

Performance Evaluation for Private Higher Education Institutions Using Balanced Score Card

تقييم أداء مؤسسات التعليم العالي الخاصة باستخدام بطاقة الأداء المتوازن

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Abstract

The aim of this paper is to demonstrate the use of balanced scorecard (BSC) specifically key performance indicators (KPIs) to establish a reference for performance evaluation in private higher education institutions. The paper first introduces related literature review, and then presents the proposed KPIs that are carefully chosen for performance evaluation in private higher education institutions. Then, the proposed KPIs are validated by applying it to five private universities in Jordan and one benchmark international university. One of these universities was named to be the Jordanian standard university after comparing the performance results of the five universities with a benchmark international university

Keywords: Key Performance Indicators, Benchmark, Balanced Scorecard.

المخلص

هدفت هذه الدراسة إلى استخدام بطاقة الأداء المتوازن لا سيما مؤشرات قياس الأداء الرئيسية بغية الخروج بمرجع لتقييم أداء مؤسسات التعليم العالي الخاصة. بدأت هذه الدراسة بمراجعة الأدبيات السابقة المتعلقة بهذه المجال ثم عرضت مؤشرات قياس الأداء الرئيسية المقترحة والتي تم انتقاؤها بعناية لتقييم أداء مؤسسات التعليم العالي الخاصة. وتم التحقق من صدق مؤشرات قياس الأداء الرئيسية المقترحة من خلال تطبيقها على خمس جامعات خاصة في الأردن وجامعة أخرى عالمية لتكون معياراً مرجعياً. وبعد مقارنة نتائج الأداء للجامعات الخمس الجامعة العالمية المعيارية، تم تسمية إحدى هذه الجامعات الخمسة على أنها الجامعة الأردنية التي حققت المعايير القياسية.

الكلمات المفتاحية: مؤشرات الأداء الرئيسية، المؤشر، بطاقة الأداء المتوازن.

1. Introduction

Performance management is an information system business process that is used by managers to set strategy, develop plans, monitor execution, forecast performance, report results, and make decisions Axson (2010). One of the main efficient tools that is used widely for performance evaluation is Balanced Scorecard (BSC). The BSC provides managers with balanced view of organizational performance through four dimensions: financial, customer satisfaction, learning and growth, and internal business process (Kaplan & Norton, 1992, 2004). These four dimensions measure and monitor both tangible and intangible performance to reach the organizational goals and objectives. Consequently, an indicator system for higher education appears to be a vital management and communication tool (Martin, Sauvageot, & Tchatchoua, 2011).

To be able to meet the challenges that exist in higher education and the desire to raise the level of education, this paper demonstrates the BSC as a performance monitoring evaluation tool in higher education to enable universities to build their own management capacity and implement

better-performing information systems and monitoring tools. The main aim of this research is to evaluate the performance in higher education using BSC as performance measurement tool. In summary, the aims of this paper are to:

- Reviewing the literature regarding performance evaluation in higher education.
- Demonstrate the using of BSC as performance evaluation tool in higher education.

The rest of this paper is organized as follows: Section 2 review the literature where the researchers present the latest regarding applying the BSC as performance evaluation tool in higher education institutions; In Section 3, KPIs for the Private Higher Education Perspective are presented. In Section 4, we present the research methodology. Data analysis, and discussions along with illustrative graphs are demonstrated in Section 5. Finally, the conclusions and recommendations for future works are given in Section 6.

2. Literature review

BSC for Performance Evaluation in Higher Education

A number of researchers have

the perception that the BSC, which has demonstrated its suitability for profit-oriented organizations, may not be appropriate for the academic industry (Lawrence & Sharma, 2002; Storey, 2002). Nevertheless, others (Al-Zwyalif, 2012; Farid, Nejati, & Mirfakhredini, 2008; Karathanos & Karathanos, 2005; Kassahun, 2010; Nayeri, Mashhadi, & Mohajeri, 2008; Nelson, 2006; Panagiotis, Pavlos, Vasiliki, & Maria, 2010; Schobel & Scholey, 2012; Tobgy & Radwan, 2011; Umashankar & Dutta, 2007; Yu, Hamid, Ijab, & Soo, 2009) challenge the above statement and provide several examples indicating the applicability of the BSC in an educational environment and prove that BSC can assist educational institutions in improving the performance quality in a similar way to the business sector (Karpagam & Suganthi, 2013). Even though, the adoption and use of BSC for measuring the performance of higher education institutions is relatively new with little research carried out (Al-Zwyalif, 2012; Grigoroudis, Orfanoudaki, & Zopounidis, 2012; Karathanos & Karathanos, 2005; Kassahun, 2010; Yu, et al., 2009).

Karathanos and Karathanos (2005) illustrate how the concept of the BSC can be adapted by the Baldrige Education Criteria for Performance Excellence. They also identify significant differences and similarities between the BSC for business and the BSC for education. In addition, the authors show examples of the BSCs of three recipients of the Malcolm Baldrige National Quality Award in Education. The BSCs in the examples confirm that although they cover the same perspectives, the individual measures differ significantly, reflecting the unique missions of the three organizations. A case study presented by Nelson (2006)

discusses the motives behind adopting BSC approach in measuring the performance of the University of Edinburgh –Scotland, and describes how the BSC is employed in the university. The case study defines the KPIs that are used for measuring the performance along with the strategic alignment of the institutional initiatives with the BSC targets. It also outlines some lessons learned from Edinburgh's experiences, and summarizes how the university is further developing its approach. Finally, the case study proves the importance and effectiveness of BSC in measuring the success of the university.

The paper presented by Umashankar and Dutta (2007) aims to look at the BSC concept and discuss in what way it should be applied to higher education institutions in India. A valuable model is proposed that can be adapted with proper modifications to the management of tertiary institutions of education (whether it be a university, affiliate college, autonomous institution or private educational institution) in India. The study found that the adaptation of BSC by Indian universities and other institutions of higher learning can be beneficial in terms of identifying and selecting areas that they need to urgently focus upon and designing appropriate strategies. Nayeri, Mashhadi and Mohajeri (2008), employs a BSC strategic model to assess the strategic environment of Business higher education in Iran with the use of tools like questionnaire and checklist for Iranian top business schools. These schools are assessed in the strategic perspectives of the proposed BSC model, and their strategic positions are defined in comparison to each other. The results of this study can be used directly in strategic planning of all other Iranian business schools, and it can present a holistic

perspective of higher education institution in Iran. In the same context, a paper published by Farid, Nejati and Mirfakhredini (2008) aims to study the application of BSC as a powerful performance management tool in universities and higher education institutes. It explores the most practical models for universities' performance enhancement, and proposes an improved BSC model to improve quality in higher education. Finally, the paper proposes an implementation guide for BSC implementation in an Iranian context.

In a pilot study carried out by Yu et al. (2009), an e-balanced scorecard (e-BSC) prototype has been developed and evaluated for its effectiveness on measuring the performance of and managing academic staffs in the higher education setting. The proposed e-BSC enables the academic staff to set targets (start of the year), monitor and track personal performance (year-round) and evaluate individual achievements (year-end), thereby promoting performance planning as well as endorse a balanced performance management and measurement at the faculty level. The results of the study indicate that the e-BSC has shown to be effective and suitable for academic staff performance management and measurement and could potentially be used for all levels of staff in a similar context. A paper presented by Panagiotis et al. (2010) discusses the prospective applicability of BSC in Hellenic Navy's education and training in order to motivate and maintain continuous improvement. The paper clarifies the processes, purposes, and limitations for designing and developing a BSC for Hellenic Navy education and training systems as part of its self-assessment by developing and reporting a complete set

of measures that include both leading and lagging indicators of performance. A study conducted by Kassahun (2010) outlines an academic scorecard that can be used, as a strategic BSC framework, for measuring higher education institutional performance in Ethiopia. The proposed framework is not a universal prescription to be followed by all higher education institutions in Ethiopia but it must be adjusted to the vision and strategic direction of a specific institution in a given period of time.

In the study presented by Tobgy and Radwan (2011), a BSC methodology is proposed and used as an educational institution performance monitoring tool and an assessment system, to be used in universities and higher education institutes in Egypt. In the proposed methodology, the higher education institutions improvement is monitored through measuring the KPIs that are categorized into six perspectives. These perspectives are: 1) Educational and learning excellence; 2) Scientific research excellence; 3) Community participation, environment development, and stakeholders; 4) Human and material resources; 5) Financial resources; and 6) Institutional capacity and quality management. The proposed tool measures the performance of the institutions through all its major perspectives, and it is flexible in which it can be modified according to institution mission and strategic priorities. Al-Zwyalif (2012) study aims at identifying the Jordanian Private Universities awareness' of the importance of implementing the BSC in the performance evaluation. Also, the study explores the availability of the basic requirements (financial resources and essential staff) to implement the BSC in Jordanian Private Universities. The results of the study indicate

that the private universities in Jordan realize the importance of the BSC as a strategic tool in evaluating their performance. The results also point up the availability of financial resources and essential staff that are required to implement the BSC in the Jordanian Private Universities. Schobel and Scholey (2012) demonstrate the use of a BSC within a higher education distance learning environment and highlights the importance of financial strategies for higher education at a time when most universities are focused on performance metrics associated with learning. The findings of this study state that higher education organizations with well-defined financial strategies that are linked to educational outcomes will be well positioned for success. Section 2 of this research has been published elsewhere (Abdali et al., 2013).

3. KPIs from the Private Higher Education Perspective

Based on the literature review presented and reviewing the most recent KPIs application, we carefully have chosen the following list of KPIs that is specifically optimized for private universities to monitor the performance in the four dimensions of BSC (Journal of Management Research). These KPIs are grouped in four dimensions. Dimensions are organized upon the concept of strategy map in which each dimension will be the root cause for effecting the other dimension.

I. Financial dimension

1. University market share comparing with leading competitor
2. On average, academic and staff Salaries compared with benchmark universities or other appropriate competitors.
3. University budget includes allocation for

strategic initiatives.

4. University budget devoted for technology.
5. Budget devoted for developing Human resources' skills.
6. Percentage of regular student to scholarship and fellowship students.
7. Budget devoted to support services (data shows, labs, smart boards).

II. Customer Satisfaction Dimension

1. On average, student satisfaction about teaching and learning services provided by the university.
2. Percentage of students complains about administration procedures.
3. Speed of responding to student complains and grievances.
4. On average, numbers of trained experts and certified employees working in administrative positions
5. Time of wait for a student in admission department during registration.
6. Percentage error in admission department.
7. On average, student satisfaction of online services provides by university.
8. Budget devoted for improving service in admission department.

III. Internal processes perspective

1. Percentage of student diversity.
2. Average library usage by student.
3. Evaluation of advertising and promotion for university.
4. Evaluation of terms of accepting master students other than those required by ministry of higher education (such as personal interview, years of experience,

letters of recommendations)

5. Percentage of students recruited out of Jordan.
6. Percentage material delivered electronically.
7. Percentage of electronic links for communication among departments of university.

IV. Learning and Growth perspective

1. Percentage faculty's full time instructors engaged in research.
2. Evaluation of Number of papers published by students.
3. Evaluation of publications in refereed journals in the previous year per full time faculty members.
4. Evaluation of budget devoted to support research and development.
5. Percentage of students per computer.
6. Evaluation of number of ideas put forward by individuals to team leaders.
7. Evaluation of number of patents received at local level.
8. Evaluation of number of patents received at international level.
9. Percentage of researchers moving from research and development to start up own business.
10. Evaluation of number of books published by full time professors.

4. Research Design

4.1. Measuring Instrument

A survey is created to evaluate the performance in the five universities through the BSC. Each perspective of BSC contains a set of KPIs as noted earlier; the researchers chose (83) questions (KPIs) then categorizes

them under the four perspective of the BSC. The survey was evaluated by (11) specialist in the management field to minimize the selected KPIs to only (31). The specialists were associated Profs. and full Profs in five different universities, the researchers made sure not to evaluate the survey internally (in the university were the researchers are studying and working) to avoid any bias. The specialists eliminate some questions due to different reasons, some of the questions were described as ambiguous, and some described as vague, while some other questions were eliminated due to the sensitivity of required information. Most of the questions eliminated were either not so clear or the source of information is unknown. The specialists, the researchers had agreed to use the Likert's Scale to respond to the close ends questions of survey. The evaluation of suggested questions took almost three weeks; some of the surveys were handed personally to the evaluation juries some were sent by email. After the questions were finalized they were classified under the four dimensions of the BSC. The specialists suggested that the survey is handed to deans, heads of administrative and academic departments, managers and quality assurance managers.

The survey was divided into five sections; the first section was related to personal profile of recipients, the questions were about gender, Age, experience, position, and academic rank. Second section of the survey (financial perspective) contains (7) questions mostly the questions in this dimension are to evaluate the different budget of university, market share and salaries (further details are in the findings). Third section of survey has a set of key performance indicators that are related

to customer satisfaction, (7) questions were selected to evaluate mostly the student's satisfaction about variety of services provided by the university. Students of private university considered customers and treated like ones because they have the choice to switch to other universities when their needs and expectations are not fulfilled. Fourth section in the survey is related to the evaluation of university's internal processes, this dimension has set of (6) queries to assess directly or indirectly the internal process the university conduct to achieve their goals and objectives. For example assessing the student diversity in the university reflects the efficiency and effectiveness of public relation department in the university. The evaluation of materials that are delivered electronically evaluates the support technical department in the university. Last section in the survey was related to the evaluation of learning and growth curve in the university. This section evaluates all the aspects that the university should enhance to support their learning and growth. The questions asses to what extent the university provides proper training and to what extent the university is involved in research and supports innovation among their staff, academic and students. This section has a set of (10) questions mainly related to assessment of research efforts and budget devoted to support research.

The survey was distributed in five private universities inside Amman city; the researchers had chosen the five universities based on several criteria

1. The similarities of organizational structure and characteristics of the five universities.
2. Ease of access.

3. Convenient location of the five universities where all of them are located inside Amman city.

The researchers started to distribute the survey on its refereed version, some of the surveys were immediately returned usable others were not good to use others were never returned. The researchers fixed the date to collect the survey.

In parallel, the survey was distributed in a university abroad to get a benchmark related to the same questions imposed in the survey distributed in Jordan, the researchers choose a university in the Middle East with a high academic rank to be a benchmark for five the universities. This university was chosen due to the cultural similarities also the resources and human capabilities are not so far from the universities in Amman-Jordan. The choice of that university (University X) was also affected by the ease of access to their staff and instructors. The researchers did not choose a European or American benchmark for example due to the vast differences in the standards between the two regions. Any benchmark should be stemmed from a leading organization in the same industry that shares a minimum characteristic with the organization that is seeking a benchmark or share the least characteristics with the benchmark.

The researchers emailed (18) surveys to the university (X) in the Middle East region (10) of them were completed and returned via email. The correspondence rate (66%) is considered acceptable given that the generally accepted average responses to non-incentive based questionnaires are around 20% (Al-Yaseen, Eldabi, Lees, & Paul, 2006). The usable surveys were analyzed 100% of the recipients were males

and none of them were females, concerning the recipients age (10%) were at the age of 30 or less, (20%) at the age of 31 to the age of 40, the majority were forty something to the age of 50, the rest of the recipients (20%) were at or above 51. When asking about the years of experience, the majority (40%) had 10 years of experience or less, (20%) had 11-15 years of experience, (20%) had 16-20 years of experience while only (10%) had 21 years of experience. When asking about the administrative position of recipients, (40%) of them were managers, (20%) were deans and the rest of (40%) were heads of departments in the university. When asking about the academic rank of the recipients in the university (X), (20%) had Bachelor's degree or less, none of them had Master's degree, the majority (50%) were assistant Profs, (10%) of recipients were associated Profs and the rest (20%) were full Profs.

4.2. Targeted population

In today's world of global competition the most effective components in organizations are human capital. Skilled human resources are the hardest to be built and found. Higher education institute have a crucial role in changing business dynamics by educating students and then introduce them to labor market. Success stories of students are too many to mention but we must bear in mind that the fine education is the cause for student to be distinguished and recognized; that's why the research selected five private universities to put the proposed framework to the test and attempting to answer the research questions. The selection of private universities is due to the flexibility and ease of accesses in private organization compared to the public ones. The researchers were committed not to reveal any information that is classified

as sensitive of critical, names of universities and recipient were all hidden and the researchers refers to the universities as A, B, C, D ,and E.

5. Analysis and Discussion

(125) surveys were distributed in five private Jordanian universities; of the 125 questionnaires distributed, 86 were completed and received making the final usable responses giving a response rate of (68.8%); This rate was considered to be above expectation given that the generally accepted average responses to non-incentive based questionnaires are around 20% (Al-Yaseen, et al., 2006),(17) In university A; (35) in university B; (37) in university C; (7) in university D and (6) in university E. Regarding the correspondence rates of the five universities, some of them were collaborative and supported the cause of the research while other universities were less tolerant, some universities (the ones with lowest correspondence rates) extended their time of response twice and three times to return the surveys, it should be noted that some surveys were never returned. In university A (25) surveys were distributed (17) of theme were returned that makes the correspondence rate (68%), in university B (72%) of surveys were returned and valid to be used. University C scored the highest correspondence rate (84%) where (45) were distributed due to the approachable organizational environment of university C, (38) of these surveys were returned valid and usable. In university D only (28%) of recipients returned their surveys where (25) surveys distributed and only (7) of them were returned. In university E (24%) of recipients returned their survey where (25) were distributed and only (7) of them return their survey as valid to be used. The

five cases A, B, C, D and E were firstly analyzed all combined together, then each case (university) was separately analyzed. After analyzing the results of the five universities the average of these answers was compared to the average of each question of benchmark. The surveys were collected the data of the five universities was entered and analyzed using windows excel 2013. The following part will be devoted to the result analysis, benchmark analysis and findings discussions.

5.1. Summary of Results

A. Financial perspective

After presenting the results of analysis for each university separately

the researchers compared the average results together (those belonged to the five universities) along with the one belongs to university X (benchmark). The researchers desired to add some illustrative graphs using excel 2013. To generate the graphs tables needed to be reorganized in a different method. The table below is divided into two parts, first part shows the average of answers for universities X, A, B, C, D, and E related to the financial perspective. A deduction is made using the excel and the results are displayed in the second part of the table.

	Financial							
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Bench	0.33	0.68	0.63	0.73	0.58	0.48	0.63	0.75
Univ. A	0.79	0.71	0.71	0.79	0.65	0.59	0.76	0.82
Univ. B	0.68	0.51	0.56	0.56	0.51	0.49	0.64	0.46
Univ. C	0.25	0.21	0.22	0.24	0.19	0.18	0.18	0.20
Univ. D	0.46	0.64	0.67	0.71	0.50	0.50	0.79	0.61
Univ. E	0.42	0.46	0.38	0.33	0.25	0.42	0.42	0.33
A - Score	0.47	0.03	0.08	0.07	0.07	0.11	0.14	0.07
B - Score	0.36	0.16	0.07	0.17	0.06	0.01	0.01	0.29
C - Score	0.08	0.46	0.41	0.48	0.39	0.30	0.45	0.55
D - Score	0.14	0.03	0.04	0.02	0.08	0.03	0.17	0.14
E - Score	0.09	0.22	0.25	0.39	0.33	0.06	0.21	0.42

Table 1 financial dimension of BSC

For example the benchmark average for first question is 0.33, the average of university A is 0.79. Accordingly, A- Score is $0.79 - 0.33 = 0.47$ (the resulting number is approximate because its decimal number deduction). It should be noted that numbers that appears in black font indicate that the

average of the university in question (in this case university A) is above the average of benchmark. In the case of university C the average of answers related to Q1 was (0.25) which is smaller than the benchmark average for this question where university X average was (0.33). C- Score is $0.25 - 0.33 = -0.08$

which means that the university C answer for this question is below the average of the benchmark. From the data demonstrated above it should be stated that university A results were all above the benchmark average.

The example above is to simplify and explain the numbers appearing in the tables. The results reflects some evidences that in general university A financial KPIs exceeds the ones of university X which means they are allocating their financial resources efficiently, and their evaluation to their market share exceeds the results of benchmark. However on the other extreme the score of university C were all below the average this means that university C is exceeding the acceptable amount of risk related to their financial resource allocation (budgets).

Concerning university B results in general, it reflects inefficient resource allocation related to budgets devoted to (strategic initiatives (Q3), technology (Q4), developing human resources skills (Q5), and improving services in the admission department (Q8)) and salaries of academics and staff (Q2) were below benchmark average, however the evaluations related to university market share (Q1), number of local to foreigner students (Q6), budget devoted to support services (Q7) exceeded the average of benchmark university. The importance of Q7 (the number of local students to foreigner scholarship student) due to the extra fees that foreigner are paying for their studies in the Jordanian universities.

Examining the averages of university D and comparing them to the averages of university X, the results were (market

share Q1, budget allocated to strategic initiatives Q3, percentage of local to foreigner scholarship students Q6, budget devoted to support services Q7) above the average of university X, which means that the performance related to these question is with is acceptable if compared to university X. however there were some results that university D Should be worried about and reevaluate these KPIs were related to (salaries of academics and staff Q2, budget devoted to technology Q4, budget devoted to develop human resources skills Q5 and budget devoted for improving admission department Q8), these KPIs if compared with university X and the other local universities could be considered and identified as risk because they fall below average of university A and university X .

The results of university E were all negative except for the Q1 which is related to market share was (0.9) above the average of university A (0.33). However, all the other questions were negative (below benchmark average) that is why the researchers recommend that university E should reconsider the allocation of its financial resources devoted to the soft KPIs. organizations and universities in no exclusion tend to squeeze their expenses on training their human resources, getting new technologies, or salaries paid to staff. Due to the competitiveness among private universities especially in Amman all the financials indicators should be reevaluated by the universities that their scores were below average. Identifying the underperformed areas is the first step of minimizing the impact of unfavorable events.

B. Customer satisfaction

	Customer						
	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Bench	0.68	0.50	0.68	0.60	0.64	0.65	0.65
Univ. A	0.71	0.37	0.72	0.54	0.57	0.46	0.75
Univ. B	0.61	0.38	0.57	0.50	0.31	0.47	0.42
Univ. C	0.24	0.19	0.26	0.17	0.19	0.16	0.22
Univ. D	0.64	0.46	0.64	0.61	0.61	0.50	0.71
Univ. E	0.63	0.42	0.58	0.46	0.42	0.25	0.42
A - Score	0.03	0.13	0.05	0.06	0.07	0.19	0.10
B - Score	0.06	0.13	0.11	0.10	0.33	0.18	0.23
C - Score	0.44	0.31	0.42	0.43	0.45	0.49	0.43
D - Score	0.03	0.04	0.03	0.01	0.03	0.15	0.06
E - Score	0.05	0.08	0.09	0.14	0.22	0.40	0.23

Table 2 Customer satisfaction dimension of BSC

Concerning the customer satisfaction analysis the results were not so assuring in general for the five universities, almost all of the answers were below the average of benchmark (university X). But the lowest among all the results are the ones belonged to university C. Following the same method used in the previous perspective, university A exceeds the average of benchmark with (0.03). However the results related to students complains about administrative procedures (Q2), number of certified employees working in administrative positions (Q4), time of wait for students in admission department during registration time (Q5), number of critical errors n admission department (Q6), were below the average of the benchmark. While the student’s satisfaction about teaching and learning services provided by the university (Q1), speed of responding to students complains and grievances (Q3), students’ satisfaction of online services provided by

the university (Q7), were all above average of the benchmark. When examining the underperformed areas related to this perspective, it is notable that university A has neglected training given to their employees in the administrative positions as well as employees in the admission department. This neglecting is obviously reflected on the speed of response and critical error number in admission department, the researchers highly recommend further and more training to improve the skills of employees in key department like admission department to minimize an decrease the rate of critical errors.

Same method applied to the results of university B where all of answers were below the benchmark average. The university KPIs indicates troubled performance in admission department and technical support related to their online services and delay of responsiveness to student complains (student’s affairs

department). Among all the negative scores the lowest were attributed to university C, the KPIs of this university were all below average of benchmark. The scores of this university indicate risk potential associated and related to their services offered to their students (customers).

The results of university D were also negative but above the average of university C, however they failed to meet the benchmark of university in the areas of student's satisfaction about teaching and learning services (Q1), students complains about administration procedures (Q2), speed of responding to students complains and grievances (Q3), time of wait for students in admission department during registration (Q5), number of critical errors in admission department (Q6). While the average of answers related to the dimensions number of trained experts and certified employees working in administrative positions (Q4), student's satisfaction of online services provided by the university (Q7), were above the average of university X. It is notable that the average of (Q4) which evaluates the number of trained personnel in administrative position was above the average of benchmark but this evaluation is not reflected on the other question related to the number of errors of the speed of response. It's obvious that the training offered to personnel is insufficient and incompatible with the daily requirements of their jobs in another word the employees failed to meet their costumers (students) expectations in general.

Analyzing the averages of university E, all the results were negative (the one appearing in red) and lied below bench mark for the whole dimension of customer

satisfaction. The researchers find that the results compromise a risk potential for the university E, more trainings should be given to key personnel in the departments of (admission, technical support and students' affairs). Proper training minimizes the probability of inviting risks but do not necessarily omit the chances for risk to emerge.

The specialists, decision makers, managers, shareholders in the five universities should reconsider their performance in the areas related to customer satisfaction; it's noted earlier that unsatisfied customer could be considered as threat or risk potential of losing market share especially if the organization is operating in a highly competitive environment or even worse jeopardizes the existence the organization (David, 2010).

Internal processes

	Internal Processes					
	Q1	Q2	Q3	Q4	Q5	Q6
Bench	0.73	0.78	0.70	0.78	0.83	0.85
Univ. A	0.79	0.79	0.66	0.75	0.76	0.91
Univ. B	0.46	0.46	0.38	0.41	0.35	0.38
Univ. C	0.27	0.18	0.22	0.30	0.21	0.17
Univ. D	0.64	0.54	0.61	0.57	0.82	0.79
Univ. E	0.46	0.38	0.50	0.65	0.38	0.29
A - Score	0.07	0.02	0.04	0.03	0.06	0.06
B - Score	0.27	0.32	0.33	0.37	0.48	0.48
C - Score	0.46	0.60	0.48	0.48	0.62	0.68
D - Score	0.08	0.24	0.09	0.21	0.00	0.06
E - Score	0.27	0.40	0.20	0.13	0.45	0.56

Table 2 internal processes dimension of BSC

To better comprehend the results generated in both financial perspectives and customer satisfaction perspective which are considered as lagging indicators (those measure past performances) the researchers were interested in analyzing closely the results stemmed from the internal processes dimension which is according to Kaplan and Norton considered a driver for indicators in customer satisfaction dimension, in another word the more effective internal processes leads to higher rates of customer satisfaction(Kaplan & Norton, 2004). The relation between customers’ satisfaction and internal processes is proven to be directlinear relationship in all organizations. Organizations that carry highly effective and efficient processes are most likely to score higher satisfaction rates than those with less effective processes.

It’s remarkable that university A is exceeding the benchmark concerning the areas of students’ diversity (Q1), methods of

advertising and promotion of the university abroad (Q2), usage of electronic links for communication among departments of the university (Q6). It appears that university A is leading a successful methods in promotion the university out of Jordan and this effort is reflected on average of students diversity and the number of local to foreigner students where it exceeds the percentage of benchmark too (Q6 at financial perspective) whoever rest of the results were below the benchmark average related to the areas of (terms of accepting master students requested by the university (Q3), numbers of students recruited out of Jordan (Q4) and the number of material delivered electronically (Q5)).Also, it is remarkable that in university A there are two controversial issues; first the KPIs related to student’s diversity (Q1) and student recruited out of Jordan (Q4) are conflicting though they are investigating the same number (number of non-Jordanian students). The

other issue is related to the use of material delivered electronically (Q5) and usage of electronic links in communications (Q6), both questions are to evaluate the technical support services but they were confusing too where Q5 below average and Q6 is above the benchmark average;. An explanation might be convincing regarding the technical support is that delivering the material is not only related to the support personnel but also to the Profs where they are asked to make the data available for students.

In university B the recipient's evaluation to the internal processes dimension all lied down the average of benchmark (university X). University B results showed a big variance from the results of benchmark. It is recommended for them to adopt more efficient promoting methods, improving their technical support systems and personnel, also reconsider their terms of accepting master students to refine the quality of their post graduates students. Among all the low scores of the five universities, university C scored the lowest scores if compared with benchmark average, even if compared with the other four university excluding benchmark it will be the farther from their average too. Their entire KPIs that are related to the evaluation of internal processes were low. The researchers do not recommend only adaptation restructuring for their organizational activities should be considered.

Results of university D came negative too whereas the same method of variances is applied. What is notable regarding the evaluations of online services provided by Profs and technical support department is that the result came different from one dimension to another in the surveys of

university D, as in the customer satisfaction dimension their evaluation was above average when evaluating the online services (Q7) while when evaluating the material delivered online (Q5) and usage of electronic links for communication (Q6) in the internal processes dimension the results were below the benchmark average. The difference of evaluation might due to the parties related to each question. In Q7 (customer satisfaction dimension) the question was related to the online services in general like, schedules, staff, personal academic information's related to the student, material general description, organizational structure along with clarification information) while in the internal processes dimension the parties related to the question (owners) were different. In (Q5) material delivered electronically the question is to evaluate the commitment of Prof the cause of distant learning and how committed they are to make the material available online. However the other question (Q6) usage of electronic links among departments is to evaluate the responsiveness of department and the use of electronic link over the usual paper based communications.

Regarding the scores of university E, all the results were below the average of benchmark but above the average of university C (which has the lowest scores among the five universities) in the sometime, it's recommended for university E to reevaluate and reconsider their internal processes because they are the main and root cause for low rates of customer satisfaction, the low customer satisfaction rate might cause market share loss or threat the existence and creditability of the university.

Learning and Growth

	<i>learning and growth</i>									
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Bench	0.63	0.48	0.63	0.65	0.68	0.70	0.55	0.67	0.39	0.63
Univ. A	0.78	0.47	0.71	0.94	0.90	0.79	0.70	0.57	0.60	0.75
Univ. B	0.57	0.22	0.57	0.65	0.51	0.42	0.45	0.26	0.21	0.31
Univ. C	0.17	0.08	0.17	0.16	0.21	0.19	0.11	0.09	0.07	0.12
Univ. D	0.58	0.25	0.40	0.65	0.68	0.63	0.63	0.50	0.40	0.50
Univ. E	0.50	0.42	0.71	0.38	0.55	0.46	0.33	0.17	0.29	0.42
A - Score	0.15	0.00	0.08	0.29	0.22	0.09	0.15	0.10	0.21	0.13
B - Score	0.06	0.25	0.05	0.00	0.16	0.28	0.10	0.40	0.18	0.32
C - Score	0.45	0.39	0.46	0.49	0.47	0.51	0.44	0.58	0.32	0.50
D - Score	0.04	0.23	0.23	0.00	0.00	0.08	0.08	0.17	0.01	0.13
E - Score	0.13	0.06	0.08	0.28	0.13	0.24	0.22	0.50	0.10	0.21

Table 4 learning and growth dimension

Moving to the last dimension (learning and growth) some universities changed their curve in this dimension. It should be noted that this dimension has more KPIs than the other four based on the external jury recommendations. The researchers had suggested this much of question due to the importance of learning and growth dimension especially in the case of evaluating universities performance (according to the specialists/Profs).

The results were all positive and above the average of university X (benchmark) while the question related to (papers published by students Q2) was equal to benchmark average. However (number of patents received at international level) was below the average of university X. usually patents are to some extent are related to student’s accomplishments, as result low rate of published paper (where papers are usually related to new ideas and innovative concepts) therefore the two questions are

related logically.

The results of university B were all negative regarding their learning and growth perspective the lowest (0.40) was associated with (Q8) where the evaluation was related to the number of patents received at international level. The results implied that the university has not been rewarded internationally. The researchers suggest a link between the number of patents received and number of papers published by student (this relation is based on strategy map concept (Kaplan & Norton, 2004) where a cause and effect relation is suggested between the number of papers and the international patents received by the university).

Applying the same method to the final group of scores belongs to university C, the learning and growth dimension was no different from the three other dimensions (financial, customer satisfaction and internal processes). However the results

were all below the average of university X (benchmark). The lowest among all the ten questions was associated to (Q8) (0.58). It should be clarified that in this case of university C the results were logical, patents at international level is directly related to the accomplishments and publications about the university, so it's natural that university C score the lowest result related to the number of international level as all the other scores in this dimension lied below average.

The results of university D were calculated as six of them were below the acceptable range (benchmark) these KPIs were (faculty full time instructors engaged in research (Q1), number of paper published by students (Q2), number of publications in refereed journals by full time instructors during last three years (Q3), number of ideas presented by individuals or team leaders (Q6), number of patents received at international level (Q8) and Q10) related to the number of books published by full time instructors) while both budget devoted to support research and development (Q4) and number of ideas presented by individuals and team leaders(Q6) results were equal to the ones in the bench mark as the variance between two was (0.0). Moreover university D managed to be above the average of university X (benchmark) concerning (Q7 and Q10) in the KPIs related to patent received at local level and number of books published by full time professors.

It should be noted that most instructors in the Jordanian universities whether in private or public universities tend to publish their books in Arabic and this explains the local patents received by the university in Jordan as both KPIs were above average.

Almost all the results were below the acceptable range (benchmark) except

only the scores related to the number of publications in refereed journals in the past three years by full time instructors (Q3) was above the average of university X and exceeds it with (0.08). It should be stated that the results of (Q3 and Q8) (number of publications in refereed journals and patents received locally or internationally) are conflicting if taking into account the theoretical link between the two questions in universities A, B, C and D.

However, the suggested link between the number of papers published by students and international recognition (patents) received internationally (Q2 And Q8) still standing in this case as both results were negative and below the benchmark average.

The university D results regarding learning and growth could be considered as potential risk or risk inviting starting from the budget devoted to support research, number of student per computers and number of instructors involved in research (Q1) (which is conflicting with number of refereed papers published by full time instructors (Q3), both KPIs indicated the efforts of instructors devoted to research each in his field of specialty.

5.2. Graphs and Tables

Table of Results obtained from Universities

	Financial							
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Bench	0.33	0.68	0.63	0.73	0.58	0.48	0.63	0.75
Univ. A	0.79	0.71	0.71	0.79	0.65	0.59	0.76	0.82
Univ. B	0.68	0.51	0.56	0.56	0.51	0.49	0.64	0.46
Univ. C	0.25	0.21	0.22	0.24	0.19	0.18	0.18	0.20
Univ. D	0.46	0.64	0.67	0.71	0.50	0.50	0.79	0.61
Univ. E	0.42	0.46	0.38	0.33	0.25	0.42	0.42	0.33

	Customer						
	Q9	Q10	Q11	Q12	Q13	Q14	Q15
Bench	0.68	0.50	0.68	0.60	0.64	0.65	0.65
Univ. A	0.71	0.37	0.72	0.54	0.57	0.46	0.75
Univ. B	0.61	0.38	0.57	0.50	0.31	0.47	0.42
Univ. C	0.24	0.19	0.26	0.17	0.19	0.16	0.22
Univ. D	0.64	0.46	0.64	0.61	0.61	0.50	0.71
Univ. E	0.63	0.42	0.58	0.46	0.42	0.25	0.42

	Internal Processes					
	Q16	Q17	Q18	Q19	Q20	Q21
Bench	0.73	0.78	0.70	0.78	0.83	0.85
Univ. A	0.79	0.79	0.66	0.75	0.76	0.91
Univ. B	0.46	0.46	0.38	0.41	0.35	0.38
Univ. C	0.27	0.18	0.22	0.30	0.21	0.17
Univ. D	0.64	0.54	0.61	0.57	0.82	0.79
Univ. E	0.46	0.38	0.50	0.65	0.38	0.29

	Learning & Growth									
	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31
Bench	0.63	0.48	0.63	0.65	0.68	0.70	0.55	0.67	0.39	0.63
Univ. A	0.78	0.47	0.71	0.94	0.90	0.79	0.70	0.57	0.60	0.75
Univ. B	0.57	0.22	0.57	0.65	0.51	0.42	0.45	0.26	0.21	0.31
Univ. C	0.17	0.08	0.17	0.16	0.21	0.19	0.11	0.09	0.07	0.12
Univ. D	0.58	0.25	0.40	0.65	0.68	0.63	0.63	0.50	0.40	0.50
Univ. E	0.50	0.42	0.71	0.38	0.55	0.46	0.33	0.17	0.29	0.42

Table 3 scores of the five universities compared to bench.

Table of Result Deviation compared to Benchmark										
	Financial									
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8		
Bench	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Univ. A	0.47	0.03	0.08	0.07	0.07	0.11	0.14	0.07		
Univ. B	0.36	0.16	0.07	0.17	0.06	0.01	0.01	0.29		
Univ. C	0.08	0.46	0.41	0.48	0.39	0.30	0.45	0.55		
Univ. D	0.14	0.03	0.04	0.02	0.08	0.03	0.17	0.14		
Univ. E	0.09	0.22	0.25	0.39	0.33	0.06	0.21	0.42		
	Customer									
	Q9	Q10	Q11	Q12	Q13	Q14	Q15			
Bench	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Univ. A	0.03	0.13	0.05	0.06	0.07	0.19	0.10			
Univ. B	0.06	0.13	0.11	0.10	0.33	0.18	0.23			
Univ. C	0.44	0.31	0.42	0.43	0.45	0.49	0.43			
Univ. D	0.03	0.04	0.03	0.01	0.03	0.15	0.06			
Univ. E	0.05	0.08	0.09	0.14	0.22	0.40	0.23			
	Internal Processes									
	Q16	Q17	Q18	Q19	Q20	Q21				
Bench	0.00	0.00	0.00	0.00	0.00	0.00				
Univ. A	0.07	0.02	0.04	0.03	0.06	0.06				
Univ. B	0.27	0.32	0.33	0.37	0.48	0.48				
Univ. C	0.46	0.60	0.48	0.48	0.62	0.68				
Univ. D	0.08	0.24	0.09	0.21	0.00	0.06				
Univ. E	0.27	0.40	0.20	0.13	0.45	0.56				
	Learning & Growth									
	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31
Bench	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Univ. A	0.15	0.00	0.08	0.29	0.22	0.09	0.15	0.10	0.21	0.13
Univ. B	0.06	0.25	0.05	0.00	0.16	0.28	0.10	0.40	0.18	0.32
Univ. C	0.45	0.39	0.46	0.49	0.47	0.51	0.44	0.58	0.32	0.50
Univ. D	0.04	0.23	0.23	0.00	0.00	0.08	0.08	0.17	0.01	0.13
Univ. E	0.13	0.06	0.08	0.28	0.13	0.24	0.22	0.50	0.10	0.21

Table 4 Results of deviation compared to benchmark

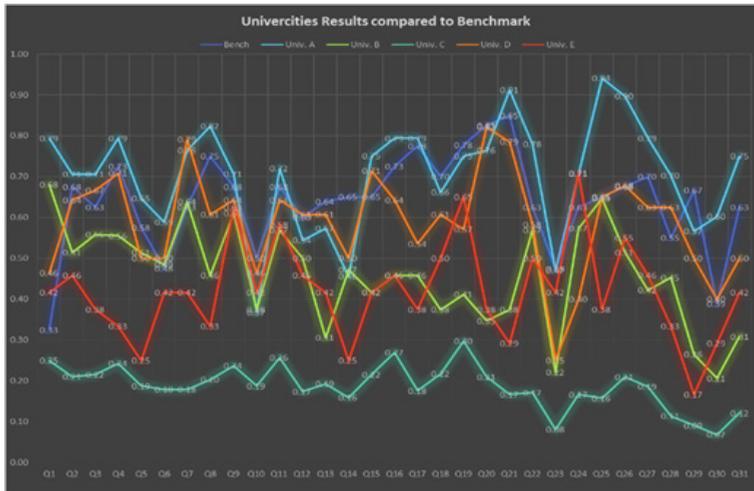


Figure 1 universities compared with benchmark

It is noticeable that in the graph above the total sum of the 31 KPIs are presented from 1-31 while they are divided into four groups in the tables and in discussions. The questions 1-8 belong to the financial dimension, (9-15) belong to the second dimension (customer satisfaction), (16-21) represent the third dimension (internal processes) while (22-31) represent the fourth dimension (learning and growth). This difference is due to technical issues to avoid fragmentations in the graph display.

The researchers chose to translate the excel sheets into illustrative graphs for further understanding using the excel 2013. The graph was color coded, the dark blue resembles the average of scores related to the benchmark while the light blue stands for university A, the yellow stands for university B, turquoise for university C which lies below all the universities' average, the orange resembles the university D and finally the color red stands for university E performance.

As each curve (color) represents the performance of one of the universities, as the results were discussed and clarified earlier, the graph translates and illustrates the same results in a visual method. Some universities (lines) failed to meet the benchmark as their scores were below the average of benchmark, other lines were above the university X (benchmark) average and at some cases the universities managed to reach the benchmark average.

As all the results of the five universities were presented in the graph above along with the benchmark average, the overlapping results might be overwhelming and complicated to track for the person who reads: the researchers had chosen to illustrate the results of each university separately along with the benchmark results for further understanding and more clear results.

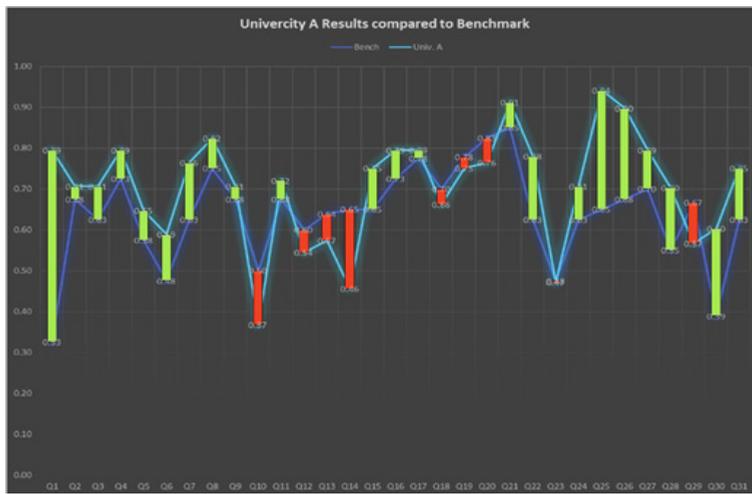


Figure 2. University A overlapping with benchmark

As mentioned earlier the graph is a visual translation of the performance of university A against the performance of university X (benchmark). If comparing the results on the sheets with the ones on the graph above the results will be identical. For example for the first question (Q1) ($0.79 - 0.33 = 0.47$) appears in green which means that the performance of university A lies above benchmark score while the red bars resemble the areas that university A scores were below the benchmark

average(university X). In all only 8 KPIs out of the 31 indicate troubled performance (risk potential) in the areas related to (customer satisfaction 4 negative scores, 3 negative answers in the internal processes, and only one negative score in research and development dimension). It should be also noted that university A mostly exceeded the scores of Bench mark or meet the bench mark exact score like in question (23) which evaluates the number of students per computer.

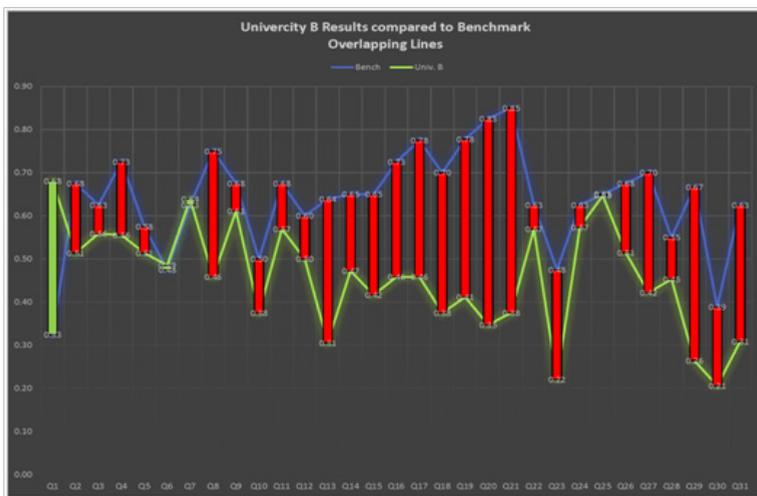


Figure 3. University B overlapping with Benchmark

The graph above demonstrate the performance average of university B compared with the results of university X (benchmark), regarding the first question (market share comparing with other competitors) the results of university B (0.68) exceeds the score of benchmark as university X (benchmark) scored (0.33) for this question that's why the bar between the two curves in the chart appears in green explaining that university B score is above average of benchmark.

However the second bar (form the left) related to the second question appeared

in red. The question is associated to the evaluation of salaries of administrative staff and instructors however the results of benchmark were superior (0.68) if compared to the one of university B (0.51). The bar between the two curves (B and benchmark performance curves) appeared in red as the score of university B fall below the average of benchmark.

All the results of university B the (whole 31 KPIs) were negative except for the one related to the market share, all the other KPIs considered a risk potential to the university B especially if compared with the results of benchmark (university X).

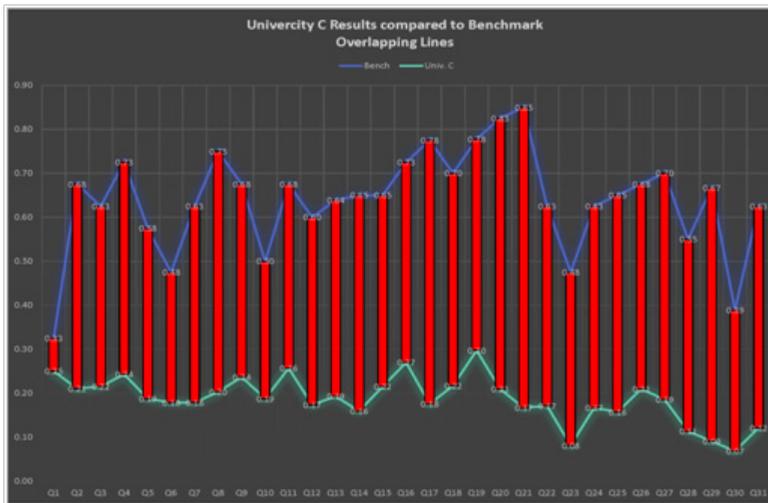


Figure 4 university C compared to Benchmark overlapping performances

Regarding the chart above that belongs to university C all the scores of the university B appear in the color red as all the answers (scores) were below the average of benchmark. What is notable about the results of university C that they all (the

31sores) failed even to reach the minimum score to meet or reach the benchmark, the results were all negative due to the troubled performance of university C regarding the four perspectives of BSC.

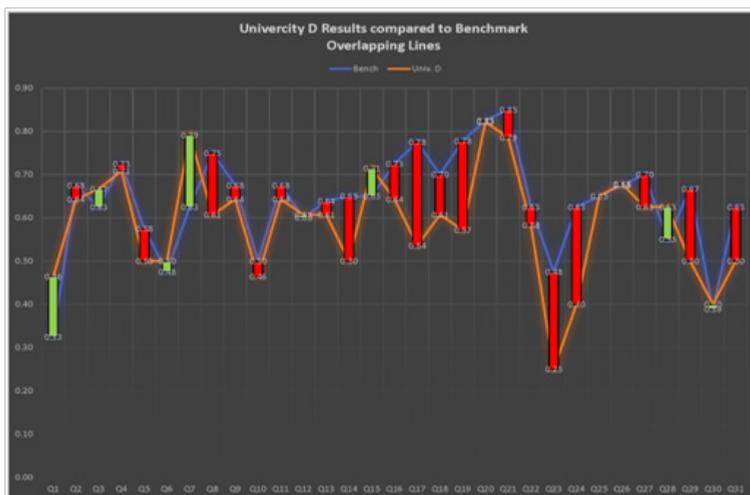


Figure 5. Overlapping results of university D compared to benchmark

The results of university D were mostly negative when compared with Benchmark, only six out of (31) were positive. However four KPIs in the financial perspective came back negative while most of the KPIs in the second dimension (customer satisfaction) indicates risk potential related to the expectations and satisfaction of customer in university D. however all the KPIs in the internal processes dimension came negative which reflects poor training and lack of

efficiency and effectiveness in undertaking activities and procedures in university D. in the final dimension the results were unlike as the KPIs 4 and 5 average was similar to the average of benchmark (budget devoted to research and developments, number of students per computer), nevertheless the university D managed to exceed the average of benchmark in the 7th and 9th KPIs. Meanwhile the rest of KPIs failed to reach the benchmark.

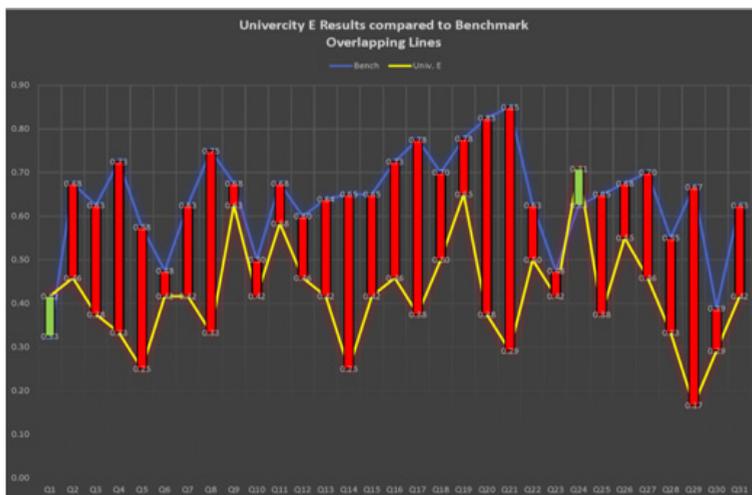


Figure 6 University E results compared to Benchmark overlapping lines

Regarding the graph of university E performance, it is notable that the university E failed to reach the benchmark at any points except for (market share and number of publications in refereed journals by instructors) as the results of the other (29) KPIs were negative and reflect underperformance in the four areas of BSC. All the graphs above (graphs 3, 4, 5, 6, 7) translate the performance results of the five universities compared with the benchmark results; the researchers used many graph types to process the results and illustrate them in an easy to use and read charts.

First group of charts have the exact results of all the universities (including the benchmark) displayed in an overlapping manner. The researchers found this method to be a bit hard to read and confusing to the recipients, it was also found hard to determine in a glance the amount of deviation of the results of the university shown compared to the benchmark university. To overcome this, the researchers decided to make the benchmark results as a base line (Zero) and

draw the values of the differences of results between the two universities (Positive and Negative Values), creating a chart of the exact deviation of the results from the benchmark. This created a much easier on the eye and an easier to read charts which can deliver the results in much faster way to the recipients by showing colored bars that can show if the difference is positive and negative where negative is red (below benchmark) and positive is green (above benchmark). The graph (figure 8) below shows the results of the five universities (in curves) together compared to benchmark results using the benchmark result as base line (zero) to demonstrated the variances in performances between the universities (A, B,C,D and E) and benchmark.

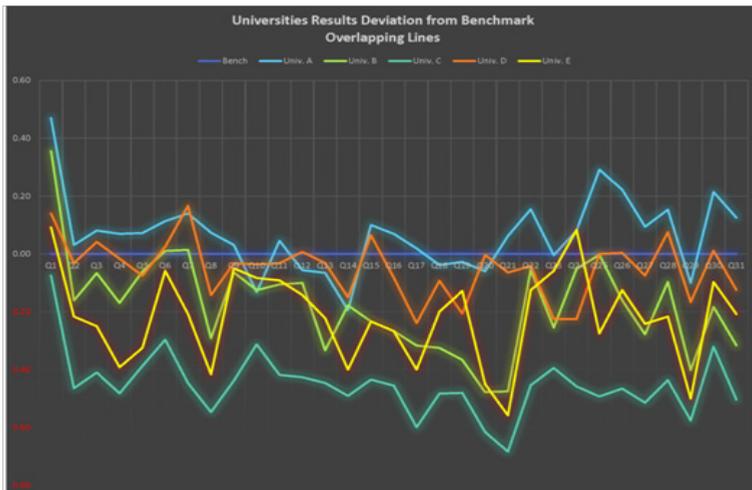


Figure 7 overlapping results of the five university considering benchmark base live (zero)

The graph above is color-coded; each color stands for one of the five universities. Dark blue base line (zero) stands for benchmark, light blue stands for university

A, green stands for university B, turquoise stands for university C, orange represent university D performance while yellow stands for university E performance.

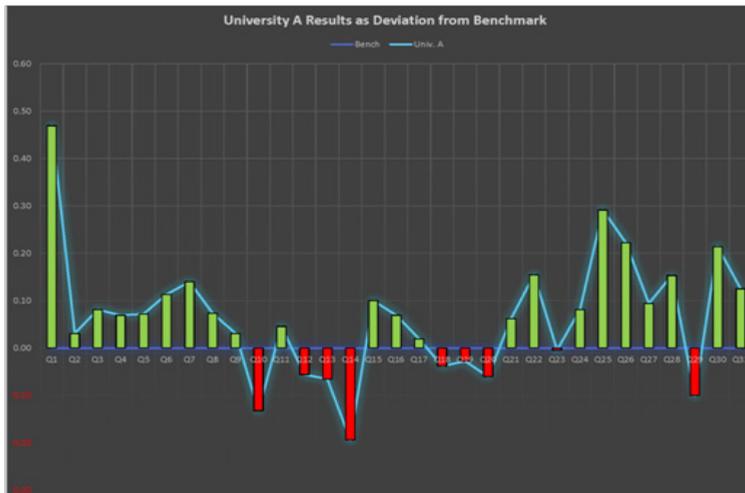


Figure 8 university A results deviation from benchmark.

The graph above(9) demonstrate the variance of university A in relation with benchmark considering the base line (zero line), the green bars represent KPIs that were positive (exceeds the benchmark) which are detailed in the results pages (26,27) whereas the red bars in the chart represent the underperformed areas which

are considered (risk potential). The same color code is applied for all the other four university (B, C, D, and E) to simplify the concept of acceptable performance and risk triggering performances. in the followed pages the researchers will demonstrated the deviation of the universities using the benchmark results as base line (zero line).

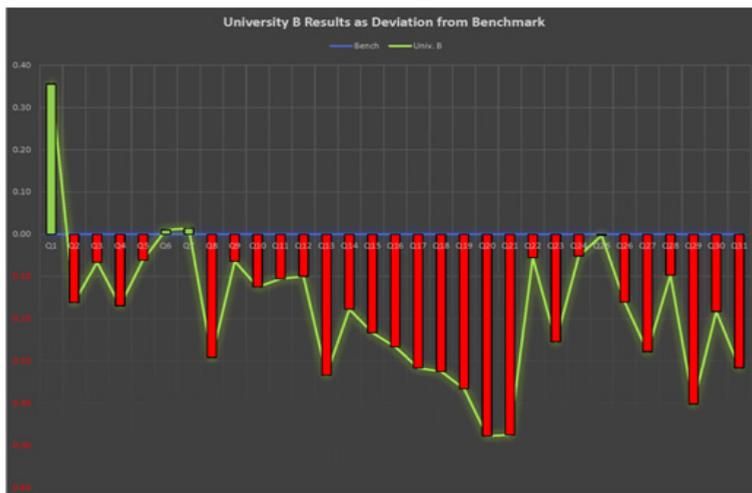


Figure 9 university B as deviation from benchmark.

The figure above translates the performance of university B while considering the benchmark as base line or zero line. The university failed to reach the

benchmark except for three KPIs (the ones appearing in green) while all the other KPIs were below the acceptable range (under the benchmark target).

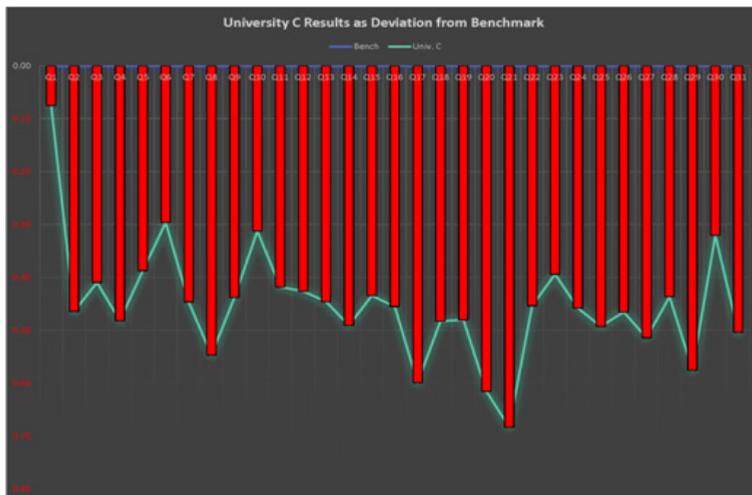


Figure 10 university C deviation compared to benchmark

The graph above translate the unfortunate performance of university C. all the KPIs belong to university C were below the average of benchmark results . all the results of university C appeared in red as none of the KPIs managed to be in the

acceptable range of performance. It should be mentioned that university C failed to meet the average of all the other competitor universities. the results of the other four universities (A, B, D, and E) were higher than the ones belong to university C.



Figure 11 university D deviation from benchmark

The figure above is a translation of university D performance compared with the performance of university X (benchmark) taking into account that benchmark is the base line (line zero). The university D had

managed to reach and exceed the benchmark in some KPIs (the ten KPIs appearing in green) while the other 21 KPIs were in red which indicate a weakness related to the areas in questions.

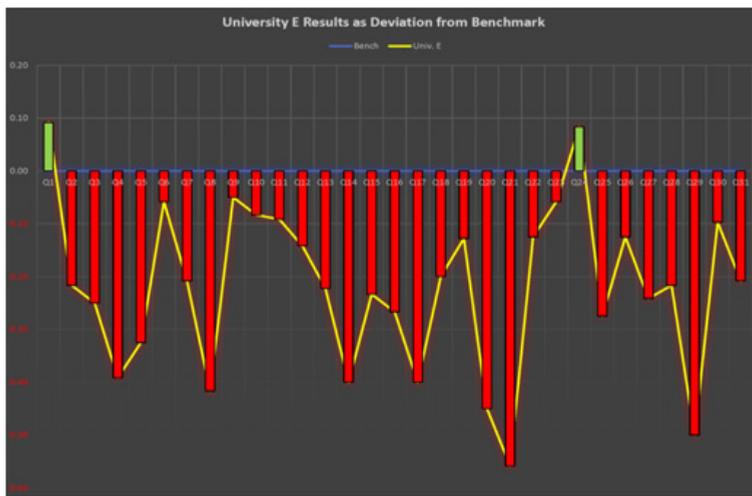


Figure 12 university E as deviation from benchmark

The results of university E were the second lowest results after university the results of university C. all the results appeared in red however all of the KPIs reflected risk potential whereas all the scores of university E were below the results of benchmark. Only two of the KPIs were above average of benchmark, the two KPIs were related to market share in the financial dimension and the number of publications in international refereed journal during the previous year by full time instructors which

is related to learning and growth dimension.

Furthermore, the researchers have found a way to create a performance index or score value to describe each university's performance. This index is created by summing the values of the differences between each university and the benchmark university (positive and Negative Values). The results are in the table below and illustrated visually in graph below (figure 8).

Bench	Univ. A	Univ. B	Univ. C	Univ. D	Univ. E
0.00	2.03	5.54	14.01	1.56	6.76

Table 5 universities in all scores

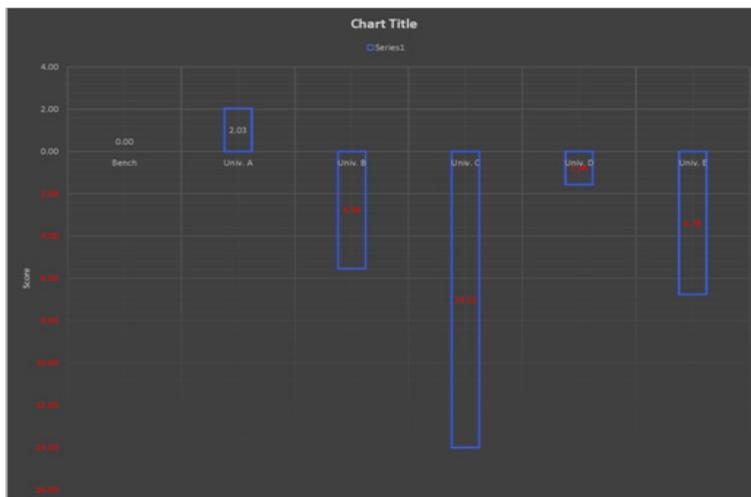


Figure 13 the summing of KPIs (score index)

It is obvious from the results demonstrated in the table and the graph above that university A managed to exceed the performance results of benchmark though it (university A results) was underperformed in some KPIs, however in all after summing all the values (negative and positive values) the final result was positive and exceed that values of benchmark KPIs. University A actually was (2.03) above the average of university X (benchmark) However the other four universities (B, C, D and E) were all below the benchmark average but university C seemed to be the farthest from benchmark average as it scored the lowest results when compared to benchmark (-14.01). However university B was also below average with (-5.54), university D score were below average too with (-1.56). the second low results belonged to university E as the score was (6.76). If arranging the universities based on their scores compared with benchmark (from the highest to the lowest score), university A will come first then (D, B, E and then comes C with the lowest scores) as university C score scored

the lowest results compared with the other four universities in the sample (A, B, D and E).

6. Conclusions and Recommendations

To test the BSC as performance evaluation tool in higher education, a survey has been designed, distributed and collected from five private universities in Jordan and one benchmark international university. The results of the survey long-established and reinforced the importance of the BSC as a tool to evaluate the universities performance. The use of BSC in higher educational institutions provides efficient allocation and deployment of human and financial resources to the various activities in the institution depending on the statuses of performance indicators in the four dimensions of BSC and the feedback. The BSC (if applied effectively and efficiently) offers synergy to fulfill the requirements of every activity within the relative limited resources in the institutions.

The results of this research also identified the closer private university to

the benchmark university, the researchers intend to conduct a detailed investigation to reveal the efforts, budget, technologies and human resources devoted to each activity and perspective. University A is considered as the Jordanian benchmark, whereas the other four universities (B, C, D, and E) are considered underperformed or troubled. Accordingly, other interested private universities might use the results of university A as reference and benchmark for their planning and resource allocation. Benchmarking with other superior institutions in the same industry prevent the negative growth. The negative growth occurs when institutions compare their performances only with their own previous performances regardless what other institutions are achieving.

The researchers recommend applying Balanced Scorecard as both performance and risk management tools in educational and non- educational organizations. BSC proves effectiveness and efficiency in continuous monitoring of performance in universities that apply BSC along with early risk identification in organizations that use BSC.

The researchers also recommend none profit and public organization to use BSC for more efficient and effective allocation for their relatively limited resources if compared with private organizations.

As a future work, the researchers aim to build and deploy the concept of BSC n elementary schools in Jordan due to the importance of this sector specifically in the educational process and the important role that elementary schools plays for the student as an individual and community in general.

References

Abdali, S., Hourani, M. a., Abuerrub, A., & Shambour, Q. (2013). Toward a Conceptual Framework for Integrating Enterprises Performance and Risk Management. *Journal of Management Research*, 5(4), 145166-.

Al-Yaseen, H., Eldabi, T., Lees, D. Y., & Paul, R. J. (2006). Operational Use evaluation of IT investments: An investigation into potential benefits. *European journal of operational research*, 173(3), 10001011-.

Al-Zwyalif, I. M. (2012). The Possibility of Implementing Balanced Scorecard in Jordanian Private Universities. *International Business Research*, 5(11), p113.

Axson, D. A. (2010). Best practices in planning and performance management: radically rethinking management for a volatile world (Third ed.). New Jersey: John Wiley & Sons.

David, F. R. (2010). *Strategic Management* (Thirteen ed.): Pearson Press.

Farid, D., Nejati, M., & Mirfakhredini, H. (2008). Balanced Scorecard Application IN Universities And Higher Education Institutes: Implementation Guide In An Iranian Context. *Annals of University of Bucharest, Economic and Administrative Series*, 2, 3145-.

Grigoroudis, E., Orfanoudaki, E., & Zopounidis, C. (2012). Strategic performance measurement in a healthcare organisation: A multiple criteria approach based on balanced scorecard. *Omega*, 40(1), 104119-.

Kaplan, R. S., & Norton, D. P. (1992). The

- balanced scorecard: Measures that drive performance. *Harvard Business Review*, 1992(Jan–Feb), 71-79.
- Kaplan, R. S., & Norton, D. P. (2004). *Strategy Maps: Converting Intangible Assets into Tangible Outcomes*. Boston: Harvard Business School Press.
- Karathanos, D., & Karathanos, P. (2005). Applying the balanced scorecard to education. *Journal of Education for Business*, 80(4), 222-230.
- Karpagam, P. U., & Suganthi, L. (2013). Performance measurement of organisations: a review of balanced scorecard technique. *International Journal of Business Performance Management*, 14(2), 129-148.
- Kassahun, T. (2010). Rethinking institutional excellence in Ethiopia: adapting and adopting the balanced scorecard (BSC) model. *Journal of Business and Administrative Studies*, 2(1), 22-53.
- Lawrence, S., & Sharma, U. (2002). Commodification of education and academic labour—using the balanced scorecard in a university setting. *Critical perspectives on accounting*, 13(5), 661-677.
- Martin, M., Sauvageot, C., & Tchatchoua, B. (2011). *Constructing an indicator system or scorecard for higher education: a practical guide*. Paris: UNESCO IIEP.
- Nayeri, M., Mashhadi, M., & Mohajeri, K. (2008). Universities strategic evaluation using balanced scorecard. *World Academy of Science, Engineering and Technology*, 37, 332-337.
- Nelson, D. B. (2006). *Introducing the Balanced Scorecard in the University of Edinburgh*. Retrieved from <http://www.eua.be/eua/jsp/en/upload/Bruce%20Nelson.1164021922470.pdf>
- Panagiotis, S., Pavlos, S., Vasiliki, R., & Maria, M. (2010). Applying Balanced Scorecard to Hellenic Navy's Education and Training: An initial approach. *Global Journal of Health Science*, 2(2), 192-197.
- Schobel, K., & Scholey, C. (2012). Balanced Scorecards in education: focusing on financial strategies. *Measuring Business Excellence*, 16(3), 17-28.
- Storey, A. (2002). Performance management in schools: could the balanced scorecard help? *School Leadership & Management*, 22(3), 321-338.
- Tobgy, H. E., & Radwan, M. M. (2011). Monitoring Egyptian Higher Education Institutions Performance Development, the Balanced Scorecard Approach Paper presented at the Quality Assurance in Higher Education: Challenges in the Arab Region, Abu Dhabi.
- Umashankar, V., & Dutta, K. (2007). Balanced scorecards in managing higher education institutions: an Indian perspective. *International Journal of Educational Management*, 21(1), 54-67.
- Yu, M. L., Hamid, S., Ijab, M. T., & Soo, H. P. (2009). The e-balanced scorecard (e-BSC) for measuring academic staff performance excellence. *Higher Education*, 57(6), 813-828.