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The Effect of Application of Non-Financial Dimensions of Balanced Scorecard on Performance Evaluation: An Empirical Study from Saudi Arabia*

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Abstract

The study applied the non-financial dimensions of the Balanced Scorecard (customer dimension, internal processes dimension, learning, and growth dimension). It was done to evaluate performance and measure the effectiveness of these dimensions on performance evaluation at College of Science and Humanities Studies: Al Aflaj, Prince Sattam Bin Abdulaziz University. The researchers used the descriptive analytical approach to conduct the study to find the effect of these dimensions. Data was collected from the college staff and administrators; 120 questionnaires were distributed, out of which 112 were collected. The questionnaire data were analyzed using exploratory (EFA) and confirmatory factor analysis (CFA), hypotheses were tested using the structural equation modeling (SEM) through the (Spss) and (Amos) software. The study finding showed that the balanced scorecard had a positive contribution in evaluating the performance of the College of Science and Humanities Studies: Al Aflaj, Prince Sattam Bin Abdulaziz University through the dimensions of customers and internal processes, and the study finding revealed that the balanced scorecard has no contribution at performance evaluating the College of Science and Humanities Studies: Al Aflaj, Prince Sattam Bin Abdulaziz University through the dimension of learning and growth.

Keywords: Performance Evaluation, Balanced Scorecard, Customer, Internal Processes, Learning and Growth

JEL Classification Code: M40, M41, M42

1. Introduction

Disclosing the level of performance and achievement of the organization's goals and the degree of compatibility between the internal work environment and external

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changes is extremely important. It enables institutions to link the requirements of the external work environment and the institutions' resources and capabilities in the internal environment. It is necessary to implement evaluation systems capable of developing measures and indicators that indicate performance developments and future trends compared to the planned objectives in various fields (marketing, human resources, competitors) to achieve this objective. Thus, the management can then evaluate performance in the event of any deviation. The Balanced Scorecard has added evolution to the evaluation process system; As it is one of the tools of modern strategic assessments, which includes all aspects of financial and non-financial performance and its connection to the strategic plan.

Institutions evaluate employee performance according to the responsibilities of the job and the extent to which they performed. Traditional systems for assessing corporate performance focus on the organisation's financial performance, but the financial approach to performance

measurement is considered unbalanced and limited. The financial statements reflect the organisation's past performance; therefore, they may not represent the current state or what may happen to the organization in the future, Isoraite (2008).

Organizations assess employee performance on an annual, semi-annual, and quarterly basis to help them identify issues and improve their performance. Performance appraisals aim to help employees identify and improve their performance. An assessment of performance is related to the type of enterprise activity and linked to the end-user.

Performance expresses the firm's ability to achieve its goals, obtain satisfaction beneficiaries, and carry out moral and social responsibilities towards society. The managerial thought indicates that if the organization cannot measure its activity, it cannot control it in light of the diversity of variables affecting the performance of different types of institutions. The trend towards adopting modern methods for measuring and evaluating performance while seeking to formulate a set of performance indicators that express the outcomes and outputs must be achieved.

Establishments use a variety of methods to measure the performance of employees, including budgeting and financial ratios, which are considered traditional methods for measuring financial indicators only. In the modern era, there is an interest in measuring non-financial indicators. Non-financial indicators are used as performance measures for achieving effectiveness across the entire organization (Lee & Yang, 2011). Many researchers have confirmed that institutions can use non-financial indicators as performance measures to achieve long-term success. (Smith & Wright, 2004), (Banker et al., 2005; Hoque, 2005).

The Balanced Scorecard has led to an increasing trend towards evaluation methods derived from strategies directed to continuous development and improvement processes. (Philbin, 2011) This method is distinguished by finding a framework that can strike a balance between strategies and operations and the presence of effective measures frameworks.

A modern method for evaluating financial and non-financial performance has emerged with developments, known as the BSC. Studies Kaplan and Norton (2005) explain the use of the (BSC) to measure performance. The BSC was used in all countries to measure financial and non-financial performance. Because the balanced scorecard links between cause and effect. This study focuses on the non-financial dimensions of the BSC and its impact on performance evaluation. The main question of the study represented the problem statement of the study. The main question was: Is there an effect of the non-financial dimension of the BSC on performance evaluation? Divide the main question into the following

sub-questions: Is there an effect of the customer's dimension on performance evaluation? Does the growth and learning dimension affect performance evaluation? Is the internal process dimension affects performance evaluation?

2. Literature Review

2.1. Performance Evaluation & BSC

There is great importance for performance appraisal in organizations, especially those facing continuous environmental changes. The importance of performance evaluation is to provide information that helps adopt the strategy on an ongoing basis in the face of continuous environmental change, which reflects on improving competitiveness. In that context, organizations must prepare a strong ground for building performance measurement and evaluation systems; these systems are widespread. Performance evaluation is the process of comparing current and past performance to standard performance (Varkkey & Dessler, 2018).

The balanced performance appraisal system is a strategic measure that manages the performance of the organization in light of the goals and strategies set through a digital information system and graphs that express the level of performance (Seminogovas & Rupšys, 2006).

Balanced Scorecard

In 1992, through Kaplan and Norton, this balanced scorecard was presented by Creating comprehensive and balanced performance evaluation models, based on a set of financial and non-financial, which express the basic and important factors that help an organization to achieve success. The new balanced scorecard, whose elements are designed to complement each other in expressing the current and future perspective of the organization by translating the organization's vision and strategy into balanced goals and procedures that describe how to achieve the organization's strategy. The Balanced Scorecard (BSC) is a performance measurement method focusing on measuring financial and non-financial performance.

The balanced scorecard was defined by Banabakova and Georgiev (2018): as a practical tool to help organizations implement and evaluate their business strategy. The card directs the organization's efforts towards critical analysis of the future and its connection with the content of the ideal in the sector. He also said that the idea of the balanced scorecard is based on forming an innovation system to measure the activities of organizations.

MacKay et al. (2020) define the balanced scorecard as a strategic performance measurement model whose purpose is to help managers translate the mission and vision of institutions into functional plans and activities. It also helps provide information on the strategic performance of the institution associated with its strategy, assisting in the feedback and learning process, looking at the organization's strategy through four dimensions: financial dimension, customer dimension, internal processes dimension, learning & growth dimension.

The Balanced Scorecard has four dimensions: the financial dimension, customers and internal processes, growth, and (Kaplan & Norton, 1996). The Balanced Scorecard helps the organization achieve a balance in the final performance measurement, behavioral orientation, and performance results for all individuals towards the goals (Kaplan & Norton, 1996). the balanced scorecard is divided into the following dimensions (Taylor & Baines, 2012).

2.1.1. Financial Dimension

This dimension focuses on meeting the needs of shareholders. Does the organization achieve an appropriate return on investment? And does it increase the organization's value in the market, which leads to an increase in shareholders' wealth? The results are measured using indicators related to profits, cash flows, return on investments, stock market price, and earnings per share (Chow et al., 1997). The financial dimension shows the measurement of traditional accounts, asset numbers, expectations of increasing profits, and earnings per share forecast. The BSC approach begins with financial goals, the motive force for the process of creating value in the distant future. There are additional measures in the BSC model in finance, like the revenue from the company's operations, increased economic value, and profits from equity and borrowed capital. The goal of add value to customers, expanding revenue generation from opportunities (Kaplan and Norton, 1996). In a BSC, the financial goal must be related to the firm's strategy that embodies the financial outcomes strategies: revenue, income, total assets, and outstanding debt. Financial performance measures how well the organization uses assets to generate revenue. It is also considered a general measure of the organization's financial soundness. Many financial measures include total revenue, net assets, diversification of income sources, and reduction cost (Raval et al., 2019).

2.1.2. Customer Dimension

The organization needs to direct its attention to meeting the needs and desires of its customers because it is these customers who pay money to cover costs and make profits in organizations. This dimension enables the development of indicators that reflect the position of the customer to the organization, such as customer satisfaction and degree of loyalty to the organization, the ability to retain the customer, the ability to attract the customer, and customer profitability (Kaplan & Norton, 1996). BSC emphasizes a relationship between final goods and services and customer satisfaction with those goods and services. Adding value is the attributes of products and services that satisfy customers. Many organizations are customer-focused. Therefore, measuring the organization's performance from customers' perspectives has become a necessity for the organization's management (Kaplan & Norton, 1996). The primary metrics for measuring customer satisfaction are the organization's market share, customer attraction, retention, value addition, and satisfaction. Measurement indicators, where the customer is the standard, measure the relationship between customer satisfaction and the operational results of the organization (Kaplan & Norton, 1996). The customer dimension describes the value an organization adds to achieve customer requirements (Jensen, 2001; Pham et al., 2020). Customer satisfaction is essential for every organization. Performance measures to help identify information that helps in knowing customers, how to use it to promote more effectively, and how to win business from competitors, thus achieving significant growth for the organization. Among the metrics that can be used to evaluate the objectives of this dimension: are growth in the number of customers or partners, the average duration of the relationship with the customer, customer loyalty, and customer profitability (Raval et al., 2019).

2.1.3. Internal Operations Dimension

This dimension works to achieve the objectives of both the financial dimension and the customer dimension for both the client and the shareholders. It includes the value chain of the organization's internal operations as a whole, which aims to meet the client's current and future requirements and develop and find the necessary solutions to achieve these needs. Includes measures to achieve this, such as the percentages of defective products and the cost of the warranty period (Lipe & Salterio, 2000). There is a set of performance measures for the customer dimension as mentioned by (Niven, 2008):

- A. Number of existing clients, the number of client meetings held, and percentage of target clients who buy products and services. Through these metrics, the goal of customer understanding can be measured.
- B. The amount allocated to research and development in the budget, the number of teams to develop services, the number of services in preparation, the revenue from new services. These metrics can measure the goal of continuous innovation.
- C. Number of service defects, customer complaints, and rework. Through these metrics, the quality goal can be measured.

2.1.4. Learning and Growth Dimension

This dimension is concerned with determining how the organization can continuously make its capabilities for change and development. For this reason, it includes indicators that show the level of learning and growth in the organization, such as are their improvements made to the products, and are there development in the procedures followed in production? Learning and growth perspective measures are factors that feed effective processes. To develop effective measures in this perspective, the three areas of capital must be considered: human, informational, and organizational (Raval et al., 2019). Examples of metrics that can be used to measure the objectives of the growth and learning dimension are: knowledge management, efficiency coverage ratio, absenteeism, value-added per employee, hours of training, and employee productivity (Niven, 2014).

(Brown & McDonnell, 1995) added dimensions such as the environmental dimension and the social dimension. These dimensions were included in the internal operations dimension, depending on the organisation's basic aspects and strategy.

The (Kaplan & Norton, 2005) study is the first study that presented the BSC method (the real birth of the BSC). They clarified the importance of non-financial performance measures in addition to the financial measures, which contribute to measuring and evaluating the organisation's performance and comparison with the objective's strategy. The study raised the following questions: How do customers view us? (Customer dimension). Shall we continue to improve and create value? (The dimension of growth and innovation). What should we excel in? (Internal operations dimensions. How does the shareholder view us? (Financial dimension). The study concluded by presenting the main dimensions of the BSC method, which are the financial dimension, which expresses the achievement of the success of financial indicators, continuity, and profitability towards shareholders and customers. It seeks to gain customer satisfaction and improve the relationship with them in the long term through internal operations. It expresses the organization's ability to follow modern systems, provide high-quality services and products with learning and growth, and express the organization's achievement of excellence through the human element and the extent of their satisfaction and belonging to the organization to raise the efficiency of performance and excellence of the organization.

Kaplan and Norton (2001) discuss how the BSC method, which has become more widespread and is widely applied by manufacturing and service companies, nonprofit organizations, and government institutions around the world since its inception in 1992. The researchers

emphasized that the reason behind this is the relationship between the BSC method and the organization's strategy, as it presents Cause-and-effect links that define relationships between performance measures. And the interest of the points card in an important dimension nowadays, which is the intangible assets, as it has become an essential source to achieve competitive advantages, and these include relationships with the customer, innovative services and products, and high—quality skills, knowledge, and information technology.

The (Quesado et al., 2018) study aimed to recognize the advantages of applying the BSC. One of the essential advantages of using BSC is that it is more of a method than a performance appraisal but is directly related to the institution's strategy. Braam and Nijssen (2004) state that the BSC does not automatically improve companies' performance unless its dimensions are used optimally. A low strategy is developed using the balanced scorecard if the use is not optimal.

The (Wake, 2015) study indicates that the Balanced card performance is an evaluation methodology that achieves harmony between strategic objectives and standards and performance indicators while achieving several advantages in conducting the evaluation process, the most important of which is accuracy, Inclusion, diversity, and integration. (Wang et al., 2013) the paper discussed the BSC method as a mechanism facilitated and let the managers achieve their strategic goals and develop fuzzy systems to evaluate functions existing in their aimed management systems., this paper aimed to create a plan to evaluate procedures to use ambiguous language to model managers' minds to access information and data. Such studies can help organizations assess their strategies and adopt a modern management approach in their daily task.

In Britain in 1985, the idea of creating a relationship between the performance of the teaching staff and the return to improving education through teacher performance management appeared. 1n (1998) The United States developed a method for evaluating performance that includes 13 indicators in four aspects: capital (financial, physical, human, and informational) (Zhao et al., 2020a). Alomiri et al. (2019) discuss the adoption of the BSC in service companies in the Kingdom of Saudi Arabia. The paper concluded a relationship between applied the balanced scorecard, competitive advantage, and the applied total quality management approach. These potential explanatory factors give direction for further research. The (Bahia et al., 2019) study aimed to throw light on the role of the BSC in the development of organizational performance through the adoption of financial and non-financial measures to evaluate organizational performance. Another study concluded that: an increase in the (Balanced Scorecard) by one unit leads to a rise in (organizational performance at organizations) by (0.89).

According to Zhao (2020a), private universities in China evaluated performance by the BSC, a systematic method to assess performance by relating it to higher education strategies in China and health improvement in universities. The (Kedzierska-Bujak, 2021) paper aimed to clarify the selected topics about the Balanced Scorecard and its importance for Polish universities in performance evaluation. This paper concluded that the current model of universities administration does not help employees develop their performance and neglects the aspirations of employees. It stated that the BSC is suitable for evaluating performance in universities. The (Benková et al., 2020) paper aimed to confirm the importance of using the non-financial factors in business management using the balanced scorecard methodology. The study concluded a link between the BSC and non-financial performance indicators. (Sutherland, 2000) reported that the University of Southern California used the Balanced Scorecard to evaluate its academic programs.

Bremser & White (2000) designed the Bachelor of Accounting curriculum through the BSC. Philbi (2011) examined how to use the BSC in evaluating the performance of universities; the study clarified the administration could use the financial and non-financial dimensions to improve the management of universities by adding real benefits to stakeholders. The paper discussed how the balanced scorecard could be modified to evaluate performance.

Several previous studies dealt with performance evaluation in the education sector, the most important of which are: The (Karathanos & Karathanos, 2005) in building an objective system for performance appraisal, which showed the similarities and differences between the use of the balanced scorecard in the business sector and its use in the education sector, and the (Al-Zwyalif, 2012) study which aimed to show the suitability of the balanced scorecard for educational institutions, and the (Brown, 2012) study which presented the basic principles of the balanced scorecard and the extent to which they achieve a balance between the various elements of performance in evaluating the use of the balanced scorecard in the sector of nonprofit organizations, especially higher education institutions.

The results of Pham et al. (2020) study showed that the performance in public hospitals in Vietnam is positively affected by the dimensions of the balanced scorecard, where the internal processes revealed the most important influence, then the financial dimension, the client dimension, and finally the internal operations dimension. (Kornelius et al., 2021) study dealt with the performance of companies from the perspective of strategic planning, revealed that the dimensions of the balanced scorecard (financial, customers,

internal operations, learning, and growth) contribute positively to the performance of oil and gas companies in Indonesia.

2.2. Hypotheses

The (Gerui, (2008 study raised these questions: What reasons lead to the unwillingness to use non-financial measures in performance evaluation? Is there a link between assessors and assessment of the BSC from the point of view of individuals? The study concluded that linking the viewpoint of superiors and subordinates to the BSC leads to a significant change in the performance evaluation system, specifically in the use of financial and non-financial performance measures together to achieve evaluation effectiveness. It is essential to understand the link or link between the various levels of the BSC as a resident.

Nippak et al. (2016) described BSC and evaluation process design in a Canadian hospital. The establishment of the BSC for health information management included planning, developing, implementing, and evaluating the indicators within the BSC. The manuscript concluded that a balanced scorecard is a helpful tool in evaluating performance indicators in the hospital.

According to Patro (2016), higher education uses educational standards that do not reflect the current status of the higher institution. Nor does it determine the success factors of the educational institution. The BSC can remove the obstacles facing higher education institutions regarding performance evaluation. The study stated a difference between academic institutions and business institutions regarding performance indicators used in the BSC.

The result of (Anggadini et al., 2021) study showed that: the performance of coffee exporting companies in Kintamani, Bali, is positively affected by a customer, which is one of the dimensions of the non-financial balanced scorecard.

Hindrikes and Karlsson (2006) Identified seven indicators of the customer dimension. Although the satisfaction studies were specific, their results could not be generalized and used by other organizations and recommended that the BSC be sufficiently modified to suit organizations seeking to achieve customer satisfaction.

The study conducted by (Pham et al., 2020), through quantitative research, showed the performance of organizations is positively affected by the dimensions of BSC (customer, internal processes, learning, and growth, and financial).

The literature review results identified the primary hypothesis: The non-financial dimension has a statistical effect on performance evaluation at the College of Sciences and Humanities in Aflaj - Prince Sattam bin Abdulaziz University. to verify the primary hypothesis, the following sub-hypotheses were formulated:

H1: the growth and learning dimensions have a statistical effect on performance evaluation.

H2: The internal processes dimension has a statistical effect on performance evaluation.

H3: The customer dimension has a statistical effect on performance evaluation.

3. Research Methods and Material

The study sample consists of faculty, administrators, and staff members at the College of Science and Human Studies at Prince Sattam bin Abdulaziz University. The researchers sent the questionnaire to the study sample (faculty members, administrators, and employees) at the College of Science and Humanities Studies to answer his questions after specialists in accounting and business administration ascertained its validity.

A questionnaire was used to collect data for the study. A total of 120 questionnaires were distributed, out of which 112 were returned with replies. The questionnaire included three independent variables (the customer dimension, the internal operations dimension, and growth and learning dimension). A dependent variable (performance evaluation), The questionnaire was designed according to the Likert scale. The independent variables were based on (Kaplan & Norton, 2005; Hindrikes & Karlsson, 2006; Zhao et al., 2020a) studies. Performance indicators measured the dependent variable at Prince Sattam bin Abdulaziz University. Performance indicators measured the dependent variable at Prince Sattam bin Abdulaziz University (https://ddq.psau. edu.sa/ar/node/6994). Most respondents were faculty members with 60%, then employees with 32%, and administrators with 8%. The results of the statistical analysis of the variable of work experience showed the following: The respondent's category between six and ten years represented (51%), the category of respondents less than five years represented (35%), and the category of respondents with more than ten years of experience (14%).

3.1. Data Analysis

The researchers used several statistical methods: Spss 26 and Amos 24 software to analyze questionnaire data, through which the personal data of the study sample were analyzed; through descriptive statistics (frequencies and percentages) and Exploratory factor analysis (EFA), the loaded phrases on the latent variables; confirmatory factor

analysis (CFA) to confirm the validity of the exploratory analysis results, and structural equation modeling. (SEM) was used to determine the effect of independent variables on the dependent variable.

4. Results and Discussion

4.1. Exploratory Factor Analysis

Exploratory factor analysis (EFA) identifies latent variables and loads each latent variable with a set of questionnaire statements. The researchers concluded that the questionnaire phrases loaded to latent factors by more than 70%. Where the first latent variable (performance evaluation) is loaded with six phrases, the second latent variable (customer dimension) is loaded with three phrases, and the third latent variable (learning& growth) is loaded with three phrases. The last latent variable (internal processes) is loaded with three phrases. Tables 1, 2, and 3 below show that the KMO test value equals 0.824. the measure is appropriate if the KMO is greater than 0.60 (Hair et al., 1998), where the extracted value turns out to be greater than the specified value. Thus, the sample size is compatible with the study.

4.2. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is used to ensure the plausibility of factor structure resulting from the EFA. After the tests, it was confirmed that 15 indicators were loaded on four latent variables (C.U., I.P., L&G, PE) with greater than 0.70, as displayed in Figure 1. This model only considered relationships between indicators and constructs, assuming covariance between latent variables (Anderson & Gerbing, 1988). and the finding of CFA showed the quality of relevant measures with values close to those indicated (CFI = 0.963, RMSEA = 0.072) by Hair et al. 1998; (Netemeyer et al., 2003), who suggested CFI ≥ 0.90 and RMSEA 0.06 or 0.08. (Hu & Bentler, 1999) suggested CFI > 0.95 and SRMR < 0.08 or < 0.06. and Table 3 shows model fit measures; this table is extracted from the statistical analysis software by Spss (amos) V. 24.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.824	
Bartlett's Test of Sphericity	Approx. Chi-Square	1670.856	
	df	105	
	Sig.	0.000	

Table 2: Rotated Component Matrix

Pleases		Components				
Phrases	Code PE		CU	L&G	IP	
The number of students for the administrative body is appropriate	P E1	0.922				
The students evaluated the courses	P E2	0.899				
There is much research published in refereed scientific journals for each faculty member	P E6	0.874				
Faculty members complete courses	P E3	0.862				
Specialists from outside the college evaluated the programs	P E4	0.858				
Many faculty members hold a Ph.D.	P E5	0.837				
The number of educational programs we offer students has evolved	C U1		0.856			
Our training courses for the community have improved	C U3		0.822			
The number of students community we serve has increased	C U2		0.821			
My organization has set performance indicators	L&G1			0.950		
My job gives me the motivation to achieve	L&G2			0.945		
My institution provides continuous training	L&G3			0.937		
My institution provides high-quality educational programs	I P1				0.836	
My organization is interested in continuing to improve the quality of educational services	I P2				0.790	
My organization contributes to the development of policies and laws for educational services	IP3				0.798	

Table 3: Model Fit Measures

Measure	Estimate	Threshold	Interpretation
CMIN	128.766	_	_
DF	82.000	_	_
CMIN/DF	1.570	Between 1 and 3	Excellent
CFI	0.963	>0.95	Excellent
RMSEA	0.072	<0.06	Acceptable
PClose	0.073	>0.05	Excellent

4.3. Hypotheses Tests

Structural equation modeling (SEM) was used to test the hypotheses, specifically the (path analysis) method, one of the structural equation modeling methods, as shown in Figure 2 and Table 4. The study discovered that:

There is a statistical effect at significance level 0.01 for customer dimension (C.U.) on the performance evaluation, which confirms the acceptance the (H3); this finding is similar to the study by Nippak et al. (2016), who concluded that a Balanced Scorecard is a helpful tool in assessing performance indicators in a hospital. Similar results were

found in the study by (Pham et al., 2020), which showed that the performance of organizations is positively affected by the dimensions of BSC (customer, internal processes, learning, growth, and finance).

There is a statistical effect at significance level 0.05 for internal processes dimension (I.P.) on the performance evaluation, which confirms the acceptance the (H2); this result is similar to the study (Brown, 2012), which showed that the use of the dimensions of the balanced scorecard in higher education institutions contributes to the evaluation of performance.

There was no statistical effect at significance level 0.05 of the dimension of learning and growth (L&G) on performance evaluation, indicating a rejection the (H1); this result varies with the Nippak et al. 2016; Pham, VU, PHAM, and V.U. 2020; Brown, C, 2012) study.

5. Conclusion

The study provided a scientific addition by searching for the effect of applying the non-financial dimensions of the balanced scorecard on performance evaluation. The study was conducted in 2021–2022 in one of the colleges of Prince Sattam bin Abdulaziz University, which is one of the nonprofit institutions. The study

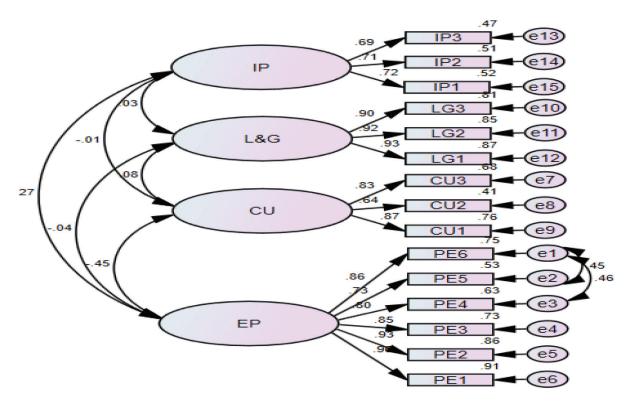


Figure 1: Confirmatory Factor Analysis

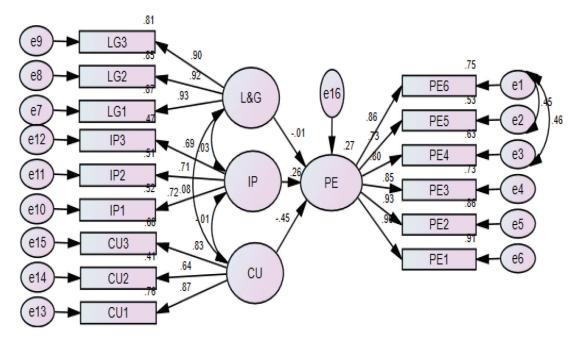


Figure 2: Structural Equation Modelling

Table 4: Regression Weights

Hypothesis	Unstandardized Estimates	C.R. <i>t</i> -value	<i>P</i> -value	Hypothesis Supported?
H1 Performance Evaluation ← Learning & Growth	-0.01	-0.125	0.90	No
H2 Performance Evaluation ← Internal Processes	0.24	2.511	0.01**	Yes
H3 Performance Evaluation ← Customer	-0.35	-4.390	***	Yes

Note **, p-value < 0.05; ***, p-value < 0.001. Significant at the 0.05 level.

found ten non-financial indicators used to evaluate the university's performance. These indicators include number of students for the administrative staff, the number of students who have evaluated courses, research published in scientific journals for each faculty member, the faculty members who have completed the courses, the number of specialists from outside the college who have evaluated the programs and the number of faculty members holding a PhD. The study concluded that there is an effect of customers and internal processes, and noneffect of learning and growth, on performance evaluation. This allows to know the reasons for the lack of influence of G&L on performance evaluation at the university. The study was limited only to the non-financial dimensions of the balanced scorecard, given that the study area is a nonprofit institution, where the financial dimension was excluded from the study. This study was also limited to the College of Sciences and Human Studies at Prince Sattam bin Abdulaziz University. Therefore, cannot be generalized, the results of this study. Based on these determinants, the researchers recommend conducting comprehensive studies on the balanced scorecard and performance evaluation for all faculties of Prince Sattam bin Abdulaziz University and giving employees training courses on the balanced scorecard as a method for evaluating their performance.

References

- Alomiri, M., Alroqy, F., & Alomiri, M. (2019). Factors Influencing the Adoption of balanced scorecard in the Saudi Arabia services sector. *In Alexandria Journal of Accounting Research*, 3(1), 1–46.
- Al-Zwyalif, I. M. (2012). The possibility of implementing balanced scorecard in jordanian private universities. *International Business Research*, 5(11), 113–120. https://doi.org/10.5539/ibr. v5n11p113
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin, 103(3), 411. https://doi. org/10.1037/0033-2909.103.3.411
- Anggadini, S. D., Surtikanti, S., Saepudin, A., & Saleh, D. S. (2021). Business performance and implementation of total

- quality management: A case study in indonesia. *The Journal of Asian Finance, Economics and Business*, 8(5), 1039–1046. https://doi.org/10.13106/jafeb.2021.vol8.no5.1039
- Bahiaa, T. H. A., Ahmedb, H. H., & Raheem, A. (2020). The role of the balanced scorecard in improving organizational performance: Field study in al-diwaniyah textile factory. *International Journal* of *Innovation, Creativity and Change*, 10(10), 388–414.
- Banabakova, V., & Georgiev, M. (2018). The role of the Balanced Scorecard as a tool of strategic management and control. IJASOS-International E-Journal of Advances in Social Sciences, 4(10), 84–99.
- Banker, R. D., Potter, G., & Srinivasan, D. (2005). Association of non-financial performance measures with the financial performance of a lodging chain. *Cornell Hotel and Restaurant Administration Quarterly*, 46(4), 394–412. https://doi.org/10.1177/0010880405275597
- Benková, E., Gallo, P., Balogová, B., & Nemec, J. (2020). Factors affecting the use of balanced scorecard in measuring company performance. *Sustainability*, 12(3), 1178. https://doi. org/10.3390/su12031178
- Braam, G. J. M., & Nijssen, E. J. (2004). Performance effects of using the Balanced Scorecard: A note on the Dutch experience. *Long Range Planning*, *37*(4), 335–349. https://doi.org/10.1016/j.lrp.2004.04.007
- Bremser, W.G., & White, L.F. (2000). An experiential approach to learning about the balanced scorecard. *Journal of Accounting Education*, *18*(3), 241–255. https://doi.org/10.1016/S0748-5751(00)00016-6
- Brown, C. (2012). Application of the balanced scorecard in higher education: Opportunities and challenges. *Planning for Higher Education*, 40(4), 40.
- Brown, J. B., & McDonnell, B. (1995). The balanced scorecard: Short-term guest or long-term resident? *International Journal of Contemporary Hospitality Management*, 7(2), 7–11. https://doi.org/10.1108/09596119510146751
- Chow, C. W., Haddad, K. M., & Williamson, J. E. (1997). Applying the balanced scorecard to small companies. *Strategic Finance*, 79(2), 21–27.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (1998). *Multivariate Data Analysi*. Upper Saddle River, NJ: Prentice-Hall.
- Hindrikes, E., & Karlsson, J. (2006). Understanding Stakeholder Satisfaction and Balanced Scorecards within a Dispute Resolution Organisation.

- Hoque, Z. (2005). Linking environmental uncertainty to non-financial performance measures and performance: A research note. *The British Accounting Review*, 37(4), 471–481. https://doi.org/10.1016/j.bar.2005.08.003
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling: A Multidisciplinary Journal, 6(1), 1–55.
- Isoraite, M. (2008). The balanced scorecard method: From theory to practice. *Intelektine Ekonomika*, 1.
- Kaplan, R. S., & Norton, D. P. (1996). Using the Balanced Scorecard as a Strategic Management System.
- Kaplan, R. S., & Norton, D. P. (2001). Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I. Accounting Horizons, 15(1), 87–104.
- Kaplan, R. S., & Norton, D. P. (2005). The balanced scorecard: Measures that drive performance. *Harvard Business Review*, 83(7), 172.
- Karathanos, D., & Karathanos, P. (2005). Applying the balanced scorecard to education. *Journal of Education for Business*, 80(4), 222–230.
- Kedzierska-Bujak, I. (2021). Usefulness of the Total Performance Scorecard for university -Selected issues. *Procedia Computer Science*, 192, 4169–4177. https://doi.org/10.1016/j.procs.2021. 09.192
- Kornelius, H., Supratikno, H., Bernarto, I., & Widjaja, A. W. (2021). Strategic planning and firm performance: The mediating role of strategic maneuverability. *The Journal of Asian Finance, Economics, and Business*, 8(1), 479–486. https://doi.org/ 10.13106/jafeb
- Lee, C., & Yang, H. (2011). Organization structure, competition and performance measurement systems and their joint effects on performance. *Management Accounting Research*, 22(2), 84–104. https://doi.org/10.1016/j.mar.2010.10.003
- Lin, Q. L., Liu, L., Liu, H. C., & Wang, D. J. (2013). Integrating hierarchical balanced scorecard with fuzzy linguistic for evaluating operating room performance in hospitals. *Expert Systems with Applications*, 40(6), 1917–1924. https://doi.org/ 10.1016/j.eswa.2012.10.007
- Lipe, M. G., & Salterio, S. E. (2000). The balanced scorecard: Judgmental effects of common and unique performance measures. *The Accounting Review (july)*, 75(3), 283–298. https://doi.org/10.2308/accr.2000.75.3.283
- MacKay, B., Arevuo, M., Meadows, M., & Mackay, D. (2020). Strategy: Theory, Practice, Implementation. Oxford University Press, USA.
- Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). Scaling procedures: Issues and applications. Sage Publications. https:// doi.org/10.4135/9781412985772
- Nippak, P. M. D., Veracion, J. I., Muia, M., Ikeda-Douglas, C. J., & Isaac, W. W. (2016). Designing and evaluating a balanced scorecard for a health information management

- department in a Canadian urban non-teaching hospital. Health Informatics Journal, 22(2), 120–139. https://doi.org/ 10.1177/1460458214537005
- Niven, P. R. (2008). Balanced scorecard: Step-by-step for government and nonprofit agencies. John Wiley & Sons.
- Niven, P. R. (2014). Balanced scorecard evolution: A dynamic approach to strategy execution. John Wiley & Sons.
- Patro, A. (2016). Using Balance scorecard in educational institutions. *International Journal of Business and Management Invention*, 5(11), 70–77.
- Pham, C. D., Vu, S. T., Pham, Y. T. K., & Vu, N. T. (2020). Evaluating performance of Vietnamese public hospitals based on balanced scorecard. *Journal of Asian Finance, Economics and Business*, 7(6), 339–349. https://doi.org/10.13106/jafeb.2020. vol7.no6.339
- Philbin, S. P. (2011). Design and implementation of the Balanced Scorecard at a university institute. *Measuring Business Excellence*. 15(3), 34–45. https://doi.org/10.1108/13683041111161148
- Quesado, P. R., Aibar Guzmán, B., & Lima Rodrigues, L. (2018). Advantages and contributions in the balanced scorecard implementation. *Intangible Capital*, 14(1), 186–201. https://doi.org/10.3926/ic.1110
- Raval, S. J., Kant, R., & Shankar, R. (2019). Benchmarking the Lean Six Sigma performance measures: a balanced score card approach. *Benchmarking: An International Journal*, 26(6), 1921–1947. https://doi.org/10.1108/BIJ-06-2018-0160
- Seminogovas, B., & Rupšys, R. (2006). Creating strategy maps for internal audit activity in the context of BSC. Management of Organizations: Systematic Research, 39, 215–277.
- Smith, R. E., & Wright, W. F. (2004). Determinants of customer loyalty and financial performance. *Journal of Management Accounting Research*, 16(1), 183–205. https://doi.org/10.2308/jmar.2004.16.1.183
- Sutherland, T. (2000). Designing and implementing an academic scorecard. *Accounting Education News*, *15*, 11–15.
- Taylor, J., & Baines, C. (2012). Performance management in U.K. universities: implementing the Balanced Scorecard. *Journal of Higher Education Policy and Management*, 34(2), 111–124. https://doi.org/10.1080/1360080X. 2012.662737
- Varkkey, B., & Dessler, G. (2018). Human resource management 15th Ed.
- Wake, N. J. (2015). The use of the balanced scorecard to measure knowledge work. *International Journal of Productivity and Performance Management*, 64(4), 590–602. https://doi.org/ 10.1108/IJPPM-08-2012-0091
- Zhao, Y., Zhang, A., Li, X., & Wang, X. (2020a). Construction of a performance evaluation system for private higher education institutions in china based on balanced scorecard. The International Journal of Electrical Engineering & Education, 0020720920930347