The Ratings of the Programs Offered in TUM's School of Business and its Competitive Edge

Anwar Hood Ahmed[1], William Kingi[2]

School of Business, Technical University of Mombasa (TUM)

Abstract: *TUM originated from MIOME in 1958 and gained its charter as an independent university in 2013. In spite of being the oldest institution to have been established in Mombasa County, it is facing fierce competition from mushrooming of many satellite campuses from other universities. We discuss the two common models used for rating universities and university programs. We then apply Multi-Criteria Decision Analysis (MCDA) technique and present a novel approach of data collection and integration. Specifically, the MCDA provides rating of School of Business (SoB) programs against competitors. The findings reveal that SoB program have been under-rated in comparison to competitors. Unless SoB take some drastic and maneuvering strategies, it will continue to lose the competitive edge. Such strategies include, but not limited to, improving marketing, advertisement, accrediting programs, mentorship, students accommodation, infrastructure, customer care, graduation rate, management and centralization of the departments.*

Keywords: Competitive edge, Multi-Criteria Decision Analysis, Data Envelopment Analysis and programs rating.

1. Introduction

One of the major challenges facing students after Kenya Certificate of Secondary Examination (KCSE) results entails university selection and the appropriate course to pursue. For those who performed well and had applied for public university, they get an admission offer under the Kenya Universities and Colleges Central Placement Service (KUCCPS). However, a number of students who do not attain the required cluster points for a particular course, end up declining the KUCCPS offer and enroll as Self-Sponsored Programmes (SSP) students. Under self-sponsorship, the stringent KUCCPs competitiveness is waived but one has to meet the minimum university entry requirements (KCSE mean grade of C+) as well as additional subject requirements dictated for each degree program. The success and growth of the universities in Kenya has been dictated, by-and-large, on the ability to attract SSP students. For public universities, it has now become a norm for Main campuses to admit both SSP and KUUCPs students while satellite campuses are exclusively meant for SSP students. According to Oanda and Jowi (2012, p.61) the SSP students (also referred as Module Two admissions), "are singularly meant to generate the 70 per cent financial shortfall from the government for the institutions, with little oversight as to the implications for the quality of the programmes and equity".

As expected and by no exception, TUM's competitiveness does not come from KUCCPs students who are placed equitably on the basis of university declared capacity but SSP students. As a Technical, Industrial, Vocational Entrepreneurship and Training (TIVET) Institute, TUM has an advantage of attracting Certificate and Diploma students who eventually progress to Degree level. Unfortunately, with exception on lower levels, TUM experiences progression decline from Certificate to Diploma, Diploma to Degree, Degree to Masters, and Master to PhD. Most of the students will start at TUM and end-up in competitor's satellite campuses. The manifestation of the competition from the satellite campuses takes five different forms. First, the entry level for Certificate and Diploma courses, TUM being a TIVET institute, is expected to have a relatively higher

market share than competition. This group targets those who completed KCSE and attained a lower grade than C+ (plus) i.e. those with D+ (plus) get admitted for Certificate program and those with C- (minus) or C (plain) get admitted for Diploma program. Second, of those who completed the Certificate course in TUM, about 60% progress for Diploma course in TUM, 30% goes into the Job Market (JM) while the rest goes to competition. Further, of those who complete Diploma in TUM, one can proceed to degree level at Year 2, if the student attained a Credit or Distinction, or proceed to Year 1, if the student had a Pass. Our findings reveal that 60% of the students with Credit or Distinction continue in TUM, 10% with Pass also continue in TUM, 10% goes to competition and the remaining proceed on employment. The third scenario, targets those with direct entry into the degree program from KCSE or other relevant qualifications, either as Year 1 or mid-entry level. The fourth scenario, targets both graduates from SSP and KUCCPs students, statistics show only 3% proceed for masters level and the rest either go on employment (about 40%) and others (about 20%) switch to competitors. The last scenario has none of those who completed Masters in TUM and proceeding for PhD in TUM. The above information is depicted in Figure 1.
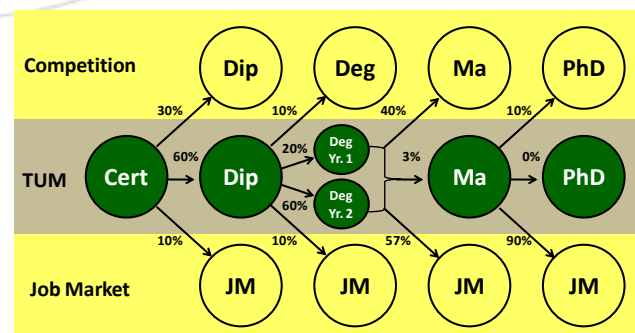

Figure 1: TUM School of Business student's progression

TUM, in spite of being the oldest institution to have been established in Mombasa County, is facing fierce competition from mushrooming of many satellite campuses from other universities. These universities have predominantly tackle and entered the market with "chalk-and-talk" courses that do

not require huge investment in laboratories. TUM, on the other hand, has been busy defining the university niche programs (i.e. marine courses) as well as developing new programs to attract KUCCPS students. However, the "cash-cows" of many universities is generated from business courses that also fall under the broad category of board-and-chalk courses. Mathews (2012) confirms that a third of business school deans thought that their department was making too much of a contribution to the running of other disciplines. Not surprising, a number of universities in Kenya were founded on a distinct specialization focus but have since diversified into business oriented courses. For example, University of Nairobi was initially associated with engineering courses, but today, it is rated as the best Business School in East Africa with two business campuses in Mombasa and Kisumu. JKUAT, on the other hand, started as technological and agriculture-based university but has since opened nine business campuses in Karen, Westland, Kigali, Arusha, Kisii, Kitale, Mombasa, Nairobi and Nakuru. A similar scenario is depicted for Moi University, that started with a department of Forestry but to date, has 5 satellite business campuses in Nairobi, Kitale, Alupe, Kericho, and Coast.

The research objective addressed in this paper can be summarized as: The ratings of the programs offered in TUM SoB and its competitive edge. The research has the following specific objectives: (1) Review the models used for rating universities and university programs; (2) Use MCDA to rate programs offered at TUM's SoB against competition; and (3) Come-up with recommendations for the SoB to compete effectively. The scope of the study is confined within TUM's School of Business's programs against eight surrounding competitor's satellite campuses situated in Mombasa County, namely, Jomo Kenyatta University of Agriculture & Technology CBD Mombasa (JKUAT), University of Nairobi Mombasa Campus (UoN), Kenyatta University Mombasa Campus (KU), MOI Coast Campus (MOI), MTK Coast Campus (MTK), Pwani University Mombasa Campus (PU), KEMU Mombasa Campus (KEMU), and Kenya Institute of Management Mombasa (KIM).

The rest of the paper is organized as follows. A literature review is presented in Section 2 where theoretical and conceptual framework are given. The methodology and data inputs on the MCDA used are discussed in Section 3. In Section 4 programs rating and other findings are presented. Recommendations, outlining strategies that can be pursued by TUM's SoB are given in Section 5. The study ends with a conclusion in Section 6.

2. Literature Survey

Rankings, and specifically university ranking or course programs ranking is not a new phenomenon, it has been the main source of performance evaluation, university and program selection for decades (Pusser and Marignson, 2013). According to Glänzel and Debackere (2009) ranking is defined as positioning comparable objects on an ordinal scale based on a (non-strict) weak order relation among (statistical) function of, or a combination of functions of measures or scores associated with those objects. These functions, which are usually based on variables for evaluative purposes, are called indicators. Different indicators X_k represent different aspects of quality, form the components of a composite indicator Y, the basis of the ranking. This composite indicator is usually a linear combination of the X_ks, that is,

$$Y = \sum_k \lambda_k X_k$$

where λ_k (k=1, 2,.....,p) are p pre-defined weights and, without loss of generality, verify the equality $\sum \lambda_k = 1$ so that Y is a weighted mean of the individual indicators, the, X_k.

Our research deals with course program ranking, defined as a institutional listing that must be ordered by some set of criteria that considers to measure program quality, and should consist of a listing of specified institutions offering that particular program, in numerical order according to their supposed quality, so that each institution has its own place (rank). Rankings are used in different individuals and entities for different reasons. Many universities use ranking to build their reputation, gain visibility and create a strong brand. Students (and parents) use rankings to make choices of universities for admission whereas Government, industry and businesses use rankings for deciding funding, sponsorship and employment. Planners and Political leaders can use ranking results to frame education policies in the country. University administrators can use these rankings as evidence to seek support and funding, etc. On the international scene, ranking affects the process of academic internationalization that encourages the mobility of faculty and students and hence stresses the need for global comparability of higher education systems, study programs and degrees. In addition, rankings have proved to enhance international competition of universities in order to create attractive educational multi-cultural environments and the trend towards university collaboration and most importantly the opportunity to improve and eliminate institutional weaknesses.

The typical standard ranking processes has four phases. Initially, data are collected, either from existing data sources or from original sources specifically for the ranking. In the second phase, the type and quantity of variables to use is selected from the gathered information in phase one. The third phase entails standardizing and weighting the indicators. In the last phase, calculations and comparisons are done in order to sort course programs in a ranking format. Nisel and Nisel (2013) classified the ranking techniques as bibliometric (such as League Tables and ARWU) and quantitative decision models (such Data Envelopment Analysis (DEA) and MCDA). However, they are in support of quantitative models to be more reliable. For example, League Table, although used widely has received much criticism from Turner (2005) who pointed out three major shortcoming: the arbitrary allocation of weightings to performance indicators, the failure to differentiate between inputs and outputs, and the comparison of institutions with dissimilar comparators. Such shortcomings were overcome when DEA was used. Similarly, Billaut, Bouyssou, and Vincke (2010) concluded that ARWU do not qualify as a useful and pertinent tool to discuss the quality of academic institutions.

DEA is a linear programming based technique for measuring the relative performance of organizational units where the presence of multiple inputs and outputs makes comparisons difficult (Emrouznejad, 2016). Mayston and Jesson (1991) advocated the use of DEA in an educational context, and pointed to earlier work in the field in the United States. Johnes and Johnes (1995) have used DEA extensively to analyze the performance of individual departments in UK universities. For the methodology and detail understanding on DEA in the context of higher education ranking, refer to the work done by Johnes (2005). At a glance , DEA would appear much appealing , but Downing and Ganotice (2016) were quickly to point out the unreliability in producing inconsistent ranking. The fact that when enough variables are included, each institution is accredited as excellent thereby yielding conflicting results. MCDA techniques have increasingly gained prominence, overcomes the inherent deficiencies of DEA and forms the basis of our research framework in the universities programs rating.

2.1 Theoretical Framework

MCDA is a branch of Management Science which deals with decision problems under the presence of multiple, usually conflicting criteria. It is a set of procedures that analyze complex decisions based on distinct, conflicting criteria and by deriving scores provide an overall ordering of options, from the most preferred to the least preferred option. MCDA consists of a series of techniques (i.e., weighted summation, concordance, analysis, etc.) that facilitate the scoring, ranking, or weighting of decision-making criteria based on stakeholder preferences. These techniques ideally operate within a transparent framework that encourages informed decision-making by providing opportunities for genuine, substantive participation in decision-making. This framework is also supported by the best available scientific knowledge that can also incorporate uncertainties in an honest, rigorous and consistent manner (Suedel et.al. 2011). MCDA typically involves the following steps (Communities and Local Government, 2009):

1) Establish the decision context: Establish aims of the MCDA, and identify decision maker(s) and other key players.
2) Identify the options to be appraised: inputting all the available options.
3) Identify objectives and criteria: Identify criteria for assessing the consequences of each option.
4) Scoring: Assess the expected performance of each option against the criteria. Then assess the value associated with the consequences of each option for each criterion. Describe the consequences of the options; score the options on the criteria; and check the consistency of the scores on each criterion.
5) Weighting: Assign weights for each of the criterion to reflect their relative importance to the decision.
6) Combine the weights and scores for each option to derive an overall value: Calculate overall weighted scores at each level in the hierarchy; calculate overall weighted scores.
7) Examine the results.
8) Sensitivity analysis: Conduct a sensitivity analysis: do other preferences or weights affect the overall ordering of the options? Look at the advantage and disadvantages of

selected options, and compare pairs of options. Create possible new options that might be better than those originally considered. Repeat the above steps until a 'requisite' model is obtained.

In MCDA, the alternatives are given scores based on stipulated criteria normally on an interval or ratio scales. Thereafter, weights are assigned to the criteria and then computed with an appropriate algorithms based on value or utility functions, goal programming, outranking or descriptive/multivariate statistical methods to determine the rank of the alternatives. One of the greatest challenges associated with MCDA is how to compare and combine dissimilar metrics. Often dissimilar criteria are transformed or normalized to a single scale such as zero to one. Transformation to this commensurable scale can be accomplished through multiple techniques. Following scale transformation, criteria and value are combined through aggregation algorithms, and alternatives are compared and ranked (Suedel et.al. 2011).

The multi-criteria analysis problems can be divided into three types: problems of multi-criteria choice, problems of multi-criteria ranking and problems of multi-criteria sorting (Vassilev, Genova and Vassileva , 2005). The problem of choice essentially entails finding the relevant MCDA technique among the various methods in use or in literature. This also breeds the classification problem where there is no universal agreement on a standard approach.

According to Vincke (1992) the methods can be grouped in three separate classes; these include the multi-attribute utility, (value) theory methods, outranking methods and interactive algorithms. An alternate way of classification is according to the number of individuals involved in the decision-making process. Hence, we have single decision maker MCDA methods and group decision making MCDA. Yet another classification distinguishes deterministic, stochastic and fuzzy methods (Mateu, 2002). In the deterministic approach, the decision-making problem (i.e. the alternatives, criteria, etc.) are known with certainty and well defined. The stochastic or probabilistic case corresponds to uncertainty surrounding the decision-making problem e.g. the criteria are viewed as random variables. Finally, fuzzy methods consider different types of uncertainty and imprecision in some of the elements of the decision making problem.

MCDA techniques have been used by different researchers for university ranking, such as, ELECTRE III methodology by Giannoulis and Ishizaka (2010), analytic hierarchy process (AHP) by Lukman, Krajnc and Glavic (2010), and VIKOR method by Wu et al. (2012) who applied a hybrid MCDM model to rank 12 private universities in Taiwan. Similarly, Nisel and Nisel (2013) used VIKOR methodology for ranking universities by academic performance. The models are mainly applied in the ranking of the universities and not course programs (e.g. degree programs). Ranking course programs, especially when the universities are many, requires huge amount of data, is time consuming and consequently lessens the significance of the analysis. However, the most realistic and common practice, is to compare a particular course program as offered in different

universities. For instance, global university ranking of MBA by Financial Times (2016). To gain an intuitive understanding of these variations, we give a tutorial on the three MCDA approaches and how they can be applied. The Weighted Sum Method (WSM) is the additive model while the Weighted Product Method (WPM) and Analytical Hierarchical Process (AHP) are multiplicative models.

2.2 Conceptual Framework

We concentrate our attention on single decision maker deterministic MCDA methods (Chen and Hwang, 1992) and according to (Triantaphyllou and Baig, 2005) the most popular of these include the WSM, WPM, AHP, revised AHP, and the multiplicative AHP. For concept illustration and simplicity, we give a prototype of WSM and AHP methods. The two methods have similar data structure and can easily be integrated in one tool.

Illustration
Suppose that the degree program, BCOM, involves five criteria (Graduation rate, university reputation, number of qualified lecturers, Good Customer Care, and Tuition Fees) and there are five universities that the student can choose from (i.e. TUM, JKUAT, MOI, KU and MTK). Further, suppose that the relative preference of the four criteria (Cj) were rated by university experts as W1 = 0.20, W2 = 0.30, W3 = 0.25, W4 = 0.15and W5 = 0.10, respectively. We are required to rank the universities using the WSM, WPM, and AHP methods as shown in the following matrix.

	Criteria1	Criteria 2	Criteria 3	Criteria 4	Criteria 5
Weights	0.20	0.30	0.25	0.15	0.10
TUM	20	10	20	15	10
JKUAT	10	20	10	25	5
MOI	20	30	30	10	15
KU	25	10	25	30	25
MTK	10	15	20	20	10

2.2.1 Weighted Sum Model (WSM)
The WSM proposed by Triantaphyllou (1997) is the best known and simplest MCDA method for evaluating a number of alternatives in terms of a number of decision criteria. In general, suppose that a given MCDA problem is defined on M alternatives and N decision criteria. Furthermore, let us assume that all the criteria are benefit criteria, that is, the higher the values are, the better it is. Next suppose that w_j denotes the relative weight of importance of the criterion C_j and a_{ij} is the performance value of alternative A_i when it is evaluated in terms of criterion C_j. Then, A^*_{WSM} is the preference value of the best alternative and is defined as:
$A^*_{WSM} = \max_i \sum_{j=1}^{N} a_{ij} w_j$, for i = 1, 2, 3. ……., M.

For the maximization case, the best alternative is the one that yields the maximum total performance value. Now, returning to *illustration 1*, when the formula for A^*_{WSM} is applied, the scores of the five alternatives are:
- $\Rightarrow$ *TUM*(WSM score) = (20×0.20) + (10×0.30) + (20×0.25) + (15×0.15)+ (10×0.10) = 15.25
- $\Rightarrow$ *JKUAT*(WSM score) = 14.75,
- $\Rightarrow$ *MOI*(WSM score) = 23.50.
- $\Rightarrow$ *KU*(WSM score) = 21.25

- $\Rightarrow$ *MTK*(WSM score) = 15.50

The best university is *MOI* because it has the highest WSM score of 23.50. The following ranking is derived:

$$MOI > KU > MTK > TUM > JKUAT$$

2.2.2 Weighted Product Model (WPM)
The WPM proposed by Triantaphyllou (1997) is also a popular MCDA and similar to the WSM. The main difference is that instead of addition in the main mathematical operation we have multiplication. In this case, each decision alternative is compared with the others by multiplying a number of ratios, one for each decision criterion. Each ratio is raised to the power equivalent to the relative weight of the corresponding criterion. Suppose similar notations hold as for the previous problem. Then, if one wishes to compare the two alternatives A_K and A_L (where $m \geq K, L \geq 1$) then, the following product has to be calculated:
R $(A_K/A_L) = \prod_{j=1}^{N}(\frac{a_{Kj}}{a_{Lj}})^{w_j}$, for K, L = 1, 2, 3, M.

If the ratio R(A_K/A_L) is greater than or equal to the value 1, then it indicates that alternative A_K is more desirable than alternative A_L (in the maximization case). The best alternative is the one that is better than or at least equal to all other alternatives. Returning to the illustration, when the formula for WPM is applied, the scores of the four alternatives are:

R(TUM/JKUAT) = (20/10)$^{0.20}$ × (10/20)$^{0.30}$ × (20/10)$^{0.25}$ × (15/25)$^{0.15}$ × (10/5)$^{0.110}$ = 1.10 > 1
R(TUM/MOI)= 0.66 < 1 (TUM ranks lower than MOI)
R(TUM/KU)= 0.74 < 1 (TUM ranks lower than KU)
R(TUM/MTK)= 0.97 < 1 (TUM ranks lower than MTK)
R(JKUAT/MOI)= 0.60 < 1 (JKUAT ranks lower than MOI)
R(JKUAT/KU)= 0.68 < 1 (JKUAT ranks lower than KU)
R(JKUAT/MTK)= 0.88 < 1 (JKUAT ranks lower than MTK)
R(MOI/KU)= 1.12 > 1 (MOI ranks higher than KU)
R(MOI/MTK)= 1.47 > 1 (MOI ranks higher than MTK)
R(KU/MTK)= 1.31 > 1 (KU ranks higher than MTK)

By the above inferential, it can be deduced that MOI is a better option and the ranking will be similar as for WSM:
$$MOI > KU > MTK > TUM > JKUAT$$

2.2.3 The Analytic Hierarchy Process (AHP)
Saaty (1980) advanced the AHP method that is based on decomposing a complex MCDM problem into a system of hierarchies. The final step in the AHP deals with the structure of an $M \times N$ matrix. This matrix is constructed by using the relative importance of the alternatives in terms of each criterion. The entry q_{ij}, in the $M \times N$ matrix, represents the relative value of the alternative A_i when it is considered in terms of criterion C_j. In the original AHP the sum $\sum_{i=1}^{N} q_{ij}$ is equal to one.
According to AHP, the best alternative (in the maximization case) is indicated by the following relationship
$A^*_{AHP} = \sum_{j=1}^{N} q_{ij} w_j$, for i = 1, 2, 3. …….,M.
The similarity between the WSM and the AHP is evident. The AHP uses relative values instead of actual ones. Thus, it can be used in single- or multi-dimensional decision making

problems. Returning to our *illustration*, instead of the absolute data, the AHP would use the following relative data:

	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5
Weights	0.20	0.30	0.25	0.15	0.10
TUM	20/85	10/85	20/105	15/100	10/65
JKUAT	10/85	20/85	10/105	25/100	5/65
MOI	20/85	30/85	30/105	10/100	15/65
KU	25/85	10/85	25/105	30/100	25/65
MTK	10/85	15/85	20/105	20/100	10/65

$\Rightarrow$ *TUM*(WSM score) = (20/85)0.20 + (10/85)0.30 + (20/105)0.25 + (15/100)0.15 + (10/65)0.10 = 0.168

$\Rightarrow$ *JKUAT*(WSM score) = 0.163

$\Rightarrow$ *MOI*(WSM score) = 0.262

$\Rightarrow$ *KU*(WSM score) = 0.237

$\Rightarrow$ *MTK*(WSM score) = 0.169

The highest score is *MOI* with 0.262. Moreover, the ranking for AHP are similar to that of WSM and WPM:

MOI>KU> MTK>TUM >JKUAT

3. Methodology

The research design was a survey that had both quantitative and qualitative questions posed in the same instrument. A sample size of 5-10 students for each particular course (if in existence) was interviewed randomly in each of the nine institution (as shown in Table 1). Further, 25 academicians from TUM were included and their responses on the nineteen criteria as shown in Table 1 were used to obtain average weights that were used in the MCDA model. The MCDA matrix has been obtained by average scores through the questionnaire from SSP students at TUM, eight competitor's institutes and alumnus of TUM. The nineteen criteria used are depicted below where respondents would rate the variables on a scale of 0, 5, 10, 15 or 20 (with a zero score being less important and 20 as more important).

- Best practices / good customer care
- High Graduation rates
- Timely release of Examination results
- Class size
- High Retention rates
- Graduate on Time
- Easy Progression Dip>Degree>Masters>PhD
- Number of Qualified Lecturers (PhDs)
- Technical staff available to faculty
- Number of permanent lecturers
- Technological infrastructure
- Accommodation facilities
- University Reputation
- Employer Reputation
- Research citations per annum
- Library Facilities
- Laboratory Facilities
- Tuition Fees
- Flexible mode of learning (e.g. weekends)

Table 1: Sample size								
	PhD	*MBA/MBM*	*MSHRM*	*MSSCM*	*BCOM/BBM*	*DBA/DBM/DPMM*	*CBM/CBA/CST/CPSM*	*TOTAL*
TUM	5	10	5	10	10	30	30	100
JKUAT	10	10	*	10	10	30	*	70
UoN	10	10	*	*	10	30	*	100
KU	*	10	*	*	10	30	*	50
MOI	5	10	5	10	10	30	*	70
MTK	*	10	*	*	10	30	30	80
PU	*	*	*	*	10	*	*	10
KEMU	*	10	*	*	10	30	30	80
KIM	*	*	*	*	*	30	30	60
TOTAL	**30**	**70**	**10**	**40**	**80**	**240**	**150**	**620**
NB: * Course note in offer in Mombasa County (i.e. not included in the ranking)								

4. Results

4.1 University Ranking

As the ranking from the three MCDA models on the prototype example are indifferent, the AHP model was used to yield Table 2. Note that, in some instances, the models could generate rankings that are slightly different, however, these variations are minor or insignificant (Ahmed, 2013).

4.1.1 PhD (Business Administration, HRM, Economics, Project Management, Supply Chain Management)
Unlike the legacy universities (JKUAT, UoN and MOI), TUM's PhD establishment is recent. Whereas the initial PhD class in JKUAT started with 28 students (in 2010), UoN with 45 students (in 2015) and MOI with 11 students (in 2016); TUM started in 2016 with 5 students. Unlike TUM, majority of the students from legacy universities undertook their masters in the same university. The pioneer class has one employee from TUM, two residing in other Counties (flexible traveling on weekend) but none undertook their master's degree in TUM. Majority of the students interviewed cited brand name and convenience to have had a great influence on their selection. By virtue of having permanent lecturers that are easily accessible for student supervision, one would have expected TUM to have had a fair market share, however, this is not the case. For competitor's campuses, initially, most of the lecturers were being flown on fortnight basis from Main campuses to Mombasa, but now they have graduated enough PhDs to handle the coursework program. TUM has further underscore in academic mentorship, whereas competitors have several professors in different fields of Business specialization, TUM SoB has none.

Table 2: Course rankings from different universities

	PhD	MBA/MBM	MSHRM	MSSCM	BCOM/BBM	DBA/DBM/DPMM	CBM/CBA/CST/CPSM
TUM	4	7	2	3	5	1	1
JKUAT	1	2	*	1	3	5	*
UoN	2	1	*	*	1	7	*
KU	*	4	*	*	4	8	*
MOI	3	6	1	2	2	6	*
MTK	*	5	*	3	7	3	3
PU	*	*	*	*	8	*	*
KEMU	*	3	*	4	6	4	4
KIM	*	*	*	2	*	2	2

4.1.2 MBA/MBM

The MBA at TUM, although launched in 2004, has faced stiff competition from satellite campuses; with declining numbers and has attracted only a handful alumnus of TUM. For instance, in the academic year 2016 - students enrolled for MBA are 5 against 30 in JKUAT, 80 in UoN and 25 in KEMU. In spite of having a flexible learning schedule (Friday evening, Saturday and Sunday classes), lower fees, flexible fees payment schedule, qualified (and full-time) lecturers, the numbers have been on the decline. This is attributed to long graduation rate due to stringent rules imposed by the School of Graduate Studies (SGS). For instance, after a TUM MBA candidate has successfully defends the proposal and eventually ready to submit the final project, the PhD regulations are imposed. That is, the project is send to External Examiner thereafter a panel is constituted to assess the student on a vocal viva. In JKUAT the projects are not send to External Examiner before the final defense; and the constituted panel assess both the proposal and final project. In UoN and KU, the student only defends the proposal and the final project is send to the External Examiner for assessment and award of marks i.e. the student does not appear for vocal viva. In addition, TUM alumnus have cited unsatisfactory experience on customer care during the undergraduate degree, mainly from examination office (e.g. missing marks, late release of exams, lack of career guidance, etc) and brand invisibility to have contributed significantly to their not coming back. Other potential students cited proximity from town center as the major reason for switching to competitor.

4.1.3 BCOM/BBM

TUM's huge support comes from alumnus as mid-entries joining Year 2; mostly Diploma graduates in Business Administration (DBA), Business Management (DBM) and Procurement & Material Management (DPMM). On other hand, MOI has the highest number of mid-entries joining Year 3 after completing CPA exams from other Tertiary colleges such as Vision Institute of Professionals, Times Training Center, etc. UoN has the greatest number of self-sponsoring students, directly after KCSE and mostly from Mombasa County. JKUAT takes the second lead after UoN. KU has come-up with a unique strategy of offering state-of-art accommodation at the town center, mainly targeting Upcountry students. KEMU has an attractive, state-of-art facilities (air conditioning library, smart teaching boards and quality furniture) that are lacking in most of the public universities. MTK fees are relatively low compared to all other universities and has gained popularity with its strategic location.

4.1.4 DBA / DBM / DPMM

TUM, as a TIVET institute, has taken a lead for Diploma courses than any other satellite campus. The SoB offers the following course differential DBA, DBM, DA, DHRM, DPMM, DLTM, and DSM - that are unmatched by competitors . Unlike other universities that admit students with KCSE mean grade of C in addition to passing in Mathematics and English, TUM criteria is less stringent. It admits students with a minimum KCSE grade of C- and overlooks subject cluster points. In addition, it recognizes other Certificates from other institution if equivalent to the KCSE with grade C- (minus). This implies a compromise in academic quality as confirmed by Gensemer-Topf and Schuh (2006) who emphasized that institutions admitting students with lower entrance exam grade relative to competition have lower performance outcomes and require more support in non-instructional areas.

4.1.5 CBM/CBA/CST/CPSM

TUM and KIM, as a TIVET institute, rank number 1 and 2, respectively. Most of the TUM students cited reputation, good infrastructure, library facilities, qualified lecturers, accessibility, noise free environment, and security as their main selection criteria. TUM fees are also relatively low compared to other institutions and has short program duration (two semesters) and well defined progression path to Diploma course. TUM's tri-semester structure offers a seamless path and continuity where students progress to Diploma immediately after completion of the Certificate course without skipping a semester waiting for results.

4.2 Preference to Study in TUM

When asked why they preferred to study in TUM over other institutions, the SSP students gave a number of reasons, including:-
- It is near to home and easily accessibility by road transport
- It is within my home county
- It has free-noise studying environment with good security
- It has good reputation and is ISO certified
- Due to timely graduation and easy progress
- It has qualified lecturers and is research oriented
- The fee is reasonable compared to other institution.
- TUM has best training facilities, state-of-art library and the number of classrooms are many
- The university produces competitive graduates
- Accessibility and flexibility of classes, especially evening, weekend programs and tri-semester system
- TUM has no long formalities when making application admission.

4.3 Students Progression in TUM

Figure 2 shows that, on average, 57% of students, mainly those pursuing Certificate and Diploma courses will continue with degree course at TUM. Those who will opt to join in other institutions (about 28%) cite reputation, state of art facilities, shorter completion rate as the main reason.
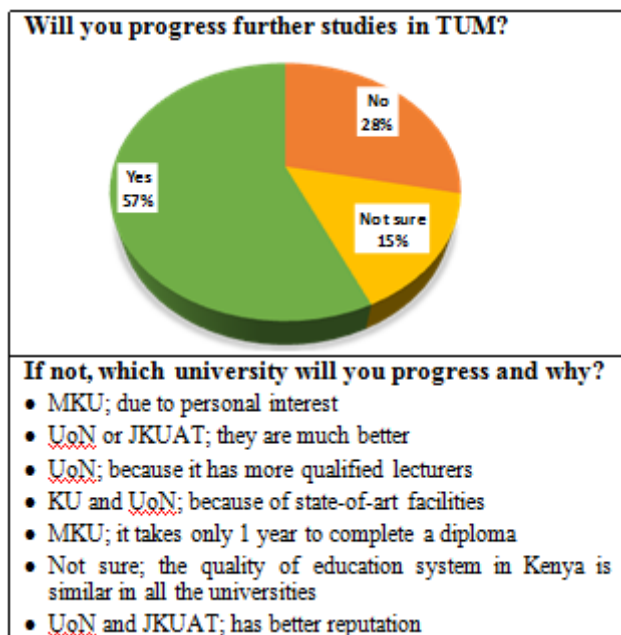

Figure 2: Progression in TUM

4.4 Fulfillment of Expectations at TUM

Figure 3 shows that 72% of the students studying at TUM are satisfied on their expectations. These students eventually act as ambassadors and help market the institution to other potential applicants.
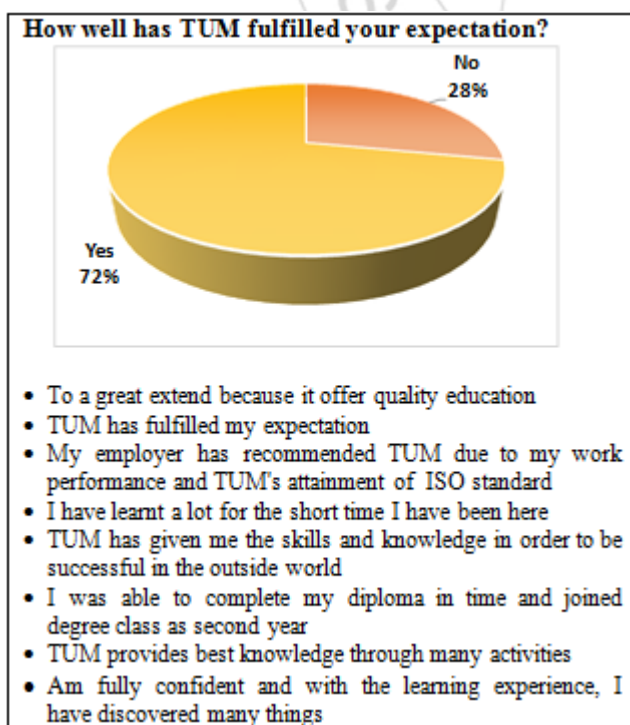

Figure 3: My expectations in TUM

4.5 Role of Marketing in TUM

Figure 4 shows that marketing plays a pivot role in students admission as testified by 55% of the students who applied through media advertisement. TUM adverts on the local dailies are not frequent and even the few have inadequate information, yet so powerful especially to those who cannot easily access the internet (TUM's website) . Similarly, TUM TV documentaries are brief and expensive but impacts significantly in the students admission.
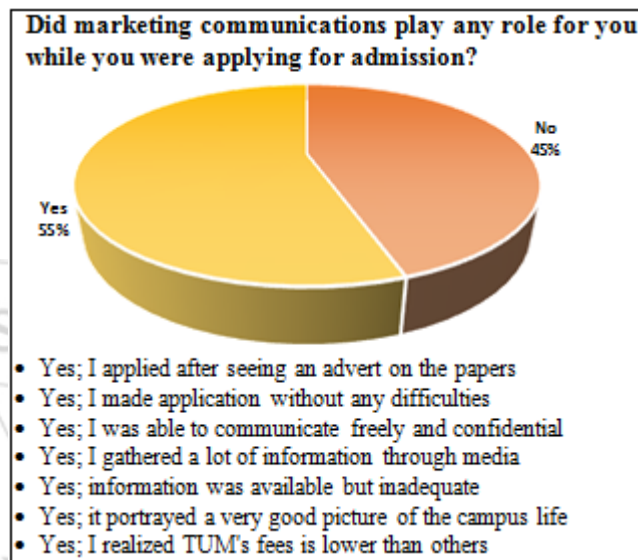

Figure 4: Role of marketing

4.6 Recommending TUM to others

Majority of the students, mainly those undertaking Certificate and Diploma, are satisfied with learning at TUM and most of them (58%) will be willing to market TUM to other students (as shown in Figure 5). However, those who are not willing, mainly the Degree and Masters students cited reasons shown on the right-hand side of Figure 5. These students would rather recommend JKUAT, followed by UoN and KU.

5. Recommendations

To remain competitive and attract more students, a number of recommendations for SoB can be adopted .

Advertising and Marketing: The SoB should consider advertising and marketing its programmes in social media, magazines and TV. Currently, the School relies in the Corporate wide university advertisement that is not undertaken frequently. Further, the general advertisement does not give SoB the attention it deserves and is more bias towards Marine related courses, as a niche, for TUM. The competitors satellite campuses have their own websites, very appealing and updated on regular basis. On the contrary, the SoB does not only have their own website but even the content on the institutional website is outdated. To market itself, a SoB website will be a powerful strategic weapon showing courses on offer, course content, research activities, publications, events, lecturer's profiles, etc. Determining the most effective types of communication is key in marketing. For students loyalty, Constaninides and Stagno (2011)

advocates for mobile communication technologies and social media marketing. Therefore, SoB should consider undertaking independent marketing, that is, without necessarily involving the central office.

Figure 5: Recommendations

Infrastructure: According to Hanssen Solvoll (2015) the factor that most strongly influences student satisfaction with university facilities is the quality of its social areas, auditoriums and libraries. SoB has highly underscored in terms lecture theatre facilities, such as, lacking executive chairs, lacking tables, lacking projectors, as well as untidiness and unclean lecture rooms. For instance, MBA classes in the SoB are taught in the Old Building that is worn out, has fading paint, electrical wires protruding, fans not working and with a rough surface floor. Price, Matzdorf, Smith and Agahi (2003) points out computing facilities to impact significantly on the competitiveness, and ideally, PCs should be accessible for research activities. SoB should upgrade the learning facilities, mostly lecture rooms to be equipped with state-of-art technology. There is a dire need to establish a computer laboratory for the School.

Competitive and accredited courses: There are a number of new Bachelors and Masters programs that have been launched by SoB yet are not accredited by Commission of University Education (CUE). As long as the courses remain status quo, SoB will not only remain uncompetive but risks being penalized by CUE.

Mentorship: Although SoB has the highest number of PhD holders (eleven lecturers as December 2016) than any other School/Faculty in TUM, it has highly underscore in academic mentorship. Whereas most of the Schools/Faculties in TUM and competitors satellite campuses have professors in different fields, SoB has none. Perhaps the inability to attract professors is due to lack of office space, low research

activities, uncompetitivness compared to legacy universities, among other reasons. SoB should create a research culture and minimize *moonlighting* where over 90% of lecturers from the SoB also teach in competitors universities.
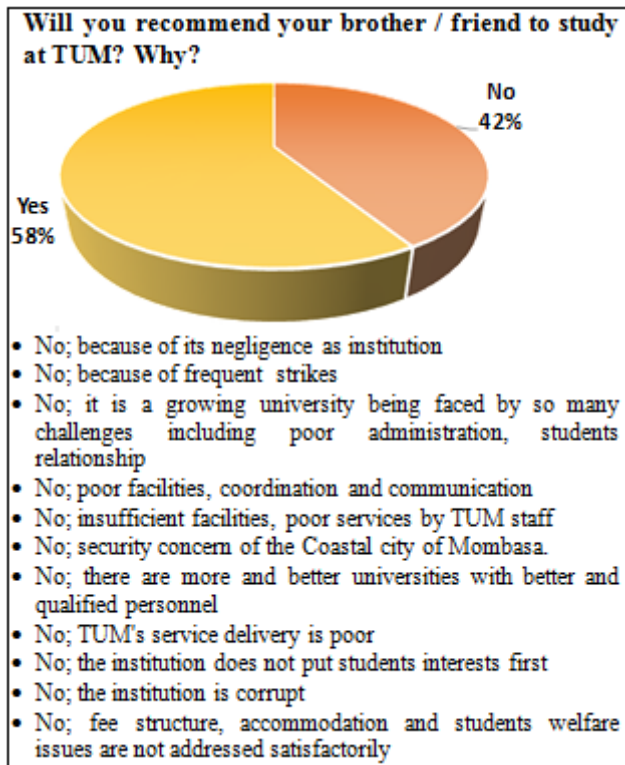
Accommodation: TUM has embarked on an expansion strategy, but lacks sufficient accommodation facilities to house both the Government and SSP students. Indeed, the crises witnessed in September 2016 intake that could only guarantee accommodation within the university halls for First Year students only, is a major setback. At KU, they have a state-of-art residential halls with sufficient capacity build in the Town Center of Mombasa.

Customer Care: Students are TUM's ambassadors that serves as a powerful marketing tool in attracting new students. They upheld the reputation of the institution if they are listened to, their grievances are addressed and administration is concerned about their welfare. There is a feeling amongst the students that communication between administration and students is one way, there is lack of transparency and service quality is not satisfactory. SoB should have a help desk to resolve student issues, notably in the Examination Office. There is a huge backlog of pending cases, such as missing exam marks that delays students from graduating on time. Late release of the exams and communication to the student is a recurring issue that keeps adding on the list of student's frustrations. The examination office has a high turnover with improper records that becomes a daunting task to the newly appointed Examination Officers. Lecturers in Business are time and money conscious, retaining an academic staff to undertake clerical work in an excuse that examination processing has been automated is a setback. SoB should consider employing a clerical staff to help in data entry, formatting exam and printing the exam documents for declaration. This should be in addition to a Help Desk staff who will be handling student grievances on daily basis.

Graduation Rate: The graduation rate is low, and since 2010, when the MBA program was launched, only five out of about ninety students (MBA, MSc Procurement, MSc HRM and MSc Finance) have graduated. SoB to embark on a revival strategy and lobby with the School of Graduate Studies (SGS) to relax its stringent rules. In specific, SGS should benchmark with other universities and stop treating MBA projects as PhD thesis.

Low or subsidies fees: Although a number of students cited fees to be slightly higher than competitors, this is not true. SoB tuition fees are not only lower but flexible enough to allow students registration by paying 50% upon registration and the balance before one sits for the end of semester exam. Therefore, SoB is recommended to maintain status quo.

Management and Leadership: Top leadership has a ripple effect on good governance and administration of TUM. The turnover on the top management has been daunting, some on accusations of corruption and others dissatisfied with management style. In a span of one year, TUM has lost the VC, DVC-AFP, Registrar AA, Registrar-AFP, Finance Officer, Procurement Manager, HR Manager, Project Officer, among many other senior staff. This creates

institutional instability because replacement are not automatic, and some acting positions have spanned over one year with dissatisfied individuals battling through court injunction, that is, restraining the recruitment process from filling their vacancies. The frequent strikes also has top management to blame because of poor communication to the student bodies, especially, when major decisions such as fee changes get implemented.

Flexible programs: SoB has flexible programs as different modes of learning are in existence. The Day program, has SSP as well as KUCCPs students and the Evening has only SSP students. Masters and PhD programs has weekend schedule where students attend classes on Friday evening, Saturday and Sunday. But even with this flexibility, some students still miss Saturday classes; for instance, those who work on that day and those who attend church service (i.e. 7th Adventist). Therefore, the SoB can consider starting distance-learning or e-Learning program, like in MTK, that will free students from geographic boundaries and accommodate wide range of other students.

Centralization of Offices: The SoB is located in E-Learning Center where two departments are housed (Management Science and Business Administration) and the Old Building (housing department of Accounting and Finance) are approximately 400 meters apart. Further, classes are conducted in different buildings, for example M-Block is 800 meters and Kiziwi is 1 km from E-Learning Center. Ideally, for smooth and efficient operation, all departments should be housed in one or same building. Therefore, SoB should negotiate with management for possession of E-Learning Center to accommodate the swelling numbers of permanent lecturers, house all the departments in one building and as best practice from many other universities.

Town Campus: There was a concern about starting a TUM satellite campus in town center, just like where the main competitor's campuses are situated. Most of the tertiary colleges offering CPAs are also situated in town centers and students find it convenient to pursue two courses, in different colleges, simultaneously, e.g. students studying at Vision Institute of Professionals and MOI, separated by a distance of 800km. Other universities, like JKUAT, offer CPA and CIPS (Chartered Institute of Purchasing and Supplies) courses. TUMs location is ideal because of the security and ample parking space that lacks in the other satellite campuses. Therefore, SoB should strengthen the TIVET programs, especially externally regulated programs and offer competitive tuition fees. The centralization, semesterizing and charging tuition fees based on TUM certificate courses to the externally regulated courses has worked to the disadvantage of SoB. The SoB has been focusing too much on the transition from Polytechnic to University at the expenses of TIVET programs, that should not have been the case.

6. Acknowledgment

References

[1] Ahmed, A. H (2014). A Kenyan strategic business selection tool for micro, small, medium size enterprises. PhD Thesis. Jomo Kenyatta University of Agriculture and Technology.

[2] Billaut, J., Bouyssou, D. and Vincke, P. (2010). Should you believe in the Shanghai ranking? An MCDM view, Scientometrics, 84, 237–263.

[3] Communities and Local Government. (2009). Mutli-criteria analysis: a manual. Retrieved from http://www.communities.gov.uk.

[4] Constantinides, E., & Zinck Stagno, M.C. (2011). Potential of the social media as instruments of higher education marketing: as segmentation study. Journal of Marketing for Higher Education, 21(1), 7-24.

[5] Downing, K & Ganotice, F. (2016). World University Rankings and the Future of Higher Education. IGI Global.

[6] Emrouznejad, A. (2016). DEA Tutorial. Retrieved December 1, 2016 from http://deazone.com/en/resources/tutorial.

[7] Financial Times, (2016). Global MBA Ranking 2016. http://rankings.ft.com/exportranking/global-mba-ranking-2016/pdf.

[8] Gansemer-Topf, A. M., & Schuh, J. H. (2006). Institutional selectivity and institutional expenditures: Examining organizational factors that contribute to retention and graduation. Research in Higher Education, 47(6), 613-642.

[9] Giannoulis, C and Ishizaka, A (2010). AWeb-based decision support system with ELECTRE III for a personalised ranking of British universities", Decision Support Systems, 48, 488–497.

[10] Glanzel, W. & Debackere, K. (2009). On the "multi-dimensionality" of ranking and the role of bibliometrics in university assessment, in Ranking universities , DEHON et al. (Eds.), 65-75.

[11] Ibrahim Ogachi Oanda & James Jowi (2012). University Expansion and the Challenges to Social Development in Kenya: Dilemmas and Pitfalls JHEA/RESA 10(1), 49–71.

[12] If Price, Fides Matzdorf, Louise Smith & Helen Agahi (2003). The impact of facilities on student choice of university. 21(10), 212-222.

[13] Johnes, J (2006). Data envelopment analysis and its application to the measurement of efficiency in higher education. Economics of Education Review 25, 273–288

[14] Johnes, J. and Johnes, G. (1995) "Research Funding and Performance in U.K. University Departments of Economics: A frontier analysis", Economics of Education Review, 14(3), 301-314

[15] Lukman, R,. Krajnc, D., Glavic, P. (2010). University ranking using research, educational and environmental indicators", Journal of Cleaner Production, 18, 619–628.

[16] Mateu, A. (2002). ClusDM: A multiple criteria decision making method for heterogeneous data sets. Doctoral thesis, Polytechnic University of Catalonia. Retrieved from http://www.tesisenred.net/bitstream/handle/10803/6638/01CAPITOL_2.pdf

[17] Mayston D.J. and St.J.Jesson, D (1991) "Educational Performance Assessment: A new framework of analysis", Policy and Politics, 19(2), 99-108

[18] Mathews, D (2012). Keep the cream, Willetts tells 'cash cow' business schools. https://www.timeshighereducation.com/news

[19] Nisel, S., & Nisel, R. (2013). Using VIKOR Methodology for Ranking Universities by Academic Performance. GSTF Journal of Mathematics, Statistics and Operations Research (JMSOR), 2 (1)

[20] Pusser, B. & Marginson, S. (2013). University rankings in critical perspective. The Journal of Higher Education. 84(4). 544-568.

[21] Suedel, B., Burks-Copes, K., Kim, K., & McKay, K. (2011). Using multi-criteria decision analysis to support ecosystem restoration planning. EMRRP-EBA-07

[22] Thor-Erik Sandberg Hanssen , Gisle Solvoll , (2015) "The importance of university facilities for student satisfaction at a Norwegian University", Facilities, 33 (13/14), 744 - 759.

[23] Turner, D. (2005) 'Benchmarking in universities: league tables revisited.' Oxford Review of Education, 31(3), 353-371.

[24] Vassilev, V., Genova, K., & Vassileva, M. (2005). A brief survey of multi-criteria decision making methods and software systems. Cybernetics and Information Technologies, 5(1), 3-14.

[25] Vincke, P. (1992). Multi-criteria decision-aid. New York: John Wiley and Sons.

[26] Wu, H. Y., Chen, J. K. Chen,I. S. & Zhuo, H. H., (2012). Ranking universities based on performance evaluation by a hybrid MCDM model", Measurement, 45, 856–880.

Author Profile

Anwar Hood Ahmed received BSc (University of Nairobi), MSc (London School of Economics), MPhil (Brunel University) and PhD in Strategic Management (Jomo Kenyatta University of Agriculture and Technology). Currently he is the Director, Kwale Campus at the Technical University of Mombasa.

Dr. William Kingi received his MSc. and Ph.D from Jomo Kenyatta University of Agriculture and Technology. Currently he is the Dean, School of Business at the Technical University of Mombasa.