

AN ADOPTION OF BALANCED SCORECARD (BSC) METHOD TO MEASURE THE PERFORMANCE OF CORPORATE REAL ESTATE (CRE) IN UNIVERSITIES

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ABSTRACT

Corporate real estate (CRE) is commonly being practiced by the business organizations as part of their strategic control on property which could give value-added to them. Implementing CRE in business organization is common due to the profitability concern, but in educational organization, it might be rare because people usually have a perception that the genuine purpose of education institution is to educate, not creating a profit through the business. However, under amendment in Universities and University College Act 1971 in 1995, public universities in Malaysia now are allowed to venture into business and form a corporation to involve in the business. This is also includes the privatization of the higher education which can be offered by private universities or colleges. So through the abovementioned scenarios, corporate real estate (CRE) in universities looks significant now as universities have to enhance their competitiveness which is not only in the education but also in their business arms. This paper aims to study the implementation of CRE and seek opportunities to enhance the application of this concept for university. This study is driven by a number of objectives namely first, to develop the conceptual framework of CRE for the university, and second, to develop the Balanced Scorecard (BSC) dimension as the performance measurement system for CRE in university. The rationale of this paper is to promote the application of CRE into the management of the university as part of their strategic plan.

Keywords: Corporate Real Estate, Universities, Balanced Scorecard, Performance Measurement

1. INTRODUCTION

Corporate real estate (CRE) concept has been widely known as a strategic real estate management tool but also give added values for the organization. The concept has gained its popularity mainly due to the changes in the business activities together with its size and scale which require for suitable size of accommodation (Krumm, 2001). The changes in corporate form have led to the emergence of various theories and improvement on this CRE concept. Most organizations know that they need place to undertake their activities, but many organizations are stuck with the perception that occupancy on property is a fixed cost commitment and burdening their financial (Stoy, 2007). This perception should never exist as the property is actually can affects the business operational performance and contribute to the profitability if the organization can formulate a good CRE strategy.

Due to the ability to bring a better real estate control for the organization, the CRE concept can be introduced to the educational organization. It might not attract too much attention because people usually have a perception that the genuine purpose of education institution is to educate, not creating a profit through the business. This perception should be changed, because under the amendment in Universities and University College Act 1971 in 1995, public universities in Malaysia now are allowed to venture into

business and form a corporation to involve in the business. So, CRE automatically look significant to the current university organizations. This situation should be exploited because the implementation of CRE in higher education institution is expected to increase occupancy efficiency, better control on strategic management as well as promoting a good image to the public.

In relation with the implementation of CRE in organization, it however needs performance measurement to ensure that it is always on track with the organization's objectives. Performance measurement can be simply explained as a process of assessing progress towards achieving pre-determined goals at most efficient manner (Amaratunga & Baldry, 2003). There are various kinds of performance measurement tools available that can be used to measure the performance of the facilities management practice. But seeking for the most suitable tool to measure performance is not easy. From the several performance measurement tools, many organizations have chosen Balanced Scorecard (BSC) (Rantanen et. al., 2007). Other than that, BSC is also a suitable approach to measure the performance for the context of facilities management (Amaratunga & Baldry, 2000). BSC is regarded as a management system which can provide a clear strategic vision to the organization and has a power to turn them into a required action (Robert. S. Kaplan & Norton, 1993). But the most important element about the Balanced Scorecard is its ability to link the external and internal business processes through the identified perspectives which consist of not only financial elements but also the non-financial elements.

This study is actually an effort to seek the opportunity to implement CRE in the higher education institutions. Using the balanced scorecard, CRE performance can be measured as part of organization's strategic management system.

2. PROBLEM STATEMENT

Functions as university, the burden to deliver a good education system always being critical as university has to be the producer of human capital to the country besides to invent new ideas, researches, concepts as well as the technologies. To function well as a university, the university must ensure that it meet up the required physical settings. The buildings and facilities must able to support all core activities of the university because the education and research activities rely on the available physical set-up.

In most cases, universities have to stretch-up their capability to provide spaces due to excessive number of occupants. This has led to the occupancy efficiency problems or requires an excessive occupancy cost which fall under the CRE concern. As suggested by Langston & Lauge-Kristensen (2002), the property and facilities of the organization should be tailored to meet the function, location, time and potential future direction. This is where the universities should concern as they are regarded as always expanding organizations.

Acceptance is always being a question for the employment of a new concept in the organization. For the university, the main concern is to implement quality in education besides to involve in other research activities. Education will usually be at the top priority for any strategic measures by university. So, apart from the education concern, this is where the CRE should appear, because CRE may directly influent the education processes by way of providing the platform for education processes. But firstly, it must be introduced and understood by the university's top management because decisions are coming from them. Ensuring the CRE concept to penetrate into the management of the university is crucial as it is depends on the acceptance by the top management.

Lastly, is the problem in relation to performance evaluation, where Crowther (1996) has suggested that performance evaluation always concerned on technique used, appropriateness of measures and empirical consideration on the current practice. So, to implement the CRE concept in university, the evaluation process on performance need to be done correctly to ensure its effectiveness and can achieve the purpose of evaluation. This is because in CRE context, performance measurement always lack its comprehensiveness in providing the general view of the CRE process and the outcomes (Lindholm & Nenonen, 2006).

3. AIM OF THE STUDY

The aim of this study is to introduce corporate real estate (CRE) into the higher education institutions, and at the same time to adopt the Balanced Scorecard (BSC) method as the performance measurement instrument.

4. OBJECTIVES

This study has driven by the objectives to:-

1. To develop a balanced scorecard for measuring performance of the CRE in universities.
2. To measure performance of CRE in universities based on the balanced scorecard.
3. To analyse the performance of the CRE of universities based on the balanced scorecard.

5. LIMITATION FOR STUDY

The limitations for this study have been set as follows:-

1. The research will study only three public universities, each with its own selected criteria.
2. The study only gives attention to general CRE application on buildings and facilities in university.

6. Literature Review

6.1 Corporate Real Estate (CRE)

Corporate real estate concept covers all the property assets such as land and building owned or occupied by one organization which its main activities are not in real estate business (Silverman, 1987). Bon, McMahan & Carder (1994) defined it as the management of building and parcels of land at the disposal of private and public organizations that are not primarily in the real estate business. It is regarded as a discipline which links to the management of organization property portfolio which comprising the asset and facility management (Ilsjan, 2007). So, from these definitions, it can be explained as property assets (property portfolio) owned, lease or used by one organization or company which do not directly involved in property line activities, but use them as platform for the purpose of business activities.

It is undeniable that for most non-property related company, they do not have a deep understanding on the importance of real estate to their core business. Many corporate firms' management still do not recognize the strategic potential of their real estate in adding value to the company (Lindholm & Levainen, 2006). But companies buy or lease the real estate because it is necessity for the purpose of business needs and they do not fully exploit the potentials of the property. For companies who aware the big potential of the real estate for business, they will treat the real asset as their source of wealth. This is in line with the argument by Zeckhauser (1983) & Bell (1987) which stated that 25% or more of corporate assets are in real property, and occupancy costs represent 40% to 50% of net operating incomes (Nourse & Roulac, 1993). By owning the property, the organization is actually storing a large amount of money but in another form of capital which can be liquidated later. But, the organizations always see it as a complicated process where it involves time and various procedures to liquidate the real asset into cash money.

In corporate real estate, the main objective is to maximize the value of property no matter the property is used as investment asset or operational asset (Edwards & Ellison, 2004), which Carn *et. al.*, (1999) have further described that CRE objectives must (1) enable the core business; (2) optimize real estate resources and (3) consistent with corporate objectives. Edward & Ellison (2004) however have stated that the value concept for the CRE context is not necessary a financial value, it can be a different types of value including social, ecological, cultural and others. So, the objectives of CRE must be seen from different perspectives to ensure that the property can function, perform and achieve its highest and best use. Besides

sharing the main CRE objectives, organizations also need to identify their own CRE objectives because every CRE implementation need to suit with the organization vision, mission and direction.

The below table is presenting the value added from CREM by various literatures, where CRE is not only promoting the efficiency of the space occupancy, but also enhancing the other aspects in the organization such as organization’s culture, working system, customer management and external factors.

Table 1: The importance and value added from CREM by various literatures

As introduced by Nourse and Roulac (1993)	As stated by De Jonge (1996) in Krumm and Vries (2003)	As from Lindholm and Leväinen (2006)
<ul style="list-style-type: none"> ○ Occupancy cost minimization ○ Flexibility ○ Promote Human Resource Objectives ○ Promote Marketing Message ○ Promote Sales and Selling Process ○ Facilitate and Control Production, Operation, Service Delivery ○ Facilitate Managerial Process and Knowledge Work ○ Capture the Real Estate Value Creation 	<ul style="list-style-type: none"> ○ Increasing productivity ○ Cost reduction ○ Risk control ○ Increase of value ○ Increase of flexibility ○ Changing the culture ○ PR and marketing 	<ul style="list-style-type: none"> ○ Reduce cost ○ Increase flexibility ○ Increase productivity ○ Increase employee / internal client satisfaction ○ Increase innovations ○ Promote marketing and sales ○ Increase value of assets ○ Effectiveness in corporate strategic process

From above, there are certain benefits/value added that are similar or bring the same concept which indicating that they are agreeing with each other. But some of the abovementioned points are too aligned to the business organization which not within the university context. So, as additional to the above, the benefits of CRE for university are as follows:-

- i. Better formulation on the space usage including occupancy flexibility (S. Apgar & Herskowitz, 2006) in the university.
- ii. Better projection of spaces for future expansion plan.
- iii. The increment on the satisfaction and safety level to the occupants.
- iv. The enhancement of value to the organization through the portrayed property image.
- v. To reflect the purpose of the organization (Krumm & Vries, 2003) or show the core activities.
- vi. Creating, attracting and retaining customers as well as an outstanding people in the organization (Roulac et al., 2002).
- vii. Better control on occupancy cost (M. Apgar, 1993).
- viii. Better usage of property portfolio to communicate and reinforce the competitive position in the market (Singer et. al., 2007).
- ix. Competitive advantage of core competency (Roulac et al., 2002)

Every organizations have their own degree of importance to the functional role of the property, which different from each other depends on their main activities(Edwards & Ellison, 2004). Awareness on real estate also could give influence to this matter, because every organization may see the property importance in different ways. So, the organizations may control their property assets according to their corporate planning. According to Dahlmann (1987), the factors that must be considered when to apply the CRE concepts are the future space needs, current available space, time to acquire or dispose of space and space obsolescence. Through the stated factors, the organization will determine their needs and this will

make the organization different from each other because there is no specific or standard formulation can be applied to all organization.

6.2 Evolution of Higher Education

The route for tertiary education in Malaysia has experienced many changes and evolutions since over fifty years ago. The revolution was getting tremendous since early 90's as Malaysia higher education has been more open and liberal by offering various types of higher education in the country (Sato, 2004). According to Lee (2004) (cited from Kaur, 2007), the development of higher education in Malaysia has gone through three major expansion waves since the independent which has started after the independent through the openings of University Malaya in 1959 in Kuala Lumpur. Then the second wave was happened 70's and 80's soon after the New Economic Policy (NEP) took an effective in 1971, which during this period many public universities have been set-up to reduce the imbalances of educational opportunities amongst the different ethnic communities. The final wave then was started in 90's which saw the growth of private universities and colleges due to the excessive demand for the higher education because of the commercialisation and commodification of higher education.

Until June 2007, Malaysia has 20 public universities, 32 private universities, 4 foreign university branch campuses, 485 private colleges, 22 polytechnics and 37 public community colleges (StudyMalaysia.Com, 2009). The number of this higher education institution is growing over time as a proposal under 'National Higher Education Strategic Plan' is to provide 1.6 million places in higher education institutions which targeted to achieve 40% population of age cohort between 17 and 23 to enroll in higher education institutions. With this high number of higher education institutions and high number of students to enroll in university, the universities need to increase their capacity by having a good strategic plan which not only to provide education but also to have an excellent physical set up and ample to cater this growing number of students.

Universities model has evolved from the traditional teaching university into a wider scope of areas. It is illustrated in the table 1 below.

Table 2: Malaysian experience with university models

Year	Description of era	University Model
1957-1980	Intellectual	Traditional teaching university
1981-2004	Government intervention	Skills-based university college/polytechnic
	Corporatisation	Corporate
2006	Marketisation	Research-intensive research university
2007-2020	Technology	Invisible
	University-Industry	À la carte Vision

Source: Morshidi (2005) (cited from Karim, 2008)

Other than establishing new higher education institutions to cater higher number of students, Universities and University College Act 1971 also has been amended in 1995 which allows for the corporatization of public universities and the introduction of privatization for higher education. Through this, public universities can involve in business related activities along with the educational activities (Abdullah & Othman, 2008). So, it can be regarded as a turning point for corporate real estate (CRE) management being implemented in the higher education institutions due to the involvement of the today's universities into corporate oriented activities. This requires them to follow some of the corporate practices to ensure their competitiveness in the education field, have higher quality standard and also to generate revenue for them.

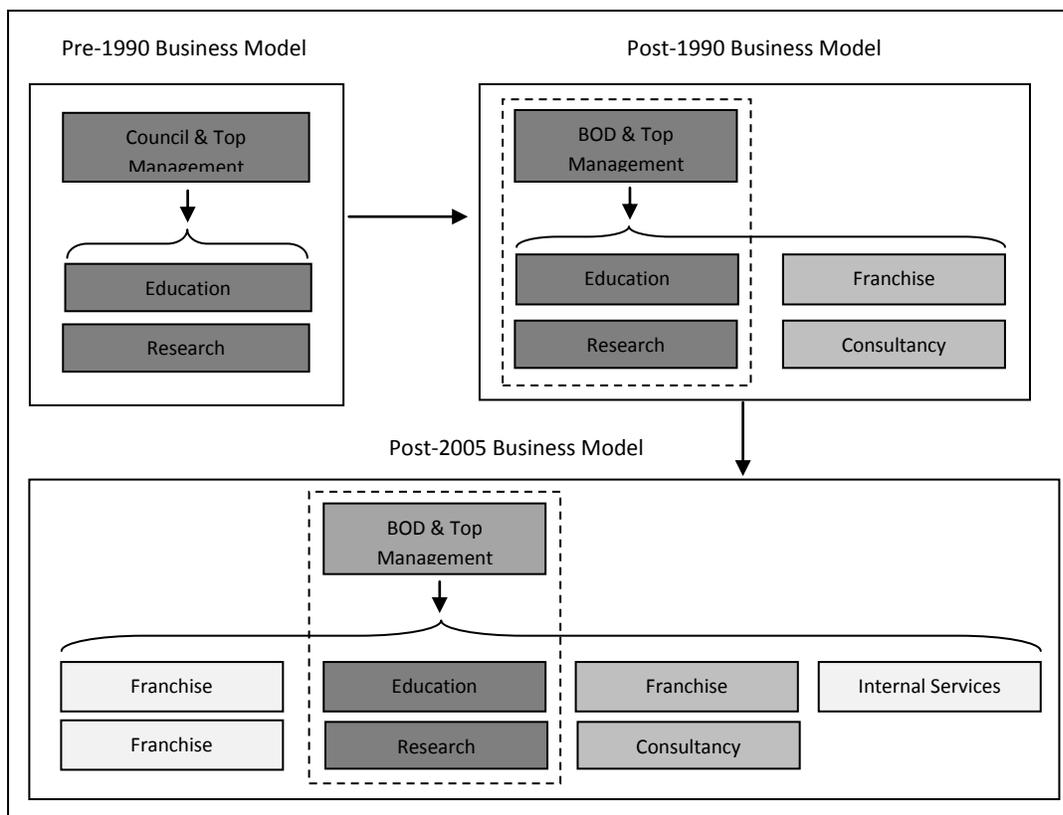
Under university corporatisation, university is assumed as a form of business organization and can run a business (Morshidi, 2006). Bostock (1999) has mentioned that through the capability of the university to involve in the business organization, the university would be able to:-

- i. to generate and raise revenue
- ii. can enter into business enterprise
- iii. acquire and hold investment portfolios
- iv. encourages partnerships with private business firms
- v. compete with other universities in the production and marketing of courses offered to students who are now seen as customers
- vi. engage with the market for higher education.

The freedom of finding ways to generate income for university would make the universities more independent and able to support some of the operation costs. The management of the universities will become more creative in creating and looking for the opportunity to generate incomes which now can be beyond the education boundaries.

Universities in Malaysia have gone through a few revolutions, where it can be described as the Figure 1 below which developed by Abdullah & Othman (2008). According to them, university business model before 1990's period were exclusively focused on the education and research only. The post 1990 period saw the public universities have expanded into the consultancy and also franchising their educational programmes to local private colleges. Starts in the year 2000, many public universities have set up university owned corporations to contend and get a better grip in consultancy market besides also to produce and market the inventions of their research products.

Figure 1: The evolution of the public university business model



(Source: Abdullah, H. S., & Othman, S. (2008). *The Public University Governance: The Missing Parameters*)

Some recent actions taken by the Ministry of Higher Education in Malaysia to boost current position for Malaysian universities are including to introduce the Research University (RU) status and the Accelerated Programme for Excellence (APEX) for universities. These universities would receive more

research grants and will be encourage more to involve in research activities and at the same time to improve the current world position. Meanwhile the APEX university will carry a bigger mission where they have to be the world top 50 university by year of 2020. The APEX status would make the university can has an autonomy in finance, service scheme, management, student intake, study fees and determining the top leadership (Bernama, 2008).

Due to shift of university's paradigm into the more complex activities after the corporatisation, universities are required to change the way they administer the university. University should inject more corporate culture in its operation as a business entity without neglecting its core purpose to give education to the public. Involvement of the university in business or corporate culture might influence them to cater a better and quality education to students who regarded as customer. So, from this, there are some elements which can be related to the concept corporate real estate when dealing with the property for occupancy. The right formulation for the occupancy is needed to enhance the value of the university organisation as a whole. The concept of corporate real estate can be injected into the corporatized university so that the university can fully exploit its corporate potential.

6.3 BSC as a Tool

BSC is a tool which has multidimensional performance measurement which does not focus only on financial aspect but also other non-financial measures which are more effective in management aspects (Atkinson, 2006). BSC can be the suitable tool to measure organization performance because the concept of Balanced Scorecard is to bring balance in the organization such as short and long-term objectives, financial and non-financial measures, lagging and leading indicators and external and internal performance perspectives (Hepworth, 1998). According to Kaplan and Norton (1992), the idea of balanced scorecard is to complement financial measures with other operational dimensions which we can regard it as non-financial elements. It not a replacement for financial measure, but as an enabler for the organization to track financial result and at the same time can monitor the progress of building capabilities and acquiring the intangible assets for the future growth (Kaplan & Norton, 1996). So, with balanced scorecard, the way to measure the organization performance can be more rigorous because the judgement from the monetary side only will not sufficient to cater all the organization requirements. All the non-financial aspects are regarded as a strategy for the organization to boost the financial performance. Be able to identify the most influential performance variable will ensure the success. The success cannot be measured through the ability of making a lot of profit only, because every organization has its own purpose and goals. Factors like customer satisfaction or quality delivered to the customer can be the main goals for certain organization which cannot be measured through the financial measurement system. Through balanced scorecard, organization can define their objectives and prioritize them.

Balanced scorecard was originally from Kaplan and Norton (1992) has developed four main perspectives to measure organization performance which its application then was further developed as describes in their articles and books. However, the perspectives originally were tailored to business organization environment, but they claim that these perspectives are also suitable for non-profit organization by adjusting some elements of measurement. The original four perspectives by Kaplan and Norton are as follows:-

i. Customer Satisfaction Perspective – This customer satisfaction perspective according to Kaplan and Norton (1992) is how the customer see the organization and how to make customer recognized and satisfied with the products or services produced by the organization. It emphasize on the customer concern such as quality, delivery time, service, cost and etc. (Atkinson, 2006). Customer satisfaction also provides a strategy for creating value and differentiation from the perspective of the customer (Chen, Yang, & Shiau, 2006), (Jusoh, Ibrahim, & Zainuddin, 2008).

ii. Internal Business Perspective – Internal business perspective is the way the organization should give focus on the critical internal operation (Kaplan & Norton, 1992). It set the priorities in the business process which create customer and shareholder satisfaction (Chen, Yang, & Shiau, 2006). Through this perspective, the organization can highlight the critical skills, competencies and

technologies which important to the future success (Atkinson, 2006). This action also relates to value added through the business process to the customer (Cohen, Thiraios, & Kandilorou, 2008). The roles of this perspective are including identifying strength and weaknesses in the business operation process in delivering products or services to the customer.

iii. Innovation and learning perspective – This perspective is an ability to innovate, improve and learn which contribute to organization value continuously because the nature of competition requires product to go through for continual improvement with expanded capabilities (Kaplan & Norton, 1992). It also relates to improving flexibility and investing for future development together with new opportunities (Atkinson, 2006). The focus of this perspective is on the intangible assets (Cohen, Thiraios, & Kandilorou, 2008) consist of employees capability to do the job, system, and procedures (Jusoh, Ibrahim, & Zainuddin, 2008) which can be grouped as the know-how knowledge to understand and satisfying customer (Olve, Roy, & Wetter, 2000) for the benefit of organization financial performance and value added.

iv. Financial perspective – Financial perspective is represent the ultimate outcomes from the application of strategies applied (Wilson, Hagarty, & Gauthier, 2003). In other words, it measures the company's strategy, implementation and execution in contributing to bottom-line improvement (Kaplan & Norton, 1992). The success of the organization strategy on the satisfying the customer, improving the internal business process and active participation in innovation and learning will be shown through the financial result because all these efforts are to improve the income flows, sales growth, operating income, increasing the market share and return on equity.

Balanced scorecard is flexible to be used and can be aligned to meet the specific organizations' mission and vision. The original perspectives also can be changed, added or simplified based on the suitability of the organization because there is no restriction on designing the measurement model.

6.4 Dimensions of BSC in CREM for University

Corporate real estate (CRE) in context of higher education property is not being well studied or applied because the stigma of corporate real estate usually goes to business corporations or organizations which involved in the profit making. The concern is always to enhance the value of the organization which in return will benefit the organization in terms of turnover or profit. Application of the corporate real estate should be introduced to the universities because university has many types of property and facilities. Regardless the university corporatization, the concept of corporate real estate would enhance the strategic process, planning, control and also increasing the efficiency of the property or facilities usage in contributing to the core university activities. From these, the quality of education is expected can be improved together with a better image development for the university itself. Further description on the corporate real estate below will focus on the value added and the importance of CRE application in university.

Based on the Malaysian university CREM scenario, the study intended to maintain some aspects of the original perspectives and also to alter by changing and adding the perspectives which related to the university. This is supported by McDevitt *et. al*, (2008) who stated that the original perspectives by Norton and Kaplan are tailored for business setting and may not necessary suitable for the academic institutions. So, the proposed five perspectives for this study are as follow:-

- i. ***Customer perspective:*** it is including students, lecturers and staffs. This perspective is important as the customer is the main user of the university and their satisfaction on the building and facilities available is considered very crucial. The intention here is to know how they perceive the available building and facilities in university satisfy them. As the customer, they are able to effectively contribute to the financial through their activities.

- ii. ***Core activities process perspective:*** this perspective including the core activities of the university such as learning, lecturing, research program, student or staff outside activities, co-curricular and others. The intention here is to know how the building and facilities could support the activities. The performance will be measured according to this focus.
- iii. ***University corporate image perspective:*** this dimension is not to measure the performance of the corporate activities of the university, but see how the available building and facilities could support the corporate activities which conducted by the university. This perspective needs to be added here because the direction of university at the moment has not only concentrating on its traditional activities, but has involved in business ventures as well in line with its corporatized policy. So here, the study is expecting for the integration of corporate practice and real estate in university.
- iv. ***The learning and growth perspective:*** in line with the nature of university as a learning centre, this perspective has been selected. This perspective intended to see how the building and facilities can enhance the learning and growth process in university. It wants to see how the CREM brings a better environment and support to this process.
- v. ***Financial perspective:*** in line the concept of BSC, financial need to be considered here because it will be complemented by other perspectives as mentioned above to create a financial and non-financial factor in the performance measurement process. However this perspective might having some difficulty when to access because it hard to measure the effects and contribution of CREM to the financial at this early stage. Maybe the approach just to see on how much the financial allocation or expected financial improvement after the implementation of CREM in university.

The above perspectives are as proposed to be used as dimension in the BSC framework to measure CREM performance in university. The focus of the framework above is more to the availability and functional of the building and facilities available in university. The intention here is to see the performance of real estate in supporting the concept of university CREM. All of these will be measure using the score given by the respondent based on their experience with the available buildings and facilities.

7. RESEARCH METHODOLOGY

The research is actually a combination of descriptive and exploratory research where the study will give an attempt to seek the level for current CRE practice in public universities and at the same time to implement BSC as the measurement tool.

Sample

The study was conducted at the only three public universities which were selected based on their different criteria. This is to put some variance to the results and see any available impacts which contributed by these criteria. The selected universities are as below:-

- i. University Alpha (UA) – is a science based university which implementing technological base as part of their core. This university at the moment has been granted with ‘research university’ status and to carry the mission to improve Malaysian university as one of the top university in the world by year 2020. Apart from the recognition, UA will receive autonomy in finance, service scheme, management, student intake, study fees and determining the top leadership.
- ii. University Bravo (UB) – is an engineering and technological based university which has a long history of success since its establishment. UB at the moment do not receive a ‘research university’ status, but it nationally has been recognized as one of top research participant in the academic or industry area. UB is a corporatized university and since then has actively involved in business ventures to generate side incomes for the university.
- iii. University Charlie (UC) – this university is relatively new and is not a corporatized university as the other two universities. But this university is commonly known as innovative &

entrepreneurial university where its research and innovation link with business and industry. Besides that, UC also carry a strong social responsibility agenda as part of its function.

So, with the selection of above three universities, the measurement and comparison of CRE performance is expected to be more dynamic and could produce a significant impact.

Data Collection

The measurement of each perspective under BSC is using the score. This score can be derived using the assessment by the organization. For this research study, the way to assess the score for each perspective is done using the questionnaire that has been distributed to the occupants of the university.

For the purpose to get the score, the questionnaire is set using the ordinal or ranking scale, so that the outcome from the scale can be transferred as the score for each perspective under SBC. Through the 'likert scale', the occupants will have opportunity to give score on the building and facilities in their university, so their experience and opinion can be a meaningful indicator to this study. The questionnaire has the scale from 0 to 10 which have been classified into 5 levels of magnitudes. This would help the respondent to determine which score they should give to each items. The average score for each item in the questionnaire will be calculated and will be used in the BSC as the score for each determined perspectives. So, the questionnaire has functioned as the instrument to derive the score for BSC.

The usage of the questionnaire in determining the score of each BSC perspectives has been considered because the questionnaire able to get the average scores of the CRE from the opinion or experience of the occupant itself. Besides that, the number of the respondents can be acceptable high which makes the research covers more rigorous compared to other tools.

8. FINDINGS AND ANALYSIS OF CRE PERFORMANCE IN UNIVERSITIES

The analysis of the data will be based on the score given from the likert scale in the questionnaire. The process to analyse the result starts from calculating the average score of each perspectives from each questionnaire of each university. That average score will be marked at each BSC perspectives to produce the BSC dimension for each university.

The performance of the CRE in three universities can be shown through the BSC dimension as figure 2. Using the BSC dimension above, we can see clearly that all the studied universities have a moderate score even though their performance is quite balance for every perspective. The best performer is the UA which positioned at the outer ring for most of the perspectives, then followed by UB and lastly UC. UC only beating the other university at the financial perspective at score of 6.35 compared to UB at 5.98 and UA at 5.47. From the dimension, UB is found to perform at a balance performance for all its perspective, where the skew of its dimension is not obviously shown. Unlike UB, UC is skewed more to the financial perspective and UA is skewed more to its university corporate image. However, in terms of the score, all the studied universities are not at the excellent level for all the perspectives where the range of the score is between 5.4 and 7.21.

Figure 2: The BSC Dimension for CRE performance in universities

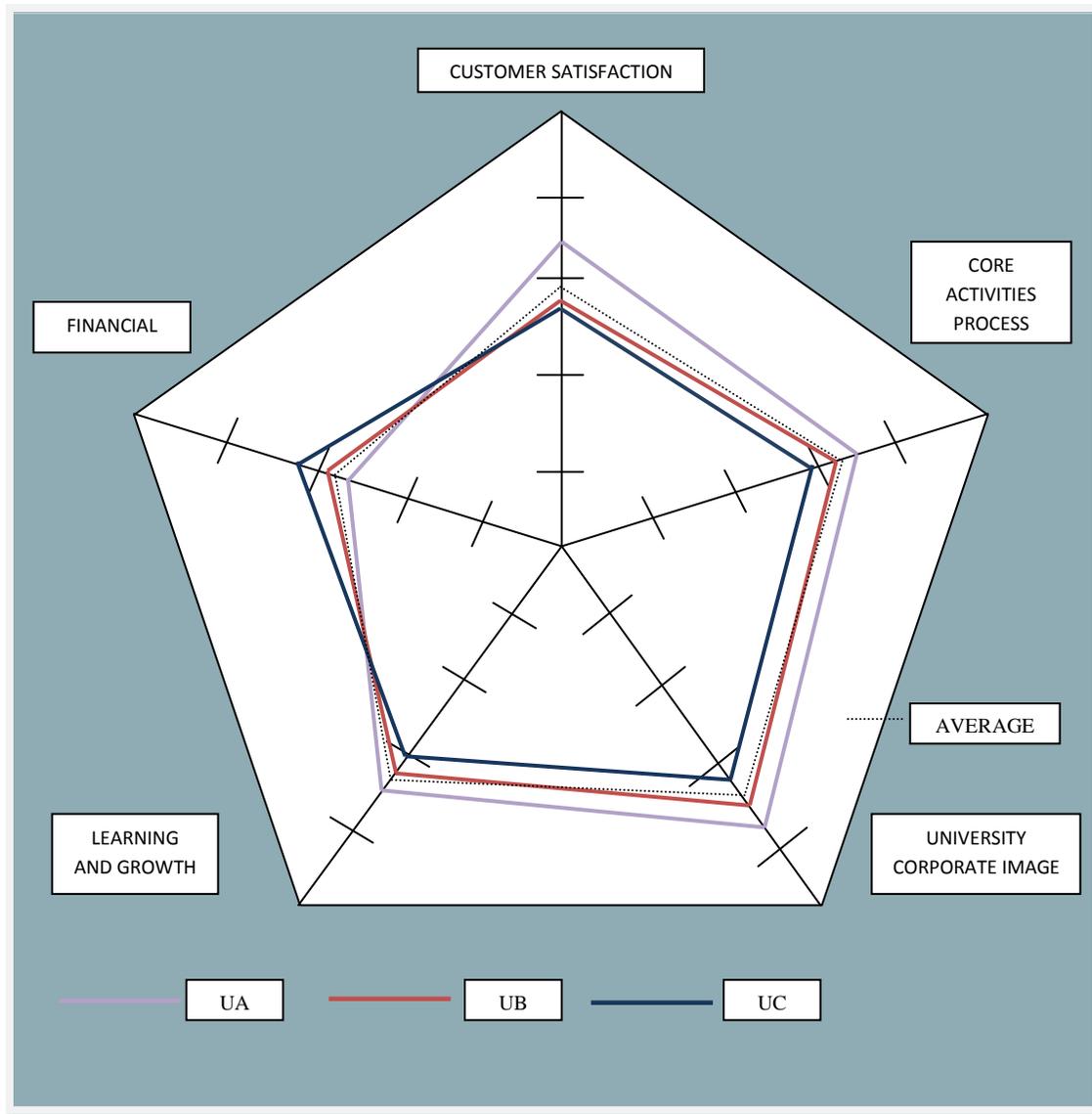


Table 3: BSC score for CRE performance in universities

	Customer Satisfaction	Core Activities Process	University Corporate Image	Learning and Growth	Financial
UA	6.42	6.93	7.21	7.04	5.47
UB	5.78	6.43	6.96	6.41	5.98
UC	5.41	5.97	6.36	6.02	6.35
Average	5.87	6.44	6.85	6.49	5.93

Based on the overall score, UA is performed at the best at its corporate image where the implementation of ‘University in a garden’ concept has given a big impact in portraying its image besides the proactive function of its corporate arms. Other than that, most of the occupants there have expressing their satisfaction through the outstanding scores at 6.42 compared to UB and UC. This is derived from the

good practice of management and emphasize on core activities and learning aspects. UB which considered here as a corporatized university has performed moderately and balance at all its perspectives. However, UC which is not a corporatized university and has been perceived to receive the highest budget allocation from government has performed slightly worse compared to other two universities, maybe due to the age of its establishment as a university.

Even though the physical setting in UC if compared with other two universities are generally at par, but the emphasize on certain core area such as research activities make UC left behind because most of the university infrastructure developments are based on the requirement of the core activities. However, with a high allocation of budget received, UC is expected to improve the situation especially when they announced that they are moving forward to the research university. The situation for UB is slightly different with the UA and UC where even though the UB is not recognized as research university yet, but UB has consistently producing numerous of significant researches. So, from time to time UB able to has a better research facilities. But it cannot be compared to UA which has been recognized as one from four research universities in the country and on top of the recognition, UA is entitled for RM100 million perk from MOHE for the research, development and commercialising activities.

From the BSC dimension above, UA performance in terms of its financial need to be balanced up with the other perspectives, because it quite obvious there that UA has some financial imbalance to support other perspectives. For the UB, the dimension is slightly not balanced at the customer satisfaction perspective, but it not so obvious because the important effort here is to improve the overall performance. For UC, the dimension is basically not balance in terms of its financial perspective where it shows that UC has performed better on financial performance, but unable to pull other perspectives together.

For the purpose to establish the overall performance of all universities, the results from all three universities have been combined together and take the average. It has shown that the score for all dimensions are at moderate performance. Among the perspectives, the university corporate image perspective has shown the best performance at score 6.85 and the worst performance is by customer satisfaction perspective at 5.87. The dimension has shown a slightly imbalance at the customer and financial perspectives where both of these perspective are scored below than 6. This creates the dimension a little bit skewed to the corporate image perspective which marked at 6.85 as the best performance perspective.

In general, the all the universities have emphasised on the improvement of each process in the each perspective. The current performance cannot be perceived as good enough and can sail through over the time in future. Identifying the weaknesses in each process in each perspective must be done to improve the current situation. The education environment nowadays has changed tremendously especially after the revolution of the education regulations which start since 1996 through the amendments in the Universities and College Universities Act 1971 which synergies the education and corporatization practices in the university.

9. CONCLUSION

This study has recognized that the CRE practice is not properly conducted in university. This is due to no CRE division has been established to implement the concept holistically in the university. The current strategic planning for the university is focusing to bring the university into the best quality, ranking and recognition, which always do not clearly put real estate management as part of university strategic planning.

From this study, the university is expected to know what the situations for its real estate performance are. This study has looked into five different aspects which regarded as important for the university. Analysing these aspects would highlight the problems that the universities face now. Any steps for improvement should start from identifying the problems and take action based on its situations and needs.

This study is no saying that the universities do not have implemented CRE at all, some of the CRE concepts have been applied in the university, but the performance does not indicate that it is at an excellent level. Means here the practice is still having some lacking at everywhere which the university

should give an attention. University can use the attributes under each perspective in this study as a guideline to see what the university should focus on in identifying or implementing the CRE later.

In this research study, all three research objectives have been achieved. The first objective has been achieved through the development of five perspectives which focus to see the main areas in CRE application in university. The second objective also has been achieved through the application of BSC in measuring the current real estate performance in university. The result has been presented in the BSC dimensions in previous chapter. For the third objective, analysis on the current CRE practice has been done on each perspective for each university. The analysis is done by describing what is behind the score produced. Besides analysing the current situation, some suggestions have been provided as to complete the discussion. This is in line with the concept of BSC which is to improve the current situation by finding the balance solutions for the identified problems (Nair, 2004).

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