in the table below to make give an overview of their relative importance.

Indicators		Points			
		Sun Wengang	Wang Meichun	Wang Maochun	Average
Financial aspect	asset-liability ratio	5	4	6	5
	Self-financing rate	4	5	6	5.33
	ratio of cash inflows and outflows	7	6	8	7
	external donors	2	2	1	1.67
Average in financial aspect					**4.75**
Assets Management	asset utilization ratio	3	2	5	3.33
	per capita assets occupancy rate	2	1	4	2.33
	fixed assets occupancy rate	2	1	4	2.33
Average in assets management aspect					**2.66**
Teaching Assessment	professors/ teachers rate	6	4	5	5
	teachers/ students rate	7	6	8	7
	masters, doctors/ students rate	6	7	5	6
	number of doctoral	9	10	9	9.33
	graduates employment rate	6	8	8	7.33
	number of excellent programme	10	10	10	10
Average in teaching assessment aspect					**7.44**
Research Assessment	research funding rate	10	8	10	9.33
	research projects awards	10	10	10	10
Average in research assessment aspect					**9.67**
Social influence	public welfare expenditure ratio	5	6	5	5.33
	poor students financing	5	6	6	5.67
	education aid to poor area	4	3	2	3
Average in social influence aspect					**4.67**

Table 2: Performance Measurement in SEU

Teaching and Research

Each School in SEU follows the university level's structure for its non-financial evaluation. The evaluation is mainly divided into two aspects: teaching assessment and research assessment.

Students grade teachers' teaching after each academic semester. The students evaluate teachers on the university's website when they login to get exam results. Professionals and peers grade teachers for their research exercise after each academic semester with evaluation questionnaires. The evaluation is anonymous. At the beginning of next semester, the results of the evaluation will be displayed publicly, usually on the announcement board. The promotion of teachers will be based on this, but there is no punishment even if the teacher gets a bad evaluation.

The interviewees hold the opinion that teaching assessment is more important than research assessment, because the beneficial groups are not the teachers themselves, but also the students. The improved quality of teaching makes teachers plunge into deeper academic research to provide students with a high-standard education and professional knowledge. However, research outcomes are easily measured using the number of published articles and research patents and many universities emphasize on research assessment. The vice president Sun holds the opinion that teaching assessment has the potential benefits as stated above. The key indicators for teaching assessment are competitive courses, outstanding subjects and programs.

Students

There are 660 full time students enrolled in School of Accounting, including Masters' and Bachelor students. As one of the key components of a university, 'students' is a significant factor in performance measurement. The School of Accounting pays much attention to it using indicators such as graduate employment rates, exam passing rates and the number of international programs.

Coordinators in the School of Accounting provide information to graduates about full-time/part-time jobs using different channels. The information may be gathered from public internet sources, from SEU's cooperative companies, or from organizations who are interested in SEU's graduates. The graduate employee rate, which is over 95%, is quite high for the School of Accounting, which benefits from its reputation of lecturers' teaching quality and graduates' ability.

Exam passing rate depends on students' effort in their study and the difficulty of the exams. There is no specific 'fail rate' in School of Accounting where a certain percentage of students have to fail. If every student performs well in the exam, all of them can pass.

International programs are conducted by SEU. As there are many competent students in the School of Accounting, its students participate actively in almost every international program. The School of Accounting has international cooperation with several universities and institutions, such as La Trobe University, Unitec Institute of Technology and KTH. Schools are unable to conduct international programs themselves, but students sign up if they are interested in international programs. IESTS/TOFFEL requirement is essential. Upon examining candidates' academic grades and English proficiency, some students are selected. There are no international students in SEU and School of Accounting, merely exchange students in SEU.

Funding

In order to improve and to get more funds from government, the university makes the amount of students' enrolment a significant and important indicator. This has resulted in more teaching assignments and tasks which teachers have to accomplish. Consequently, this causes the lowering of the quality of teaching. The university has to expand the sources of funding, but there is little effect visible in the short run.

At present, the main indicator for funding is still the number of enrolled students. While SEU may attract more donations and seek cooperation with external organizations to raise its reputation, the School of Accounting itself has no right to get independent external financial support and collaborations. It could only follow the university's policies and strive to perform well.

4.1.3 Nanjing Forestry University (NFU) and College of Economics and Management

4.1.3.1 Background of Nanjing Forestry University (NFU) and College of Economics and Management

Nanjing Forestry University (NFU) was founded in 1902 as a comprehensive university located in Nanjing with 60 departments within 20 colleges of Forestry Resources and Environment, Wood Science and Technology, Chemical Engineering, Mechanical and Electronic Engineering, Civil Engineering, Economics and Management, Humanities and Social Sciences, Information Science and Technology, Landscape Architecture, Science, Foreign Studies, Art Design, Furniture and Industrial Design, Light Industry Science and

Engineering, Automobile and Transportation Engineering, Graduate School, International Education, Applied Technology, Continuing Education, one Physical Education Department and Nanfang College. The total number of students is approximately 26,000, among which 2800 are masters, doctoral and foreign students.

NFU pays particular attention to scientific research and has attained great achievements. NFU also plays an active role in developing academic exchange and has established intercollegiate ties for academic exchange and cooperation with 50 universities and research institutions from 20 countries and areas worldwide.

Today, NFU is further deepening its own educational reform and quickening its development while exploring different effective ways to provide services for economic construction and social development, endeavouring to establish itself as an outstanding university, both at home and abroad. (http://www.njfu.edu.cn/)

The College of Economics and Management consists of six departments of Agricultural and Forestry Economics and Management, Business Administration, Finance and Accounting, Management Science and Engineering, Economics and Trade and Economic Law. The college has more than 30 professors, associate professors, a total of more than 80 teachers, 2,000 full time students. In recent years, the college has undertaken many scientific research projects, and some projects have won the Science and Technology Progress Awards, benefiting the country's economy and society. The College also takes an active role in developing regions such as the USA, Japan, Canada, Finland, Sweden, South Korea, etc. (http://www.njfu.edu.cn/)

4.1.3.2 Performance measurement system in NFU

In the NFU case, we interviewed three people working with the performance measurement system in NFU through telephone interviews and questionnaires. They are: Lu Ping, the director of Finance and Accounting Programme, who is responsible for academic disciplines of accounting and teaching arrangements in all departments; Zhang Fuxiang, the vice-director of the school's financial department, who is responsible for final accounting and budget, bidding, and managing the inventory liquidation of the school's state-owned assets; Wang Hongxing, the director of budget department, who is responsible for the budget work of the school.

An overview of the performance measurement system in NFU

As a whole, the current performance measurement system is not fully operational. There is no systematic performance measurement system in the school yet. This situation is common for most of the average universities in China. The current performance measurement system is largely based on the evaluation of undergraduate education from the Ministry of Education. Internally, the university uses the Balanced Scorecard and sets several key indicators, both financial and non-financial to evaluate the performance of the school.

One main characteristic of the performance measurement system in NFU is that budget is a vital aspect. The financial budget is the basis of the accounting work in the school, so as to ensure that the school utilizes the funding efficiently. The university will set budgets for each college in the beginning of a year, usually 1st of January. There are three kinds of budget: monthly budget, seasonal budget and yearly budget. There's no independent budget system for the College of Economics and Management, which merely complies with the university's budget and funding.

External performance measurement system

As mentioned above, the only external performance measurement organization is the Ministry of Education of People's Republic of China. NFU was evaluated by the Ministry of Education in 2005 and was categorized as an 'excellent' school. However, it was not easy to get this result. The school has put in lots of effort as preparing for the Ministry of Education's assessment is a very long process. The core work of NFU is the preparation for the assessment one year before the Assessment Committee sends inspection teams to the University for Investigation. The school has invested considerable resources in preparing self-evaluation documents for the Ministry of Education. Before this assessment, the school practically did not have any performance evaluation system at all. Thus, the initial stage was difficult due to a lack of experience and mechanisms in place to collect relevant information. During that period, NFU set "leading groups" in each faculty which had specific responsibilities for preparing various materials and documents. Despite the extensive work needed, the interviewees said that it was good for the school to establish a performance measurement system with this external pressure. Once the system was established, all matters of the school were done systematically.

Although there is no direct relationship between the results of the performance assessment and funding from the government currently, the result is still very important as it may affect the funding that the university can get. For example, there is a possibility of greater funding from the local government, easy access to loans from banks with low interest rates or interest-rate free loans, more funding from external organizations such as corporations. Moreover, the high score gave NFU a good reputation and standing in the society.

Internal performance measurement system

Developments

The performance measurement system is a new development in NFU and the internal performance measurement system is not fully developed. In 2005, owing to the evaluation by the Ministry of Education, NFU set up an internal performance measurement system to support the external evaluation by the Ministry of Education. Currently, the system consists of the Balanced Scorecard and some key evaluation indicators which works together. The traditional Balance Scorecard comprises of the financial perspective, customer perspective, internal processes and learning and growth. For the school's balanced scorecard, the indicators are divided into five parts which is adapted from the traditional Balanced Scorecard. They are the financial aspect, assets management aspect, teaching assessment aspect, research assessment aspect and social influence aspect.

The indicators are divided into the financial perspective and non-financial perspective. Indicators from the financial perspective are from the financial aspect and assets management aspect. Indicators from the non-financial perspective are teaching assessment aspect, research assessment aspect and social influence aspect.

The interviewees think that the development of future performance measurement system will focus on budget measurement, evaluation of budget revenue and expenditure, the proportion of non-tax income, sponsor-income ratio, the input of innovation and creation, service projects for the community and society, and the efficiency of investment funds and educational output. Thus, more indicators will be needed to measure performances in these different aspects.

Roles and Uses

Although the internal performance measurement system plays no significant role in the school currently, the main function of the internal measurement is to support the external evaluation by Ministry of Education. The interviewees believe that this will gain importance in the years to come. The college does not have an independent performance measurement system as it follows the university's system. According to both financial and non-financial indicators from the university, the school will measure its performance and report the results to the university. At the university level, it will distribute funds to colleges according to the evaluation results, mainly according to the number of students and research projects. At the college level, the results of performance measurement are related to the promotion of teachers to a certain degree, but the main indicator is the research outcomes of teachers.

Key Indicators

According to the Balanced Scorecard, the key indicators and relevant information from the College of Economics and Management are as below. The key indicators for the school are mainly concentrated in the teaching and research aspect which will be elaborated in the next section. Also, there is an emphasis on a healthy financial situation for the school.

Indicators		Points			
		Lu Ping	Zhang Fuxiang	Wang Hongxing	Average
Financial aspect	asset-liability ratio	10	10	7	9
	Self-financing rate	6	5	6	5.67
	ratio of cash inflows and outflows	6	3	7	5.33
	external donors	6	10	4	6.67
Average in financial aspect					**6.67**
Assets Management	asset utilization ratio	10	10	8	9.33
	per capita assets occupancy rate	8	1	6	5
	fixed assets occupancy rate	6	1	6	4.33
Average in assets management aspect					**6.22**
Teaching Assessment	professors/ teachers rate	5	3	5	4.33
	teachers/ students rate	10	9	6	8.33
	masters, doctors/ students rate	5	2	6	4.33
	number of doctoral	5	10	9	8
	graduates employment rate	10	5	8	7.67
	number of excellent programme	10	10	10	10
Average in teaching assessment aspect					**7.11**
Research Assessment	research funding rate	9	2	7	6
	research projects awards	10	10	10	10
Average in research assessment aspect					**8**
Social influence	public welfare expenditure ratio	8	3	7	6
	poor students financing	10	4	6	6.67
	education aid to poor area	3	1	6	3.33
Average in social influence aspect					**5.33**

Table 3: Performance Measurement in NFU

Teaching and Research

From the non-financial perspective, research projects awards (10) and the numbers of excellent programmes (10) in the school are the most important indicators in NFU. These indicators reflect that NFU emphasizes on the quality of teaching and research. It is the same for individual Colleges.

Apart from some quantitative indicators, the school has several ways to assess and improve on the teaching and research work. For example, the student evaluation system is widely used. Students have the right to evaluate the courses and teachers at the end of every semester and to give comments for improvement of the courses. This affects the 'teacher promotion system as teachers' promotion is in accordance with their performance of teaching as well as their research work. The teacher will be examined by senior professors and the leader of the college to assess the competence of the teacher, how many articles are published in core journals and how many core projects are assigned by the school or government are also taken into account during promotion. These different aspects stimulate the teachers to provide good teaching and research.

Students

The college of Economics and Management has more than 2,000 full time students currently, and the number is increasing. Students are one of the key aspects of the university. They affect not only the funding the school gets but also the reputation of the school. The college puts much effort into providing an excellent education to students so as to ensure high graduates' employment rate. This is a very important indicator for its students. Moreover, NFU helps poor students by providing scholarships, grants, and student loans to enable these students to continue their studies. The College also takes an active role in cooperating with universities in developed regions such as the USA, Japan, Canada, Finland, Sweden, South Korea, etc to provide students more opportunities to study overseas.

Funding

In the financial perspective, the College of Economics and Management of NFU measures its performance using some indicators to evaluate the financial situation. Asset utilization ratio and asset liability ratio are the main indicators here. The university calculates the financial data and distributes the results to each faculty accordingly. The major part of the funding for the college is from the university, and the university gets funding mainly from the government according to the number of students. Other funding comes from other

organizations and corporations. The college of Economics and Management does not have the right to budget and account independently. However, it can have external donors and is also able to cooperate with companies for certain projects. However, this is very limited.

4.2 Performance measurements in Swedish universities

4.2.1 The higher education environment in Sweden

Högskoleverket (HSV)

Högskoleverket (Swedish National Agency for Higher Education) is the public authority that oversees higher education institutions (HEIs) in Sweden. The Swedish National Agency for Higher Education (Agency) performs this task through a variety of mechanisms: reviewing the quality of higher education, ensuring higher education institutes (HEIs) comply with relevant legislation and regulations, monitoring trends and developments in higher education, providing information about higher education and recognizing qualifications from abroad (HSV.se).

National Quality Agencies like the HSV was established in all European countries to make sure that universities meet a certain standard. This is due to the fact that most of the higher education system in Europe is totally or partially governmentally funded. Thus, the governments needed to have a quality assurance system in place, which schools have to comply with.

One main function of the HSV is quality assurance and its quality assurance policy has been developed in accordance with the European Network for Quality Assurance's (ENQA). It reviews the quality of higher education through the evaluation of subject areas (main fields of study) and study programmes, and granting degree awarding powers. This is to ensure that individual students have the right to demand that their course or study programme is of high standard, employers in the public, private and voluntary sectors have a need for highly trained graduates, the general public is entitled to be assured that high level of taxation result in high standards and that Swedish higher education retains a high standard in a global world (HSV.se).

Currently, this Swedish national system is in the middle of a transformation and this would bring about new changes to how things are done.

On the education and research level, internal quality audits are also being done. These audits have a connection to performance measurement because evaluations are made

based on certain indicators which have to be met. One such audit on research is called the "Research Quality'08" which is an extensive report which goes through all the research activities going through in the entire university. There is also an upcoming internal audit called the "Educational Quality'11" which will be done in the coming year.

4.2.2 Blekinge Institute of Technology (BTH) and School of Management

4.2.2.1 Background of Blekinge Institute of Technology (BTH) and School of Management

BTH offers programs and courses on basic, advanced and research levels. There are more than 7 000 students and around 40 professors and 100 associate and assistant professors in BTH. BTH attracts students from many countries in the world. BTH also collaborates in exchange programs and networks with universities in Europe and other parts of the world. Along with traditional academic quality, BTH promotes innovativeness and entrepreneurship among students and within its faculty. In 2008, BTH was awarded national funds to further develop its profile to co-produce research with other industries and society. Close to BTH campuses are industry clusters with companies ranging from start-ups to multinationals.

The vision and desire of the School of Management is to develop and offer education that is relevant in a modern information society. The fact that it is part of a technical institute gives access to deep technical knowledge and the unique opportunity to specialize in information technology within education. The School of Management's programs, courses and research are developed with the future societal, social management and information technology changes in mind. Thus, preparing students with the skills and knowledge they need to 'make it' in their industry.

The programs and courses are in the fields of: business administration, economics, commercial law, education, sociology, psychology, philosophy, and work sciences. It has a variety of programs and individual courses available at undergraduate, Masters and PhD level, many of which can be taken either on campus or online. The Research is collectively called - 'Innovation processes in information economies' - and is conducted in several of the School of Management fields. The largest research group is the business and economics field. Research is also conducted in the sociology and occupational science fields, with the latter research focusing on IT, change and learning. (http:// www.bth.se)

4.2.2.2 Performance Measurement System in BTH

BTH is a relatively small school. For the BTH case, we only interviewed the Deputy Vice Chancellor - Anders Hederstierna, who is an associate professor and research director in the business administration department at the School of Management. Apart from supervision of master thesis work and doctoral work, he is responsible for BTH's strategic work on future student mix and strategic recruitments.

An overview of the Performance measurement system

BTH uses balanced scorecards to measure performance. Also, they are supervised by Högskoleverket for performance in education and research. BTH also strives for international accreditation such as EU-accreditation and accreditation in China. It is easier for BTH to enrol more students worldwide if it has more international accreditation.

External performance measurement system

Externally, BTH is evaluated by Högskoleverket for performance in education and research. HSV assesses the rights of BTH to issue degrees in different subjects and on the three levels (basic, advanced and research education). They focus on the output from education, i.e. the standard of the students' exam work and the assessments by alumni. BTH also sends a self-assessment to HSV when a subject area is assessed. Following, they include an assessment of the processes and the resources they have for carrying out the education. However, Högskoleverket is not specific and they evaluate the quality of all higher education in Sweden.

Besides the national performance measurement conducted by the HSV, BTH also strives for international accreditation. It is believed that international accreditation is very important for the school. BTH is currently applying for EU-accreditation and accreditation in China. While preferring accreditation of the whole university, they may also need accreditation for certain programs, like EQUIS for its MBA-programs.

Internal performance measurement system

Developments

The performance measurement system has developed rapidly in the recent decades. Currently, BTH has an internal performance measurement system which uses the Balance Scorecard. However, more tools and indicators are needed to measure administrative performance. Although administrative tasks take up a big part of the university's budget, BTH still lacks comprehensive performance measurements tools in this area. While there is an increasing trend of using performance measurement in BTH, there a back-lash may be possible as academia is not used to performance measurements, especially not in a systematic way. Too much control may make it less attractive for people to work in universities.

Roles and Uses

The balanced scorecard is mainly used as an internal performance measurement system. There are scorecards on the university level and the sections (departments) are in the process of developing similar scorecards at their level. BTH uses scorecards to measure critical aspects of performance, both in relation to the benchmark (KTH) and in relation to BTH's goals. These enable BTH to know where they are and the different aspects in which they could improve on.

Besides the financial perspective, BTH has four other perspectives in the balanced scorecard measuring performance. They are "students", "personnel", "brand" and "process effectiveness". When the measures deviate from expected performance, BTH focuses on how to improve on these areas.

Key Indicators

In financial perspective, total revenue, revenue allocation, external business resources, external resources, and geo-distribution are important indicators. Among the other four non-financial perspectives, Anders thinks the indicators of "students" are the most critical. There are a few indicators in the student aspect used for performance measurement: the number of students applying for programmes, standard of students' exam work, course and program evaluations, the number of doctoral student and last but not least, attractiveness in the job market after exam.

Teaching and Research

Performance measurement is different in research and education. In research it has always been important to the school and the performance measurements are well-developed as outcomes are easily measured. However, performance measurements for education and teaching are an increasingly important aspect which is relatively more difficult to measure.

Within research, there are many collaborative projects with both industry and the public sector. In these projects, it is also common that the industry is involved in the funding. Co-operation with industry takes many forms and there is potential for BTH to be of tangible benefit to the external world, not just in the region but also globally (www.bth.se). Because they have long lead times, the main problem of internal performance measurement is that they are unable to take results into account with quick effect. Also, teachers and researchers are used to "soft" performance measurements from their peers, not from management.

Students

As mentioned before, the student aspect is the most critical factor for BTH. The number of students applying for programs, standard of students' exam work, course and program evaluations and attractiveness in the job market are the most important indicators for students. Also, the number of international students is increasing every year. BTH has many international students through collaborative projects with America, Canada, China, India, and Pakistan and so on. BTH has a very good atmosphere for students. The international office organizes several trips for students every year and "International Day" is organized for international students to share the culture of their home country. From the perspective of social responsibility, BTH is making an effort on education and research by increasing knowledge in the society, cultivating excellent students and promoting growth and innovations.

Funding

The funding for undergraduate and Masters' courses and study programmes is based on the number of full-time equivalent students and the annual performance equivalent. The amount of funding varies depending on the disciplinary domain. About the funding for doctoral studies, although a high proportion of direct government funding goes towards research, it is increasingly financed from indirect government funding and external

sources, including the government research funding body, foundations, local government, county councils and the private sector (http://www.hsv.se/).

4.2.3 Lund University and School of Economics and Management (LUSEM)

4.2.3.1 Background of Lund University and School of Economics and Management

Lund University was founded in 1666 with approximately 40 000 students and 6 000 staff. There are 170 Educational programmes and 1 580 Single subject courses in the eight faculties of Lund University. Every year, about 2 000 International students enrol in the 70 International Master's programmes and 300 Single subject courses taught in English in Lund University. Lund has an excellent academic reputation with a large number of visiting professors and international students. With eight faculties and many research centres and specialised schools, Lund University is one of the largest institutes for research and higher education in Scandinavia; and is the strongest research university in Sweden.

Lund is consistently ranked among the top 100 universities in the world and was ranked as the top university in Sweden in the most recent Times Higher Education ranking. The Times Higher Educational Supplement ranks Lund University 1st in Sweden. In Lund University, programmes and courses cover traditional academic disciplines as well as specialised areas such as commercial aviation and the performing arts. Education programmes for employees in the public and private sectors are another important component of the University's activities. (http://www.lu.se)

The School of Economics and Management at Lund University (LUSEM) is among the top ranked business schools in Scandinavia. Research and education at LUSEM concern economic history, business administration, business law, informatics, economics and statistics, as well as research policy. There are about 4100 students and 400 researchers, teachers and other staff at LUSEM. A crucial goal of LUSEM is education and research at a high international level and this is reinforced through research in the international front line, participation in multidisciplinary projects and continuous exchange on the content and teaching of the subjects. LUSEM is accredited in accordance with EQUIS (European Quality Improvement System). This seal of quality reflects its high standards in tuition, research, internationalization and collaboration with society at large. (http://www.lu.se)

4.2.2.2 Performance measurement system in Lund

We have interviewed three key people in Lund who have worked with its performance measurement system in various ways. Kristina Eneroth is the Vice-dean and the key person in-charge of the external accreditation for the school's performance measurement. Alf Rosenbäck is the Head of Dean's Office and is mainly in-charge of the financing and funding of the school. Gerd Bucht is a very experienced professor who has worked with performance measurement within the school and has witnessed its development over the years. She was also previously a Director of Studies at the Business Departments and other programs.

An Overview of the Performance Measurement System in Lund

Performance measurements are gaining importance and play an increasingly important role in monitoring and maximising performance the past five to ten years. The internal performance measurement system for Lund's School of Economics and Management is mainly influenced by two external factors – Högskoleverket (HSV) and EQUIS. It is largely aligned with an external international quality assurance body – EQUIS, since 2001, while HSV is the Swedish national agency which monitors the school's performance.

External Performance measurement system in Lund

Initially, the major factor influencing the performance measurement system for the school was the national agency of evaluation within Sweden, Högskoleverket (HSV). However, in the recent years, more emphasis has been placed on evaluation by an international quality accreditation agency –EQUIS. The school started being accredited by EQUIS in 2001 and it has influenced its internal performance measurements since.

The performance measurement system at the School of Economics and Management at Lund University (LUSEM) complies with both the national standards - Högskoleverket (HSV) and international standards-EQUIS. In addition, HSV and EQUIS affect internal performance measurements in LUSEM.

EQUIS

To understand the school's performance measurement system, it is important to understand the EQUIS accreditation system. The EQUIS accreditation is a stringent quality assurance service. All standards and criteria are described in detail and the school has to come up with answers based on these.

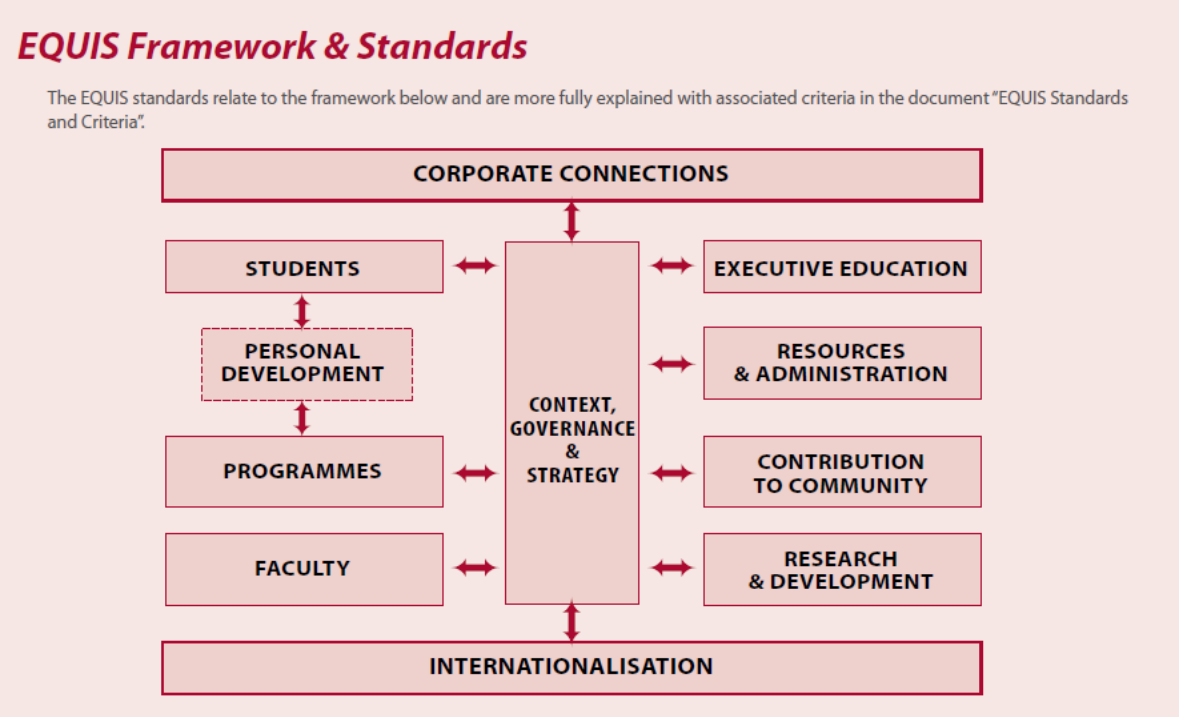


Figure 5: EQUIS Frameworks and Standards

Process of Evaluation

Upon entering this program, the school pays an amount of fee to EFMD to try to get this accreditation. Then, it has to put together a thorough self-evaluation report by bringing together the entire faculty, which is a huge project. Upon sending in the report, EQUIS would appoint an evaluation committee consisting of four international people who are typically three deans of other business schools, with the fourth person representing the business world. They would come down to the school for a site visit, staying for two to three days. During this period, they would interview the faculty, students, alumni and corporate contacts to establish the authenticity of the report. They would also have access to all newspaper reports about the school in the last five years, translated into English.

After the site visit, a report about the school would be written. It is based on the criteria from EQUIS and the school either meets the standard, be above the standard or below. The aim of this evaluation is avoid being below the standard and it is difficult to get that many 'above the standard'. If too many standards are not met, the evaluation committee themselves would recommend that the accreditation is not awarded. However, the final decision is made by an independent jury which is not dependent on the EFMD. The jury evaluates the report and makes their recommendation. It is a decision body which decides whether or not the school gets the accreditation. If the school loses the accreditation, it has to remove all the EQUIS accreditation and wait for a number of years before it could reapply again. Thus, accreditation is not given automatically as EFMD has their reputation to safeguard.

Upon examination by the EFMD, comments are given and the school works on them to make improvements. For example, the last comment was about having the same computer system and interface for all the departments within the school for all the students. The school worked on it and has just presented the new system which is used for all departments.

Roles and Uses

The school chose to go into the EQUIS program for accreditation and paid to be a member of it as it strives to be the best school in Sweden and in Europe as well. Being examined externally was seen to be a need and a means to achieve that. The performance measurement system such as EQUIS helps the school to change in a way due to the external pressure. The criteria are very stringent and the school is evaluated in a much more defined way in areas such as social responsibility. As EQUIS is expecting the school to be more explicit in the upcoming report, it requires the school to constantly improve and re-evaluate itself.

A substantial amount of money was poured into this program, but the most important resource was the large number of people involved to get what EFMD requires. This was deemed as 'a problem' for some due to the enormous effort needed to coordinate these activities.

If the school does not perform or meet a certain standard, it loses its accreditation. It is interesting since the criteria given by EQUIS give the schools much room for interpretation. Typical questions could be "What are the three most important goals in terms of internalization and how do you keep track of those?" It is up to the school to decide and to

communicate their goals. However, after five years, EQUIS would ask tougher questions as other schools have also been evaluated and it raises the standard. Everyone is constantly trying to improve and linking their performance measurement system. Thus, the accreditation process gets tougher and tougher.

Given room for interpretation of the many criteria, the school has to come up with its own internal system which takes EQUIS and the national system into account. Apart from EQUIS, there is also another American international quality accreditation, AACSB which the school might be looking for. It started with American universities but went international about some years ago and is similar to EQUIS. However, currently, the school is unable to do so as a lot of resources will be needed.

Future Developments

In the beginning, most schools accredited with EQUIS were based in Europe. That is not the case today as they are all over the globe, especially more from China. Many Chinese schools are getting the EQUIS accreditation and some of them partner the school for exchange programs at the undergraduate level. However, this is limited to the top universities in China at this point of time, only the best schools get accredited at this stage, but it would change given time.

Although the school recognizes the importance of having the EQUIS accreditation, it could also be deemed problematic as there is a tendency to ignore other measures. Since the school's performance measurement system is largely influenced by EQUIS and the national agency, there leaves little room to explore other measures. There could be other important things which might be more difficult to look upon and more difficult to quantify. The EQUIS and national agency requires a fair comparison between different universities and measures are drawn up to be able to do so. They might not be able to take into account other measures which may be unique or advantageous to a particular university. The quantitative measures are very difficult to determine and compare although EQUIS does interview different people within the school.

There are always challenges and pressure to maintain the accreditation. Although EQUIS try to put a focus on innovation ability and innovative programs and innovations in research teaching, such performance measurement system could harm innovation as the school would prefer tried-and-tested methods instead of taking risks, not knowing the outcome and impact. There is a risk that the school could become less innovative and there is a need to monitor these tendencies in the organization since universities are very stable and generally,

do not like change. Thus, universities tend to resist change unless there is a pressure to change. This aspect could be a downside for such extensive performance measurement systems. Kristina highlighted the saying which is well-known for performance measurement system – "What gets measured gets done", however, "what doesn't get measured doesn't get done too". This is an apt description to this limitation of performance measurement as the things which are not measured goes 'under the radar' and less attention is given to other aspects of performance which is not measured.

EQUIS has exerted great influence on the school's internal performance measurement system in the recent years although the school has had a long-standing financial measurement system in place since it is being funded by the government. The vice-dean, Kristina Eneroth noted that this is inevitable when one is dealing with such an international quality accreditation as you need to comply with what they are asking for. One interviewer described the initial EQUIS process as 'terrifying' as 'every responsible person is terrified about EQUIS and what do we get in the report from the examination'.

Recent developments and the granting of a higher degree of freedom entail more changes to the performance measurement system within the school. More performance measurements in the lines of EQUIS, and evaluation being done by external agencies could be expected. Resultantly, more emphasis would be put on complying with such standards and there is a change from a more financially-driven performance measurement model to a broader performance measurement system with more non-financial indicators.

Internal Performance measurement system in Lund

Developments

There have been more and more performance measurements in place within the school over the past five to ten years. In the past, there were not many performance measurements. However, performance measurements have steadily gained importance. Previously, reports tended to focus more on traditional book-keeping, which used to be the main performance measurement system for a long time before things started to change.

These performance measurements have helped the school improve its standards internally. The systems in place to document what is happening within the school have improved tremendously in the last five to ten years to make things easier for the school. The first evaluation by the EFMD for the EQUIS accreditation was difficult, but the school has found some documentations and routines to monitor performance. The school took about a year

to put these systems in place initially, according to EFMD's schedule since schools were measured in the same way. However, these internal systems are still evolving and constantly being improved on even today.

Using a broader perspective to look at these different evaluations and the effect on the school's internal performance measurement system, there is clearly interactions between what is going on. These developments drive the school towards more complex performance measurements, which could be tricky as the school is a non-profit organization. It is so much easier for an organization to work towards profit, a tangible goal, which is easier to explain and communicate. The primary goal is not evident for a non profit-seeking organization, such as the school. As schools seek intangibles such as high good education, high education, good research and being a good citizen in the general sense, measurements are trickier.

In general terms, performance measurement is tricky and it is difficult to ascertain whether or not you are actually measuring what you think it is. As a governmental agency, the school recognizes that it is easy to get blindsided and try to run the organization based on performance indicators only. This is seldom neither efficient nor sufficient. It is important to constantly strive to find the balance between the hard and the soft and between the formal and informal organization. Performance is driven by the values of the individuals in the organization.

Through the interviews with key persons in charge of performance measurement in the school, they believe that the school is still in the middle of the transition and improvement of the performance measurement system. The vice-dean, Kristina Eneroth does not think that they will reach the final goal as there is something that is continuously happening in the organization. However, it could be easier for the School of Economics and Management as compared to other faculties since it is more accustomed to working with real-life business. The performance measurement system in place have not been changed totally and completely as more dimensions are added to the financial core as it is governmentally funded.

As school fees will be introduced in 2011, there are many unknowns and this will have an effect on the performance measurement systems. There is a need to react due to the reduced government funding and the system needs to adapt and deal with less money from the government. The school needs to rely on being able to sell at a price to student outside Europe in the future and foresees that it could be difficult. Many precedents have experienced a dramatic fall in the number of applicants and the school expects such a

scenario with far less students applying in 2011. These will have effects on the performance measurement systems but due to the many unknowns, there is a need to determine what changes should be made. These changes which will take place in the next five years would change the performance measurement systems in place.

Roles and Uses

The proliferation of performance measures makes things more explicit for communication. Typically, there is a high degree of freedom within an academic career and professors are unwilling to spend so much time on administrative tasks. It could be difficult to measure performance through budgets or other performance measurement systems when the organization has many professionals with that attitude. Thus, such an organization may need something externally driven, such as EQUIS to lean towards. As most people in the organization recognize the benefits of having such an international accreditation, it makes it more legitimate to go out in the organization and ask questions. Such a system enables people to understand why there is a need to know certain things and helps the communication within the organization, which should not be underestimated.

Performance measurement tools also help to explain why certain things are measured within the school as one has to explain why certain things are measured. These tools have to be linked to the strategy and goals which the school is trying to achieve. Otherwise, it would be difficult to get any acceptance or enthusiasm within the organization.

The performance measurements in place within the school also makes it easier to explain why one needs a strategy and help to achieve it as it is not something that is evident in a university. Although it is becoming more evident, it was not evident 20 years ago when more people and professors would consider it ridiculous. Professors were more focused on their research individually, with less focus on the performance or the school. However, the school is becoming more like the business world in terms of strategies and strategic plans. Today, the school has strategic plans in a variety of fields, everything from research to gender equality. There are plans for everything, whereas there was not a plan in sight twenty years ago. Now, it is crucial to communicate what the school is working on and what it is trying to achieve. These are then monitored through the performance measurements.

The performance measurement system within the school is also influenced by the university's management. It requires the school to report on what they are doing on a yearly basis and what is done in order to achieve these goals. The school has to come up

with these answers and to monitor the performance of the organization closely using non-financial indicators throughout the strategic planning system. The approach being used might not be the most modern method and reality might be complex, but plans and measurements are in place to help the school to achieve these goals.

There is also external pressure on all universities to provide more data on what the school is doing. This is deemed to be a good thing as the degree of freedom for the individual lecturer has been too substantial in the past. Such performance measurement systems are in line with other international universities which are used to reporting on many measurements while Swedish universities are not so used to.

While some professors claim that administrative matters pose strains on their teaching and research, the school requires some performance measurement to document progress within the school. There is a high degree of freedom in terms of teaching in Swedish universities and some professors firmly believe that showing up at lectures itself is quality work. This is an ongoing discussion but the school believes that it does not take too much time to provide high quality assessments, without which improvements could not be made. Even the Danish and Norwegian universities are more used to reporting. Danish universities have external examiners to grade exams and that puts higher pressure to the professors to account for their performance.

Key Indicators

The FTE indicator has traditionally been 'the' most monitored indicator within the school's performance measurement system. Performance measurements are conducted on a rolling four-month schedule over the fiscal year. All departments are to report the number of enrolled students on all courses throughout the year in order to be able to make alterations in admissions to courses depending on the outcome. In March, the first estimation or prognosis on the yearly outcome of FTE's is estimated and alterations in admissions are made throughout the year. Although FTE's are easy to measure, it does not provide any information on the quality dimension of the school's educational activities. However, it is a very important indicator as a healthy financial situation is a pre-requisite to get EQUIS accredited.

Other key indicators for the school are measured in terms of research number of publications in high-level journals. This is part of what is known as 'biblometrics' which can be described as a collection of methods used to measure texts and information. Another common part of bibliometrics is 'citation analyses'.

Apart from primary indicators for teaching quality and research to bring in quality in terms of education and teaching, one other key indicator is the degree of internalization which cuts across the school. The school tries to stay ahead of developments and being innovative. This is done through many exchange programs, recruitment of international students and also collaborations with other universities.

Teaching and Research

While rewards are tied to the performance measurement system in place, universities are typically more geared towards research. There are generally more rewards out of being a good researcher than a good teacher. Although teaching activities are encouraged and the school tries to reward good teaching, it is easier to measure research activities.

Rewards could be easily quantified when publications are made in high ranking journals. Other indicators could be the number of seminars, opposition of others' seminars, 'biblometrics' and 'citation analyses' as mentioned above. This is in contrast to giving really good courses due the subjective nature of evaluations.

Courses could be determined through course evaluation or students' grades and passing rates. Course evaluations are done upon completion of every course, except for PHD-level courses. Upon collection of these evaluations, the director of studies gives feedback to the lecturer in-charge of the course and makes alterations as needed to improve on the course. While course evaluations have an impact on lecturers and are taken into account for lecturers' promotion, it is also recognized that teaching is an aspect which is tricky to measure. Thus, it is difficult to punish or reward good teaching.

It is easier to agree upon what is good research and how to measure it, so that rewards could be linked to performance. However, there is an ongoing debate and a realization that a university could not rely on good research alone. There is a need to provide good research, together with good teaching. While this is difficult, the performance measurement system tries to encourage both aspects.

The more recent additions to the measurement systems are more quality related. For instance, all course leaders are required to conduct a course evaluation and report the results into a database. This was introduced in 2009. New additions of performance measurements are more qualitative in nature, largely due to the larger degree of freedom for Swedish Universities.

Students

Students are an important part in performance measurement and indicators such as grades and passing rates are measured internally by the school. Other measures such as the employment rates are documented by an external union. The school sends out questionnaires to students three years after graduation and gets information such as how they got their first job, salary etc. The union consolidates this information and produces a report to compare the different universities every year.

The school also has internal programs to take social responsibility into account through the 'Code of Conduct' and some projects to help students who are from non-academic homes, from other countries, diseased students and so on.

In Swedish universities, social responsibility is also known as the third goal. The first goal is research and the second goal is teaching, depending on how it is looked at. The third goal is to provide communication with the surrounding society and that is explicitly stated in the laws that govern the universities' activities. One of the main objectives of the school could be said to provide useful research and provide good education for the students to get jobs, making it a better world for everyone in a way. As such, universities couldn't be more linked to social responsibility when trying to achieve these goals.

Funding

The School has four revenue streams: government funding for education, government funding for research, external revenues from research grants (and sales) and fundraising and donations. These revenue streams are monitored in four-month period over the budget year.

Governmental funding for education is a substantial part of LUSEM's budget. As for all governmentally controlled universities, the government allocates resources per student, so called full time equivalents (FTE's). Monitoring fluctuations in FTE's could be regarded as "the" most important financial measurement tool. In future, when tuition fees are being introduced, LUSEM will have to monitor students from EEU separately from non EEU students in order to find a balance in between these two groups of students.

Currently, funding is partially affected but not directly tied to the school's performance as the educational part is governmentally funded. While indicators such as employment rates could be one input for government funding, it is only for business schools and it is difficult to ascertain which university is better based on these measures. Moreover, the school's funding is allocated through Lund University which then distributes the money to different schools based on performance reports which includes passing rates of students and so on.

As funding is given to Lund University as a whole, and Lund University distributes the money, performance does not make a substantial effect on the school's funding. The university allocates money based on the number of full-time equivalent students in the school for a year. This could be said to be the most important financial indicator which the school uses. Every full time student gets an amount of money and this sum differs between the different schools. This funds the school's salaries, other expenses and determines the number of lessons given to a full-time student. While it should not be the most important measure, it is the main measure which determines the amount of funds which the school gets as it is easy to quantify and compare. However, schools like the Medical school and technical high school tend to get more money. Even if the school performs well, it could be difficult to ask for more money as other schools are also fighting for more funds.

The research part is partly funded by the government but also funded by external grants from research agencies. There are also corporate endowments from organizations, which is a factor in the budget system. Such funding is irregular and comes now and then, for example, to look for a professor in accounting. Typically, money is given by a corporation or foundation to conduct research in a certain area. This is might be more common for the School of Economics and Management compared to other faculties due to closer links with the corporate world. Thus, performance could be a factor when it comes to such endowments.

In terms of research funding, a balance between governmental and external funding is crucial. External funding is becoming increasingly more important, and all faculties are encouraged to increase their efforts in order to attract more external funding. This relates to changes in how the Government plans to distribute research funding in the future. Within Lund University, there are also activities stemming from the Vice Chancellor on how to increase external funding. Since the school is in the middle of this developmental process it is difficult to comment in detail or predict future developments.

Chapter 5: Analysis

5.1 An overview

Upon the conclusion of our empirical data collection, our analysis will be done at two levels. The first level of analysis will be between SEU and NFU; and between BTH and Lund. Here, we examine the similarities and differences between the performance measurement systems used and seek to explain these observations.

The next level of analysis will be done between the Chinese Universities and the Swedish Universities. An in-depth analysis of each internal and external performance measurement systems will be done to discuss the types of measures used, the users of these performance measurement systems and the different reasons for the use of performance measurement systems.

In order to give a holistic picture of our study, we have tabulated our empirical data in a table below to make a brief comparison between the four different universities. The following section will be an in-depth analysis to compare the performance measurement systems in place in these universities.

	External		Internal						
	National	***International***	***Developments***	***Roles and Uses***	***Key Indicators***	***Teaching***	***Research***	***Funding***	***Students***
SEU	Periodical evaluation by the Higher Education Evaluation Center of the Ministry of Education	N/A	No systematic performance measurement system, but uses various performance measures	Unimportant but plays a significant role for promotion.	Research indicators such as the number of doctoral degrees, research funding rate and research projects awards	Most important aspect	Important, placed after teaching	Governmentally funded. School is unable to raise funds by itself and has to rely on allocation by the university.	Important, especially 'FTE' Indicator
NFU	Periodical evaluation by the Higher Education Evaluation Center of the Ministry of Education	N/A	Uses the balanced scorecard but is not used systemtically and it remains unimportant internally.	Unimportant but several measures are used to measure performance.	Teaching and research indicators such as the number of excellent programs, research project awards and teaching/ student rate	Important, placed after research	Most important aspect	Governmentally funded but the school could self-finance itself through donations and other fund-raising activities.	Important, especially 'FTE' Indicator
BTH	Periodical evaluation by Högskoleverket (HSV)	N/A but is striving for accreditation.	The balanced scorecard is used at the universitiy level and developed also for the school-level	To monitor performance and for continuous improvement	'FTE' indicator and the 'Student' Aspect such as enrolment rate, students' grades, evaluations, number of doctoral student and employment rate.	Important, placed after research	Most important aspect	Governmentally funded but the school could self-finance itself through donations and other fund-raising activities.	Important, especially 'FTE' Indicator
LUND	Periodical evaluation by Högskoleverket (HSV)	EQUIS	Systematic performance measurement system which has developed over the past 5-10 years. EQUIS plays a big role in shaping its development	To monitor performance and for continuous improvement	FTE' indicator and research indicators such as number of publications and 'biblometrics'. Teaching is also increasingly emphasized on.	Important, increasingly being emphasized	Most important aspect	Governmentally funded but the school could self-finance itself through donations and other fund-raising activities.	Important, especially 'FTE' Indicator

Table 4: Comparison of the Performance Measurement Systems

5.2 Analysis between Chinese universities

External National Agency

All Chinese universities are evaluated using the same external performance measurement system at the undergraduate level, which is administered by the Ministry of Education. The evaluation is extremely crucial for Chinese universities.

Periodically, each university applies for the evaluation by the Ministry of Education. Upon application, universities put all their effort into preparing for the evaluation. The evaluation results can be divided into four levels: excellent, good, pass and fail based on certain educational goals and standards of schools' education. The evaluation seeks to accurately understand and analyze the actual situation and educational level of the universities. All staff and students are under pressure in order to achieve an 'excellent' or at least 'good' result from the evaluation. In the event that universities are graded 'pass' or 'fail', their reputation would be affected and it would be difficult for the universities to attract excellent students.

Each school follows its university's standards during the evaluation in both SEU and NFU. SEU was evaluated in 2006 and was graded 'Good' while NFU was evaluated in 2005 and was graded 'Excellent'. The effects of this external evaluation system are distinctively different in these two universities. The external performance measurement system has limited influence on SEU while it is quite significant to NFU.

For the evaluation, the majority of Chinese universities are graded 'Good' or 'Pass' and few universities are graded 'Excellent' or 'Fail'. SEU was graded 'Good' which is considered to be an average university; the result is very common. Thus, the influence on its reputation is limited. The evaluation does not bring SEU any advantages.

On the contrary, NFU was graded 'Excellent' which was considered to be a good evaluation which only few universities could get. As a result, this advanced NFU's reputation. In addition, the local government takes this into account and provides more financial support for NFU, bringing many benefits to NFU. For example, there is a possibility of greater funding from the local government; easy access to loans from banks with low interest rates or interest-rate free loans and more funding from external organizations such as corporations.

However, the evaluation by the Ministry of Education also has some drawbacks. The evaluation project took a long time and consumed many resources which may affect the

lecturers' daily routine work. Moreover, due to the importance of this evaluation, many schools focus solely on this self-evaluation report that is required by the Ministry of Education and ignores other important performance measurements and even the quality of teaching.

Internal performance measurement system

Development

Currently, universities in China do not use performance measurement systems comprehensively. Performance measurement system, especially internal performance measurement system, is still at its infancy within Chinese universities and the development in this area appears to be limited in the short-run due to its environment. However, universities in China are willing to seek improvement and to be in line with international higher education developments. They foresee themselves adopting more systematic performance measurement systems in the future.

Roles and uses

The role of performance measurement is different between SEU and NFU. Performance measurement plays a primary and significant role in SEU, but this is in contrary to NFU. One main reason that contributes to this distinction is that SEU is a relatively young university which was established in 1958. The lecturers' are relatively young, with less emphasis on seniority. As a result, SEU puts more emphasis on performance measurements to encourage lecturers to improve their teaching abilities and research outcomes.

On the contrary, NFU is a university with a long history. It was set up in 1902 and there is more emphasis on the seniority hierarchy since there are many senior professors in the school. They are highly respected for their past contributions and the university has a tradition of taking lecturers' experience into account. There is a stronger focus on research outcomes and experience, resulting in less emphasis on using performance measurements as a tool for monitoring and improvement.

Key indicators - Financial

In SEU, the ratio of cash inflows and outflows is an important financial dimension. The ratio of cash inflows and outflows is a crucial indicator to measure organizations' management

capability, efficiency of funds' usage and ability to return debts. The university can only operate without additional debts if the ratio is >1. Thus, SEU puts much emphasis on this indicator.

For NFU, the key financial indicator is its budget. This is slightly different from SEU when internal performance is evaluated. The university will set a budget for each school, and even each research project. The school should adhere to the budget strictly. Otherwise, the school needs to seek self- financing when there is a deficit. Thus, budgeting is a very important financial indicator for the school. One other main indicator is the asset-liability ratio, because it reflects the financial situation of the school. Asset-utilization ratio is the most important in the assets management perspective and the efficient use of assets is more important than how much assets the school has.

Key indicators – Non-financial

On the other hand, the number of doctoral degrees, number of excellent programs, research funding rate and research projects awards are the top four vital indicators in the non-financial aspect for SEU. This is also arguably the most important indicators for performance measurements in the school. The number of doctoral degrees, research funding rate and research projects awards can estimate the qualification, professionalism and research ability of lecturers. The number of excellent programs is one important factor to attract additional governmental funds as well as other external donation at the university level. In addition, teaching ability can be represented through these indicators and more excellent staff and professionals will be attracted to join SEU and its Accounting School. The concentration of performance measurements is predominantly laid on non-financial indicators.

For NFU, the number of excellent programs, research project awards and teaching/ student rate are important non-financial indicators. Apparently, the school puts more emphasis on teaching and research in non-financial perspective. One main reason that attributes to this is that universities are divided into research universities, research and teaching universities, teaching universities in China. It is extremely difficult for universities to be classified as a 'Research University' and this is considered to be an honour. Currently, only several top universities are classified as research universities while the majority of universities are teaching universities. Many universities are making an effort to be classified among the "research and teaching universities" and this is also NFU's goal. Although budgeting and financial indicators are important, teaching and research still takes priority over other performance measures.

Teaching

In both SEU and NFU, teaching is a critical area when evaluating staff's performance. Teaching is the major performance measurement to measure lecturers' capability and it determines lecturers' promotion (qualification to be a professor). The performance is measured through indicators such as students'/ peers' grading.

In SEU, focus is paid on teaching when evaluating lecturers. That is because both lecturers and students benefit from good teaching. Lecturers plunge into deeper academic research to provide students with a high-standard education and professional knowledge if they want to distinguish themselves from their colleges. This also enables them to get an 'excellent' grading for teaching.

In NFU, teaching is ranked as the second important aspect when measuring performance. Lecturers' promotion is partly related to their performance in teaching. Students have the right to rate their lecturers at the end of each semester, and senior lecturers will sit-in at certain lectures to monitor the competency and teaching ability of lecturers. These are ways to motivate lecturers to improve on their teaching. However, as mentioned above, NFU has a tradition of a seniority and experience. Thus, teaching performance has a relatively less impact on lecturers' evaluation and promotion.

Research

Research is a main area which is taken into account in both SEU and NFU. The number of published academic articles is a fundamental factor for lecturers' promotion. Especially in NFU, research is the most important non-financial indicator. Research outcomes are easily measured by the number of published academic articles, research projects and patents.

In SEU, research is placed second, behind teaching. Research outcomes are another main indicator to measure lecturers' performance. Similar to most Chinese universities, research proves the lecturers' academic ability and it is another factor in the promotion of lecturers. As explained above, teaching assessment is more important in SEU, but the research indicators are emphasized as research outcomes are easily measured and bring instant and significant benefits to university.

In NFU, the evaluation of performance is mostly based on research outcomes, such as research projects and published articles. Lecturers will be assigned to some research topics and projects with funding from the government and external organizations. They publish

their research reports in key journals or books and obtain research project awards if they have completed many projects successfully, with excellent findings. Research outcomes are relatively easy to be measured and lectures' promotion is mainly based on this. NFU puts much emphasis on research and encourages lecturers to put more effort into research.

Students

Students exert an important influence on universities. The amount of students is the key factor which determines the funding the school gets. Also, students' quality influences a university's academic environment and reputation. Indicators such as passing rates, employment rates, doctoral and master/undergraduate rates are major indicators in both SEU and NFU when evaluating students' performance. High rates of these three indicators imply that students are able to get good jobs and the quality of students graduating from the school is high. As a consequence, the reputation of the university is advanced because of its excellent graduates. The university benefits from its students' good performance.

Internationalization is another fundamental aspect used to evaluate a university/ School performance, for example the number of international exchange programs and international students. Internationalization increases academic and operational communication among universities. It can raise universities' quality and provides universities with a chance to exchange advanced knowledge and international standards. Both SEU and NFU have international programs, but differences exist between the schools in these two universities.

Schools in SEU have no right to cooperate with foreign Schools themselves, only the university can conduct international programs. When SEU has an international program, students within SEU apply for it. Upon selections with exams and English proficiency certification, selected students have the opportunity to study in other universities as exchange students. There are no full-time international students enrolled in SEU, only exchange students who come to SEU to study for 2-3 months. The reason is that SEU is a young university and it is not very well-known in China. There is also a lack of programs conducted in English. As for individual schools, they have difficulty providing such English programs and are unable to make any international communication by themselves.

On the other hand, the enrolled students of NFU are increasing rapidly every year. There are also increasingly more international students and exchange students in NFU. NFU is more international than SEU, but it still does not have any English teaching programmes at the Bachelor level. There are only a few specific English courses, designed for exchange students. NFU has many exchange programs with foreign universities worldwide and each

school conducts its own international communication independently. Even though NFU is increasingly international, it still has a long way to go before it is ready for international accreditation such as EQUIS.

Funding

Funding for both SEU and NFU is from the national government, based on the number of enrolled students. There is no direct relation between the results of the Ministry of Education evaluation and funding from national government. However, the results affect other sources of funding, for example, external donations and financial support from organizations.

SEU gets its funding from the government based on the amount of enrolled students. The university then allocates the funds to the Accounting School according to the university's standards and policies. External donation and self-financing are only being conducted on the university level, not at the school level. SEU evaluates each school's performance with some key indicators, such as amounts of students and number of research projects. These internal indicators determine the amount of funding the school gets. The school does not have the right to get financing by itself and is unable to obtain any funding from government or any external organizations by itself, despite its excellent performance. SEU is a relatively small university when compared to other Chinese universities. Due to its size, there is not much need or freedom for individual schools to obtain external funding. It is sufficient for SEU to allocate funds to each school within the university and SEU's financial department is responsible for the allocation.

Similar to SEU, NFU allocates funds to each school using several key indicators such as the number of students, the research topics and projects, and other activities. However, in contrast to SEU, the School of Economics and Management in NFU can seek funding by itself from external resources, such as organizational donation and financial support externally. The school collaborates with some companies to provide certain funds as well as field work opportunities for students. However, the proportion of school self-financing is very small and funds are still mainly obtained from the university.

5.3 Analysis between Swedish universities

External National Agency - HSV

All higher education institutes in Sweden are evaluated by the Swedish public authority Högskoleverket (Swedish National Agency for Higher Education) since 1995. As Swedish universities are predominantly governmentally funded, the periodic evaluation by HSV ensures the quality of higher education. HSV is also subjected to instructions from the Swedish government as they are also governmentally funded. In order to maintain the quality of higher education, HSV follows its policy according to the European Network for Quality Assurance (ENQA). To be able to grant degrees at different levels and of different subject areas, all Swedish universities have to be assessed by HSV and deemed qualified before being able to do so. Apart from the periodic evaluation, internal quality audits for education and research are also being done to ensure that certain indicators are met.

Like all other Swedish universities, both BTH and Lund are evaluated using similar standards. Thus, we can conclude that the performance measurement for all Swedish universities are evaluated using the same external national system.

External International Agency - EQUIS

LUSEM is one of the three Swedish business schools accredited by the external international agency – EQUIS. In LUSEM, the EQUIS accreditation exerts a significant influence on its internal performance measurement system. Apart from coping with the traditional external national evaluation by HSV, the performance measurement system also developed processes and mechanisms to cope with this stringent evaluation.

This external international evaluation is voluntary and used as a tool to help it to achieve its goal of being one of the top universities in the world. It is recognized as a crucial tool to enable the school to be in a competitive position among universities and to attract more international students to pursue their studies at LUSEM. This will be a crucial tool due recent developments in Swedish higher education, such as the introduction of school fees from 2011.

As LUSEM is an established Swedish university with a long history, it is in a better position to cope with the extensive demands from such an international external evaluation. Different levels within the school have recognized the outpour of resources to retain such an accreditation. However, all levels within the school recognize its importance to the school and work to improve on its internal performance measurement system and processes.

However, for a relatively new and small school like BTH, it has not applied for such an international accreditation. While they recognize its importance and value to the school, current processes and resources are still insufficient to meet the stringent criteria in all aspects. Thus, the school hopes to gain such an accreditation in the near future. The main external performance management system used currently is still administered by HSV.

Internal performance measurement system

Developments

As LUSEM is more established, the development of its internal performance measurement system is evident over the years. The school has developed its internal performance measurement system the past five to ten years. Performance measurements systems were unheard of previously and only basic performance measures were used.

Having developed an internal performance measurement system has helped to make things easier for the school and has helped it to improve on their processes internally. The different external evaluations also drive the school towards more complex performance measurements and the establishment of routine processes for monitoring and improving performance. The school also believes in continuous improvement of its internal performance measurement system to cope with constant changes and developments.

For BTH, the internal performance measurement system has also developed rapidly in the recent decades. Currently, its internal performance measurement system uses the balanced scorecard to take the different aspects of the school into account. However, the school still lacks certain tools and indicators in its performance measurement system. For example, administrative tasks take up a big part of the university's budget but there are insufficient tools to monitor performance in this aspect. Thus, developments are still on-going but there is a concern that there may be a backlash when too many controls are in place.

Roles and Uses

The roles and uses of the internal performance measurement system are similar for both Swedish universities. Both have an internal performance measurement system to monitor performance in critical aspects. Also, it is used as a tool for continuous improvement and to achieve their goals.

In BTH, the balanced scorecard is used as an internal performance measurement system to monitor performance. There are scorecards on the university level and the departments are also in the process of developing similar scorecards. These scorecards are used to measure critical aspects of performance in relation to its benchmark with KTH and BTH's goals. Thus, it is used as a tool to monitor and improve performance, so as to achieve their goals. When performance deviates from expectations, improvements are sought.

In LUSEM, the internal performance measurement system is also seen as a tool for communication within the school. It is used to unite the different professionals within the school to work towards the same goal and strategy. Similar to BTH, the internal performance measurement system in place establishes routines and processes to measure performance of critical aspects, so as to seek continuous improvement.

Key indicators

For both Swedish universities, the 'FTE' indicator is important as it determines the funding that the school gets. Also, it is a pre-requisite for the EQUIS accreditation for LUSEM.

However, other key non-financial indicators are important to Swedish universities. For BTH, the students' perspective is the most important and impacts the school's enrolment, reputation and ultimately funding.

For LUSEM, research indicators are important. This is measured in terms of the number of publications in high-level journals and 'biblometrics'. Also, the degree of internationalization is also an important aspect for LUSEM as it tries to stay ahead of developments and innovation. This is done through many exchange programs, recruitment of international students and also collaborations with other universities.

Despite the different focus and prioritization of key aspects in the performance measurement system, key indicators are teaching, research and students.

Teaching

Teaching is an increasingly important aspect for Swedish universities although it could be difficult to measure. The teaching aspect is mainly measured through course evaluations, students' grades and passing rates. Course evaluations are done upon completion of every course and the school tried to improve on the course and make alterations based on these evaluations. Also, the quality of teaching is increasingly being taken into account in the

performance measurement system due to the freedom of Swedish universities. Thus, course evaluations and teaching has an impact on lecturers' promotion opportunities.

Research

Research has been traditionally more important than teaching in Swedish universities. Performance measurements are well-developed as research outcomes are easily measured. There are also generally more rewards out of being a good researcher than a good teacher as rewards could be easily quantified using various indicators. Common indicators such as publications in high ranking journals, number of seminars, opposition of others' seminars, 'bibliometrics' and 'citation analysis' are used to measure research performance.

However, one main problem with measuring research performance is the long lead times for benefits to materialize. Also, intangible benefits stemming from research and rippling throughout the society is difficult, if not impossible to take into account.

There is also a realization that good research alone is insufficient for universities. Thus, both aspect of research and teaching is encouraged in the performance measurement system.

Students

The students' aspect is an important part in the performance measurement system in both schools. For BTH, this is the most important aspect in its balanced scorecard. Indicators such as grades, enrolment and passing rates are used. Student exchange programs and collaborations with international universities and corporations are also important. These facilitate a transfer of knowledge and skills and prepare students for the society.

Other important measures such as employment rates are documented by an external union while the school sends out questionnaires to students three years after graduation to obtain information. These results are consolidated by the external agency which publishes a comprehensive report every year.

Apart from these indicators, schools also try to help students through many different programs such as projects to help students with financing and other difficulties. This is part of the social responsibility aspect within the performance measurement system.

Funding

Funding is predominantly similar for both Swedish universities. Swedish universities are governmentally funded, mainly based on the number of full-time equivalent students. Upon receiving funding from the government, the universities allocates funding to different schools and faculties based on internal indicators.

However, Swedish universities also encourage funding from external sources. Research grants, donations, corporate endowments and fundraising are gaining importance as a source of financing for the schools. Schools are encouraged to increase their efforts in obtaining external funding through organized activities.

5.4 Analysis between Chinese and Swedish Universities

External National Agency

Both China and Sweden has an external national agency which monitors higher education's performance. The Ministry of Education evaluates universities in China while the HSV evaluates universities in Sweden. These agencies are governmentally funded and are accountable to the government. Similarly, both agencies ensure the quality of higher education in their respective countries and evaluate all universities using the same criteria. This national evaluation system is similar in many ways and has the same mission.

However, despite the many similarities at the top level between these two external national evaluation systems, some differences are apparent.

Firstly, the grading systems for these two evaluation systems are markedly different. The Ministry of Education in China evaluates the universities and grades them into four different levels – 'Excellent', 'Good', 'Pass' and 'Fail'. However, HSV mainly grades Swedish universities a 'Pass' or 'Fail' and award them the right to grant degrees and run certain programs based on the evaluations. Thus, this different grading system results in different effects for the universities.

For Chinese universities, the national performance measurement is extremely crucial for its reputation and resultantly, the funding they get. As not many universities are awarded the 'Excellent' grade, the government is willing to give these universities more resources to develop further. Moreover, as this is the main performance measurement system for all

Chinese universities, they strive to do well in order to stand out among over 2000 different universities. The evaluation would also determine the outside funding it could obtain from banks and corporations, and also affect its collaborations with private corporations. As the Chinese society values relationships, this could have far-reaching effects for the schools.

On the other hand, Swedish universities are merely graded a 'Pass' or 'Fail' and the performance measurement system has comparatively less motivation for the universities to excel in the evaluation once they are granted all the rights for the awarding of degrees. While it is still a core part of Swedish universities' performance measurement system, it was described as 'something which was always there and taken into account'. For Lund, we could see that the focus on improvement has moved towards an international accreditation system for improvement, while maintaining its standard for the national evaluation.

Secondly, the Swedish national evaluation agency is comparatively more developed and comprehensive when compared to the Chinese performance evaluation system. Most significantly, the Ministry of Education in China only measures universities' performance at the undergraduate level. There is no systematic performance measurement system for the masters' or doctorate levels. For these levels, universities have to rely on their own performance measurement system. Thus, we could anticipate large disparities between universities' performance measurement systems for the masters' and doctorate levels.

However, the Swedish national agency, HSV, evaluates all universities on a cyclical basis and on all levels, undergraduate, masters' and doctoral levels. Also, quality audits for areas like education and research is also being conducted periodically to assess quality in different areas. Thus, it is apparent that the external performance measurement system for Swedish universities is more comprehensive and developed.

This disparity could be attributed to the respective countries' stage of development. Sweden has a relatively developed economy, resulting in more comprehensive mechanisms and systems in place for performance measurement in higher education. On the other hand, China is still growing rapidly and has to meet many demands on different fronts. Also, due to the sheer number of universities, more time and resources will be needed before a comprehensive performance measurement system is developed. At this stage, the focus is put on the undergraduate level. Although China lacks behind in this aspect currently, higher education is an area of growing importance and would be developed in time to come.

External International Agency

Based on our empirical study, only Lund School of Economics and Management is being accredited by an external international agency – EQUIS. While international accreditation is gaining importance worldwide, only the top schools are accredited. In Sweden, only 3 universities are accredited with EQUIS. In China, only the top 5 universities are accredited with EQUIS. The percentage of schools being accredited by EQUIS is low and thus, accreditation is prestigious and puts the school in a competitive position.

Examining the process of accreditation by an international performance measurement system like the EQUIS, it is apparent that many criteria has to be met and that the school has to pour in many resources to meet its stringent standards in many areas. However, through Lund's case study, the influence of this external performance measurement system is significant. The school has successfully developed and improved on its internal performance measurement system and processes to meet these stringent demands. Having aligned its internal performance measurement system with this international performance measurement system, the school is able to monitor and improve on different aspects easily. Despite the exhaustive resources needed to meet the standards, the school has managed to establish an internal system to cope with international standards. This results in many benefits for the school, for example increased internationalization and opportunities for collaborations with other top universities among many others.

Apart from advantages which accredited schools could reap, internally and externally, such international performance measurement systems could facilitate an overall improvement and harmonization of higher education standards internationally. As schools are required to improve upon each evaluation to retain its accreditation, the international evaluation system gives the schools comments and areas to work on. Since the evaluation committee is international and experienced, this could facilitate the transfer of knowledge for processes in different areas.

Despite the many potential benefits of such an international performance measurement system, there are also some potential drawbacks which schools are also aware of. As 'what gets measured gets done', there is a risk that schools are run solely based on these indicators. However, whether or not these indicators are up-to-date or the 'best' for the school might not be straight-forward. As such an international performance measurement system requires a similar set of indicators for all schools worldwide; it may not take into

account unique needs of individual schools. An inertia and bureaucracy to change different indicators for the performance measurement system may also result. Like all performance measurement systems, such an international system has to be carefully monitored and kept up-to-date for it to work efficiently.

Due to the extensive resources needed to meet the requirements of such an international performance system, not all schools could afford it. Schools which are of smaller scale or relatively newly established schools like BTH might not be able to do so in the short-run.

Overall, international performance measurement systems have many benefits which could be reaped for the university, internally and externally. Having an outside pressure to motivate the school towards improvement could eventually result in better performance for the university and for the higher education field.

Internal performance measurement system

Developments

The development of performance measurement systems is relatively comprehensive in Swedish universities as compared to Chinese universities.

Internal performance measurement systems are still at its infancy stage for Chinese universities. These systems are at its basic level to cope with external evaluations and for promotion purposes. Internal performance measurement systems have been developed traditionally to cope with the external national evaluation. Several main indicators are also used but schools lack a comprehensive system which monitors all aspects of its performance and link these to its strategy. Also, while Chinese universities are willing to seek improvement and to be in line with international higher education developments, development in this area appears to be limited in the short-run due to its environment. A substantive outpour of resources to develop a comprehensive internal system is needed and the outcomes uncertain. Resultantly, not many universities are willing to overhaul and redesign its internal performance measurement systems.

On the other hand, the internal performance measurement systems within Swedish universities appear to be generally comprehensive. In the LUSEM case study, we could observe how its internal performance measurement system developed upon its international accreditation. There is also a comprehensive internal system to take into account different aspects of its performance and processes for continuous improvement.

Also, in the BTH case study, despite being newly established, it uses a balanced scorecard and benchmarking techniques to monitor its performance and to seek continuous improvement.

Thus, we could observe that a comprehensive performance measurement system in consciously designed and used to coordinate different aspects within Swedish universities. On the other hand, performance measurement systems are rarely acknowledged and used constructively for improvements in Chinese universities. Instead, they are looked upon as a tool to help them to achieve good results for the external evaluation and consequently, good reputation and potentially increased funding. This disparity in the developments of the respective internal performance evaluation system could be attributed to the different attitudes towards performance measurements and environmental factors within which they operate.

Roles and Uses

The roles and uses of performance measurement systems within Chinese and Swedish Universities are markedly different.

In LUSEM, the performance measurement system is regarded as a tool for improvement and communication. The school actively seeks to measure and monitor its own performance, so as to constantly improve itself. The performance measurement system is also used as a tool to explain why certain things are measured and how they contribute to its overall strategy. It also helps to bring together different parts of the organization to work towards the same goal. Thus, LUSEM uses its performance measurement system in ways which are similar to private corporations. Although different aspects and indicators are used, it functions in a similar way to help the organization monitor and improve on different aspects to achieve its strategy.

Similarly, in BTH, it uses the balanced scorecard to measure critical aspects of performance. It also benchmarks its performance in relation to another university to monitor its performance and to work towards its goals. Improvement is sought when results deviate from expectations, resulting in a continuous improvement process.

However, for universities in China, the internal performance measurement system is relatively undeveloped. While some indicators and measures are used to monitor and measure performance, they are mainly used to cope with the external national evaluation. There is a lack of a comprehensive system which brings all aspects together.

Notably, Swedish universities associates its performance measurement system as a tool to achieve its strategy but 'strategy' was not mentioned for Chinese universities. Also, a different attitude towards performance measurement systems is observed. While Swedish interviewees constantly describe their performance measurement system and how they use it for improvements in detail, Chinese interviewees mention several measurements they used and admit that a comprehensive system is not in used currently.

Key Indicators

For financial indicators, schools in both China and Sweden focus on the number of enrolled students or 'FTEs'. This could be attributed to the fact that they are governmentally funded and this is the major determinant for the funding they get. Also, for LUSEM, this is closely monitored as a healthy financial situation is a pre-requisite for the EQUIS accreditation.

However, when it comes to non-financial indicators, different schools focus on different aspects. LUSEM and NFU focus on research indicators, BTH focuses on the students' aspect while SEU focuses on teaching indicators.

Despite the different focuses, all schools agree that these three indicators are highly important to them. While the approach used might be different, these different aspects are crucial for universities.

Teaching

Teaching is an important aspect which is of great importance to all schools. However, for most schools, research appears to be of higher importance, with the exception of SEU. For SEU, teaching is emphasized on as it benefits both lecturers and students. It also facilitates the transfer of knowledge and results in deeper academic research for high-standard teaching.

Evaluations after every course are commonly used among all schools as a tool for teaching performance measurement. Students are required to evaluate every course upon completion and their comments are worked upon for improvements to future courses. Amendments are made to the courses based on the comments and teaching evaluation could have an impact on promotion opportunities of lecturers. For established schools with a long tradition like NFU, peer grading by senior professors are also done when they sit-in to observe certain lectures.

Teaching has traditionally been placed behind research as more rewards are tied to research than teaching in Sweden. However, teaching is an aspect which is gaining importance as universities realized that they could not rely on good research alone. Thus, the performance measurement system tries to encourage both teaching and research and to introduce more qualitative measures.

Research

Research could be regarded as the most important performance measurement for universities as they are easily measured and rewarded. Indicators such as publications in high-ranking journals, number of seminars and number of research projects are common indicators.

For Chinese universities, the number of published academic articles is a fundamental factor for lecturers' promotion. It is also an important non-financial indicator. Similarly, research is also an important non-financial indicator for Swedish universities.

However, one problem with measuring research is that some research projects and collaborations with private industries have long lead times and have intangible benefits which are difficult to quantify or measure. Thus, main indicators used are still the number of published articles.

Students

Students are a crucial aspect for universities as they determine the schools' reputation and amount of students enrolled, which affects the funding it gets. Moreover, being able to attract quality students could affect the learning environment and the eventual output of the school. As such, this aspect is important for both Swedish and Chinese Universities.

Key indicators to measure the students' aspect is similar among the universities and includes passing rates and employment rates. Other indicators include degree of internalization, which could be measured using the number of exchange programs or collaborations with other universities. Increased collaborations and exchange programs increases learning opportunities for students and accelerates the transfer of knowledge between different countries. Also, collaborations with corporations and internship opportunities are also crucial as these give the students a learning opportunity to gain real-world experiences and facilitate higher employment rates for its graduates.

Funding

When it comes to funding, the universities in Sweden and China are both mainly funded by public funds. Also, determinants for funding are similar and the number of students enrolled or the 'FTEs' indicator is used. However, Swedish universities have more flexibility when it comes to raising funds from outside sources such as from corporations. The schools in China have limited ability to raise funds by themselves externally, but have to rely on the university level funding instead.

In China, funding is predominantly from the government. Determinants of funding is mainly the number of enrolled students but universities which are graded 'Excellent' may be allocated with more funding. Universities allocate the funds between different schools based on their internal indicators such as the number of enrolled students and number of research projects. Funding from external sources is limited and not all individual schools are able to raise fund by itself. For example, SEU is unable to raise funds for itself at the school level and has to rely solely on allocations of funds from the university level. However, NFU is able to raise external funds by itself at the school level although such funds are limited.

In Sweden, while funding is predominantly from the government, universities are encouraged to raise external funds themselves. Funding from the government is also allocated to universities which then allocate funds to individual schools based on similar indicators. Apart from External funds are becoming increasingly important and activities to increase external funding are also undertaken by universities. Business schools have the advantage to raise external funds due to their close links with private corporations. External funding could be a donation or research funding in an area. External funding would also gain importance for Swedish universities due to reduced funding from the government from 2011.

Chapter 6: Results and Conclusions

6.1 Main Findings

Having explored the different performance measurement systems within universities in China and Sweden, we have gained an understanding of the internal performance measurement systems in place and also the external factors which shape it. We have also examined the differences and similarities between these performance measurement systems and tried to explain the different observations and the factors which cause these.

Chinese universities have the same external performance measurement system at the undergraduate level and schools follow universities' structure as well as the universities' performance measurement system. In addition, there are no systemic performance measurement systems for universities at the masters' and doctoral levels. It is the real and identical situation for all Chinese universities. Also, the evaluation by the Ministry of Education is only conducted every five years. It takes a long time for the authorities to evaluate all universities in China due to its sheer number. It is also more difficult to evaluate universities the second time, to determine any improvement or deterioration in standards. As a result, the external pressure for universities to carry out performance measurement is relatively limited when compared with universities in other countries.

As anticipated, we could see that the external performance measurement systems have a great influence on its internal performance measurement systems. In Chinese universities, individual school's internal performance measurement system is mainly aligned with the university's performance measurement system. The main use of this system is to help the school cope with its external national evaluation as it is crucial for its funding. In Swedish universities, external influences are also predominant but international accreditation and a larger focus on internationalization resulted in a more developed internal performance measurement system as a tool for monitoring and improving quality. More qualitative indicators are also being introduced due to the greater degree of freedom in Swedish universities.

Despite similar external factors, the influence on internal performance measurement could vary among Chinese universities. Apart from external influences, factors unique to each university itself could result in different developments and usage of its internal performance measurement system. History, size and tradition of a university are some factors which affects its internal performance measurement system. For example, in SEU, which is a relatively young university, performance measurements are used as a tool for monitoring

and to encourage improvements. This is contrary to NFU which is an established university with a longer history and puts more emphasis on experience and the seniority hierarchy. Also, established universities such as Lund are accredited by international performance measurement standards while newly established universities like BTH has a less developed internal performance measurement system and have not applied for such international accreditation.

The environment within which universities operate also affects the performance measurements in place. There is no systematic internal performance measurement system in Chinese universities as schools only need to be accountable to the state which provides the funds. Thus, the school's internal performance measurement system is developed only to meet the demands of the external national evaluation by the Ministry of Education. As universities have limited incentives or rewards associated with improved performance, they are unwilling to put in additional resources to develop a more comprehensive performance measurement system.

Also, the predominant external performance measurement system is administered by the Ministry of Education. The majority of universities in China relies on this system and aligns its internal system accordingly. Not many universities have their performance measured by other external agencies, such as EQUIS. Thus, this also contributes to the relatively underdeveloped performance measurement systems which Chinese universities use today.

In contrast, the environment which Swedish universities is competing it requires it to perform well, especially when internationalization is an important aspect. In order to be in a competitive position internationally and to attract an international mix of students, international accreditation is essential and the school is rewarded for good performance. Thus, schools are more willing to pour in resources and to perform well.

In contrast to private corporations, universities emphasizes on non-financial indicators to measure its performance. Teaching and research indicators are most important within its performance measurement system for both Swedish and Chinese Universities. This could be attributed to the mission and strategy of universities, which is to provide quality education and research for the society. Given the nature of the organization, universities generally use similar indicators to measure their performance in these areas.

In line with developments and observations in literature, universities appear to be inclined to adopt more comprehensive performance measurement and improve on its internal performance measurements. Nowadays, universities are increasingly being run like

corporations and there is a need for external accountability for the resources they consume. Greater freedom being granted and the greater competition for funds in the higher educational field also results in more performance measurements.

6.2 Literature comparison

Our results are largely in line with the literature about performance measurements. Tracing the developments in universities through our empirical data, we could clearly see that performance measurements have been increasingly important today although it was unheard of a decade ago. Although academia is traditionally not used to being subjected to performance measurements, schools have developed more qualitative indicators to measure its quality and to account for its performance.

Comparing the performance measurement systems in place within universities and private corporations, a different focus is apparent. While private corporations use financial measures such as profitability, non-profit organizations such as universities lack a single measure which could be measured easily. Universities are concerned with the quality of education and output in terms of research and students. These aspects could be problematic to quantify accurately. However, we could also see that performance measurement system plays the same role in trying to monitor and improve performance given a strategy or goal. Thus, given their goals, universities focus on non-financial indicators predominantly although a healthy financial situation is fundamental.

As predicted, Chinese universities have a less-developed performance measurement system in place as compared to Swedish universities. In line with the literature, Chinese non-profit organizations have procedures mainly established to meet policy and/or reporting requirements and lack a market-driven culture (Ronald Zhao, 2003). The performance measurement systems in place within Chinese universities are developed mainly for the external evaluation by the Ministry of Education. Internally, while performance measurements are used in varying degrees, it is still not widely used to monitor and improve performance. The role of performance measurements appear to be used mainly for promotion and to meet external requirements.

Notably, despite a lack of a comprehensive performance measurement system in place within Chinese universities, key persons in charge are optimistic about its future development. Chinese universities are willing to keep up with international developments in higher education and develop its performance measurements accordingly. They do not rule out international accreditation in future, but the environment within which they

operate is not conducive. While the resources needed are extensive, universities are unwilling to take the plunge due to the uncertain benefits. Moreover, there are too many universities in China and it would take a long time before their performance measurement systems are fully developed.

6.3 Research parameters

Using Chinese universities as part of our case study is interesting as it is a big country which is growing at an astounding pace. However, the situation with Chinese universities is also unique due to the sheer number of universities within China. Probably no other country has more than 2000 universities and its centralized bureaucracy system could make the situation more challenging than any other country. Thus, the situation within top universities and other universities could vary greatly.

Taking NFU and SEU, our case study could be said to represent the average Chinese university although our small sample size does not allow our results to be generalized. Several top universities in China have been accredited with EQUIS and should have comparable performance measurement systems with most Swedish Universities. However, this is exceptional and does not represent the general situation in Chinese universities. If universities from other well-developed countries such as United Kingdom or America are chosen, the performance measurement systems should be comprehensive and well-developed.

Apart from the universities being chosen, there are also far-reaching implications for our choice of 'School' being chosen. We have chosen to examine the performance measurement systems being used by business schools. However, the results and the use of such performance measurement system could vary greatly for other faculty such as for medical or engineering schools. We have noticed that the internal performance measurement used is greatly influenced by external actors. There may be other external factors and indicators involved such as a stronger influence by professional bodies and even professional ethics and law governing specialized fields. Consequently, indicators used to measure performance and aspects taken into account would also vary among different faculties.

Being closer to society than any other faculty, business schools will probably have a head-start in the use of such performance measurement systems and the role it plays in other faculties such as in the environmental or history faculties might be comparatively

smaller. Thus, other faculties are expected to lag behind in the use of performance measurement systems.

6.4 Learning outcomes

Although Chinese universities have a relatively less developed performance measurement system, the Chinese external national grading system is more extensive than the Swedish external national grading system. While the Chinese system grades universities into four different brackets – 'Excellent', 'Good', 'Pass' and 'Fail, the Swedish system only grades universities a pass and fail and grants them rights to give exams. Giving universities different grades could be used as a mechanism for universities to strive for improvement and to maintain their grades. Thus, the Swedish external grading system could benefit from this. However, it is also notable that there are more than 2000 universities in China but only 14 universities and 22 higher educational institutions. The need for different grades given could be more acute for the Chinese evaluation system.

Swedish universities have a relatively more developed internal performance measurement system which is greatly influenced by its external system. There is a greater focus on performance, improvement and internationalization. Swedish universities are also adding more qualitative indicators to ensure high quality. The advantages of using such performance measurement systems have been widely accepted by the faculty, resulting in a positive attitude towards such a performance measurement system despite an increased workload. This is an environment which facilitates growth and improvement, which is a crucial aspect which Chinese universities could learn from.

6.5 Further Research

Further research could be done to examine the obstacles which Chinese universities face in further developing a holistic internal performance measurement system. Being in its development stage, education is a crucial area which could help China develop its human resources to meet the demands which comes with accelerating growth.

Also, in-depth studies of universities with well-developed performance measurement systems could also identify critical success factors which could help other universities to further develop their internal performance measurement systems. Being able to measure universities' performance accurately is a crucial tool which could help to improve the quality of worldwide higher education.

6.6 Conclusions

Taking into account all aspects, the performance measurement system in Swedish universities is more comprehensive and developed compared to Chinese universities. This is most evident when we examine the roles and uses of the performance measurement systems.

However, it is important to distinguish between the performance measurement system and performance measures. While Chinese universities do not have a comprehensive performance measurement system in place, the main performance measurements used are largely similar to those used in Swedish universities. Key indicators for funding, teaching, research and students are similarly measured. Despite so, a system is not in place to bring these measures together in a systematic way to help it to achieve its strategy and goals. The main reasons which results in a lack of performance measurement system for Chinese universities could be attributed to its current higher education environment and a lack of incentives for its development. Also, attitudes towards performance measurement systems are also a problem as Chinese universities are not used to being managed in a similar way to private corporations. As such, Chinese universities are still relatively traditional and lack behind recent developments in the higher education field.

Despite the under-development of a holistic performance measurement system in Chinese universities currently, universities are willing to keep up with international developments in the higher education field. Given the right motivation and resources, Chinese universities would be able to catch up quickly and use a performance measurement system as a tool to advance themselves internationally.

Performance measurement systems in universities lack extensive research currently. Various factors influence performance measurement systems in universities and they vary between different countries, even within the countries. Through our research, we could identify many areas for improvement in the higher education field to improve on processes and efficiency. As higher education is a crucial for future economic growth and innovation and the transfer of knowledge for betterment, the benefits from more research in this area would ripple throughout societies.

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Appendixes

A 1. Questionnaire to Chinese Universities

EKONOMI
HÖGSKOLAN
Lunds universitet

Questionnaire about Performance Measurements in Universities

Name：_____ Position：_____

Hello, we are master students from the Accounting and Management Control Masters' program of Lund University. We are studying the differences between the performance measurement systems within Swedish Universities and Chinese Universities. We hope that you can help us to do this questionnaire. Your answers are very important to our research. Thank you!

Questions

1 Please introduce yourself, e.g. your position in the university, your daily work and responsibilities.

2 What kind of performance measurement system is used in your school? Are there both external and internal influences? And how do they interact?

3 From the financial perspective, what indicators does your school use for performance measurements?

4 From non-financial perspective, what indicators are used for performance measurements?

5 Are there any specific organizations which evaluate the performance of your school? How do they work?

6 What aspects of performance measurements does your school take into consideration? Can you give us some examples?

7 What advantages and shortcomings of performance measurements in your school? How do you try to overcome these disadvantages? What difficulties or problems do you face when improving on such performance measurements?

8 What indicators does your school use in your performance measurement system? And which ones do you think are more important?

9 What roles does the performance measurement system play in the university?

10 From your own perspective, what are the main differences between performance measurement system in private sectors and non-profit sectors?

11 Is there an increasing trend of using performance measurement systems in universities, or have the number of indicators being used increased?

12 Being in the educational sector, do you think non-profit organizations, like universities; need to take into account its social responsibility? And how the performance measurement system can help to contribute to social responsibility?

13 Does your university take social responsibility into consideration in performance measurements? How do universities take its social responsibility into account when choosing performance measurement indicators?

14 What other aspects should be taken into consideration of performance measurements? Can you give us some suggestions on it? Please provide any other comments or information about performance measurement which you think is useful.

Thank you for your answers!

Grading: (1-10 points: 1-Least important; 10-Most important)

Indicators		Points
Financial aspect	asset-liability ratio	
	Self-financing rate	
	ratio of cash inflows and outflows	
	external donors	
Assets Management	asset utilization ratio	
	per capita assets occupancy rate	
	fixed assets occupancy rate	
Teaching Assessment	professors/ teachers rate	
	teachers/ students rate	
	masters, doctors/ students rate	
	number of doctoral	
	graduates employment rate	
	number of excellent programme	
Research Assessment	research funding rate	
	research projects awards	
Social influence	public welfare expenditure ratio	
	poor students financing	
	education aid to poor area	

Thank you for your answers!