Balanced Scorecard to Attain Strategic Goal in the Manufacturing Industries in Kailali, District

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Abstract

Balance Scorecard (BSC) is an emergent strategic management accounting technique that supports in making strategic planning and performances evaluation. This study's primary objective is to assess decision makers' familiarity with BSC and the extent of application by the managers to achieve their organizational strategic goals. The study used a descriptive and causal comparative research design. Primary data were collected through a structured 5 points likert scale questionnaire and 26 manufacturing companies in the Kailali district having higher annual turnover ware taken as sample using convenience sampling technique. The findings show that four dimensions of BSC (learning & growth, internal business process, Customer perspective and financial growth) have moderate correlation with each other. Decision makers are supposed to be familiar with BSC dimensions but overall impact of BSC- dimensions and their implication in the industries to attain strategic efficiency and effectiveness is insignificant. Decision-makers in all types of business organizations can be benefited from knowing the implications of BSC-dimensions. The strategic management accounting (SMA) community places a high priority on managerial staff members' understanding about BSC.

Keywords: Balance Scorecard, BSC-Dimensions, Strategic effectiveness and efficiency, learning and growth

Introduction

Background

The Balanced Scorecard (BSC) was propounded by Robert Kaplan and David Norton in the early 1990s.This is a strategic management tool and performance evaluation metrics that allow organizations to translate their vision and strategy into a coherent set for performance evaluation (Kaplan & Norton, 1992). Unlike traditional performance measurement systems that focus solely on financial metrics, the BSC incorporates four perspectives: financial, customer, internal business processes, and learning and growth. This comprehensive approach ensures a balanced view of organizational performance and helps to align business activities in the direction of accomplishment of vision and strategy of the organization, also improves internal and external communications, and monitor organizational performances that are against strategic goals (Kaplan & Norton, 1996).

In the manufacturing industry, where competition is fierce and customer preferences are constantly evolving, the application of the BSC can provide significant benefits. By integrating financial and non-financial performance measures, manufacturing businesses can gain a holistic understanding of their operations, enhance decision-making, and improve strategic management (Marr, 2012). For instance,

the customer perspective can help manufacturing companies to understand and respond to consumer needs and preferences. Finally, the internal business process perspective can streamline operations and improve profitability and business efficiency (Kaplan & Norton, 2001).

In the context of Kailali District, a region with a growing manufacturing industry, the adoption of the BSC can be practically advantageous. It can assist local manufacturing businesses to have survival and thrive in a competitive market by providing a structured approach for performance measurement. For examining the utilization of the BSC in this specific geographical and industrial context, this research aims to highlight the practical applications and benefits of the BSC, offering insights that can be applied to similar settings globally.

The SMA approach is not only related to accumulate the accounting information, but also to planning, controlling, and implementing business strategies. Investment decision making in tangible as well as intangible assets is one of the tasks of seeking farsightedness in uncertainty. In order to become more strategic, competitive, and forward-looking, managers seek and evaluate different aspects of the company. One of the most important SMAT is Balance scorecard (BSC) with its four dimensions to have influential role to make organization more effective, goal- oriented and sustainable.

BSC is an emerging strategic management accounting technique that is propounded by (Kaplan & Norton, 1992). This SMAT- BSC is knowingly or unknowingly applied by all the organizations at different extent. But, the decision makers and accounts/finance officers of the companies might have understanding about the BSC or not, it depends upon their academic background and education level. There is no study has been conducted to explore the extent of application of BSC and its four dimensions in the selected manufacturing industry of Kailali. This research study has been focused to explain the practice of SMAT-BSC and its theme. To determine whether or not the SMAT-BSC is applied in the selected major Manufacturing industries of the Kailali district. This is the prime concern and problem of this research and expressions of problems are in the following questions:

a) Do the business managers and accounting department's officers of selected manufacturing industries of Kailali imply the SMAT-BSC equally?

b) Are all dimensions of BSC equally applied by selected Manufacturing industries of Kailali?

c) Does SMAT-BSC truly helpful to attain strategic efficiency and effectiveness of the Selected Manufacturing industries of Kailali?

Research study has aimed to show the practice of BSC techniques and their overall impact for achievement of strategic efficiency and effectiveness in selected manufacturing industries of Kailali.

a. To explore how familiar managers and accounting staff are with SMAT-BSC of the selected manufacturing industry of Kailali

b. To examine the practices of BSC technique in the selected manufacturing industry of Kailali

c. To assess the impact of SMA techniques for achievement of strategic efficiency and effectiveness in selected manufacturing industries of Kailali

The study needs to satisfy the following hypothesis formulated to explore the findings against the pre-determined objectives:

H1: The decision makers of the manufacturing industries of Kailli district are Familiar with theme of BSC

H2: There is significant impact of BSC-dimensions on attaining Strategic efficiency and effectiveness.

Review of literature

Monden (1995) has described the target costing as tool for a new product to yield the target profit necessary over the medium to long term given the current market conditions, it is necessary to: (1) plan products with customer-pleasing quality; (2) determine target costs (including target investment costs); and (3) come up with ways to make the product design achieve target costs while also satisfying customer needs for quality and prompt delivery. This process is known as target costing.

Coskun (2002) has emphasized in his research that the strategic role of target costing is to enhance cost management practices and driving profitability in organizations. Target costing encourages cross-functional collaboration between design, engineering, and finance teams to optimize product costs and enhance overall value for customers.

According to Milis and Mercken (2003) in their research work, the findings highlighted the application of a multi-layer evaluation process or a balanced scorecard (BSC) approach for the appraisal of major ICT investment projects to mitigate weaknesses of traditional techniques

In order to assess the effectiveness of the Nepal Electricity Authority's (NEA) benchmarking policy, Jha, Yorino, and Zoka (2008) used Data Envelopment Analysis (DEA) to evaluate the performance of the generation and distribution systems of various units. The findings state that decision making units (DMUs) using benchmarking have higher returns and efficiency.

Goncharuk (2011),in his research paper focuses on improving the methodology for selecting optimal investment objects using benchmarking tools like nonparametric data envelopment analysis(DEA)

The study by Al-Sayyed (2015) found that modern management accounting techniques like target costing, Balanced Scorecard, and the production system on time have an impact on rationalizing decision-making in Jordanian industrial companies.

Talebnia et al. (2017) has stated through his research the implications of TC as an understanding the linkages between target costing, value engineering, expected profit, and Kaizen can help organizations to enhance their cost management strategies and overall profitability. By acknowledging the significance of factors like value engineering and Kaizen in cost management practices, organizations can continuously improve their processes and products to drive long-term success and sustainability

According to the findings explored by Putter, Eikema, de Wreede, McGrath, Sánchez-Ortega, Saccardi, & van Zwet (2022) in their research work, there was a statistically significant relationship between applying benchmarking and rationalizing administrative decisions, indicating that benchmarking can assist in decision-making for cost reduction

Kumaat, Morasa, and Suwetja (2023) also highlighted the findings in their study found that by implementing the Target Costing method, UMKM Brownice Manado was able to minimize production costs effectively. The similar findings of cost minimization and achieving desired profit through target costing adaptation have been demonstrated by numerous research studies

According to Efendi (2023) the BSC is an applicable tool and has a global adaptation, making it suitable for tailoring to the specific managerial information needs of retail, service, and financial companies.

.Wei, Josefine and De Leon (2023) has also the similar empirical evidences about BSC in context to application in public hospital of Hebei Province of Chaina.

Methodology

The study was carried out using a casual comparative and descriptive research design. All the manufacturing industries were taken as population of the study, established in Kailali District. According to the record of Kailali Chamber of industry there are 50 manufacturing industries having annual turnover one crore or above. Using the convenience sampling techniques, 26 large sized companies in and around the Dhangadhi city have been taken as sample for the study. The information needed to assess and examine the research hypothesis came from primary data. A 5-point Likert scale was used in a structured questionnaire designed to measure the "Impact of SMATs in Investment Decision Making," as used by Jbarah (2018) and Aduvaga (2020) in their studies.

 Senior accountants, finance officers, managers and BOD members were taken as respondents. SPPS-26 has drawn the descriptive and inferential facts for analyzing statistical data and information. Mean, standard deviation in descriptive and Qhi-square, correlation and multiple regression as inferential statistic have been used the statistical measures to evaluate and conclude the research objectives and to satisfy the research hypothesis.
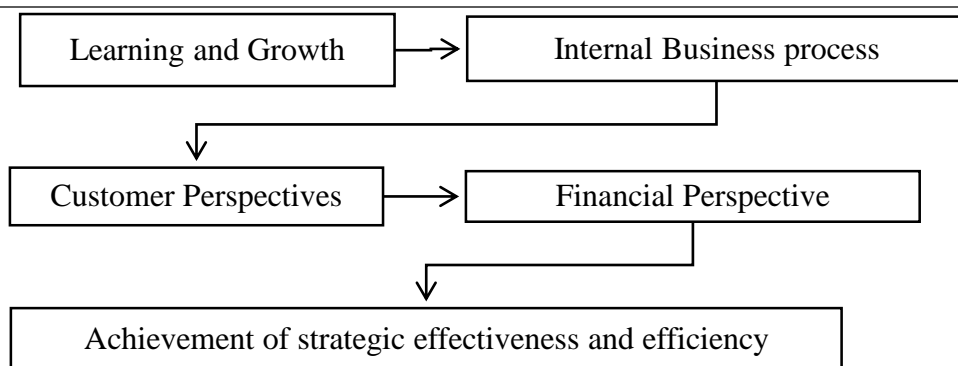
The regression model: $ASEE = \beta_0 + \beta_1 \cdot ALG + \beta_2 \cdot AIBP + \beta_3 \cdot ACM + \beta_4 \cdot AFP + \epsilon$

β_0 is the intercept.

β_1, β_2, β_3 and β_4 represent beta1, beta2, beta3, beta4 which express coefficients for the independent variables.

ϵ\epsilon ϵ represent is the error term

> Research Model

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┌──────────────────────┐      ┌──────────────────────────┐
│  Learning and Growth  │ ───> │  Internal Business process │
└──────────────────────┘      └──────────────────────────┘
           │                              │
           ▼                              │
┌──────────────────────┐      ┌──────────────────────────┐
│  Customer Perspectives │ ──> │   Financial Perspective   │
└──────────────────────┘      └──────────────────────────┘
                                          │
                                          ▼
┌─────────────────────────────────────────────────────────┐
│   Achievement of strategic effectiveness and efficiency   │
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Source: Modified and adopted framework of Najafi et al., (2009)

The research model looks at how various interrelated four BSC perspectives correlate and affect one another, as well as how they all work together to achieve organizational effectiveness and efficiency. The model is taken from Aryanegad, Lotfi, Najafi, and Ebnerasould (2009).

Balance Scorecard

Strategic benchmarking is used to enhance performance and achieve commercial success by comparing processes with industry leaders and implementing best practices. Armenian (2022) has described the process of benchmarking as an examination of the company's strengths and weaknesses. After exploring strength and weaknesses organizations can overview their resource allocation. This analysis also includes the evaluation of dependent variables, which relate to the company's capacity to adjust to shifts in the market and efficiently fulfill consumer needs. According to Balance Scorecard-BSC's philosophy, improvements in internal business processes are thought to result from learning and growth. Enhancing internal business processes helps to improve the business's customer perspective. Finally, sound customer perspective begins to improve the business's financial perspective.

Learning and Growth Perspective (L&A)

The learning and development dimension within the Balanced Scorecard (BSC) places emphasis on the enhancement of employee competencies, knowledge, and skills to facilitate innovation and continual advancement in the organizational setting. Assessing the effectiveness of training, employee contentment, and knowledge assimilation through benchmarking can aid organizations in pinpointing areas for educational interventions and advancement to elevate overall efficacy. The integration of benchmarking approaches within the learning and growth domain of BSC empowers enterprises to adjust to evolving market dynamics, enhance employee involvement, and nurture a milieu conducive to learning and creativity. The assessment and benchmarking frameworks are pivotal in gauging the influence of educational endeavors on employee performance, competency enrichment, and organizational expansion, thereby aligning educational results with strategic goals. Branko, Vajdová, Koščák, and Jenčová (2020) talk about how important it is to educate staff members and give them

opportunities to learn and grow because doing so always improves the organization's success as a whole.

Internal business Process (IBP) Perspective

The internal business process perspective within the Balanced Scorecard (BSC) framework entails the alignment of internal operations with strategic objectives to improve efficiency and effectiveness in achieving desired results. And weaknesses, and the incorporation of industry best practices to drive continuous improvement and operational excellence throughout the organization. Weerasooriya (2013) asserts in his research that the BSC's use for strategic evaluation can direct the creation of management faculties' strategic plans and push them in the direction of achieving organizational objectives through internal business process-oriented program.

Customer Perspective (CP)

The customers' perspective in the Balanced Scorecard (BSC) is centered on satisfying their expectations regarding quality, performance, and adaptability, all of which are on the rise in the current market environment. According to Prarajuli (2020) internal business process significantly increases the Banks' customer satisfaction by enhancing internal procedures and the competency and productivity of Nepalese Commercial bank employees.

Financial Perspective (FP)

The financial aspect within the framework of the balanced scorecard emphasizes conventional financial metrics such as return on investment, which may not offer a comprehensive overview of a company's performance. Within the realm of strategic project management, the financial dimension serves as a fundamental element that is assessed utilizing the Balanced Scorecard methodology. This aids in the evaluation of project outcomes in relation to financial goals and effectiveness. Advocates of the balanced scorecard approach critique the financial perspective within the system, deeming it imbalanced and constrained, as it fails to present a holistic perspective of organizational performance.

Strategic Effectiveness and Efficiency (SEE)

Strategic effectiveness and efficiency are measurable in terms of expansion of market share, augmentation of goodwill, enhancement of market presence, establishment of a strong product image, and achievement of the pre-defined objectives of the organization. Perception of respondents regarding to strategic efficiency and effectiveness were acquired through the structured questionnaire having 5 points likert scale. According to Bošković and Krstic. (2018) the combination of BSC dimensions can contribute a better comprehensive assessment of organizational efficiency by considering both financial and non-material factors.

Limitation of the Study

Following are the limitations that have not been covered by this research and results of this study may vary from the reality because of these causes:

- Only manufacturing industries of Kailali district are taken as population size.

- Only BSC-SMAT has been taken to measure the Strategic efficiency and effectiveness

- Only investment decision regarding to fixed asset and technology have been considered but investment decision in working capital management, and HR development are not considered.

- Only four SMA techniques are taken to study the impact in investment decision

Results

Table 1

Reliability test report

Variables	Value of Cronbach's Alpha	No. of Items
Financial performance perspective	.710	5
Customers perspectives	.736	5
Internal business process perspective	.787	5
Learning and Growth Perspective	.825	5
Strategic learning and Efficiency	.812	5
Overall	.804	5

Both the overall Cronbach's alpha and the Cronbach's alpha values for each independent and dependent variable are higher than what is considered acceptable. (Alpha Cronbach's >.70). According to Kilic (2016) the value of Alpha Cronbach greater than 0.70 is acceptable.

Table 2

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	d.f	Sig.	Statistic	d.f	Sig.
Average score in Strategic efficiency & effectiveness	.277	26	.000	.856	26	.002
Average of Financial growth	.239	26	.001	.823	26	.000
Average of Customer perspective	.274	26	.000	.749	26	.000
average of internal business process	.252	26	.000	.800	26	.000
Average of learning and growth	.281	26	.000	.829	26	.001

The calculated p-values ($p < 0.05$) under the Kolmogorov-Smirnov and Shapiro-Wilk tests for each variable shows that the data are normal. There is normality in distribution in data so additional tests by using this data are acceptable.

Table 3

*Responsibility in the company * Nature of organization Crosstabulation*

Count

		Nature of organization				Total
1. Responsibility in the company		Floor mill	Backery and Biscuit Factory	Dairy Industry	Others	
	BoD member	1	0	0	2	3
	Chief account /Finance officer	4	5	2	2	13
	Other managers	4	2	2	2	10
	Total	9	7	4	6	26
2 Experience of years						
	Upto 5 year	2	4	1	3	10
	5 to 10 year	7	0	2	1	10
	above 10 year	0	3	1	2	6
	Total	9	7	4	6	26
3. Academic Qualification						
	Up to +2	2	1	1	0	4
	Graduation	7	3	2	5	17
	Post-graduation and above	0	3	1	1	5
Total		9	7	4	6	26

The largest percentage of respondents' designation is account and finance officer. They are the highest at 13, followed by other officers at 10, and BOD members at a pitiful three respondents.

The respondents' tenure at their company does not appear to have been particularly lengthy. Ten respondents each have up to five and ten years of work experience. There are just six workers with more than ten years of experience. The majority of respondents have a graduation as their academic qualification. A small percentage of respondents are below and above graduates.

H1: The decision makers of the manufacturing industries of Kailli district are Familiar with the theme of BSC

Table 4

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distributions of investment in L&G, investment in IBP and investment in Customer perspective are the same.	Related-Samples Cochran's Q Test	.931	Rejection of alternative hypothesis.

Asymptotic significances are displayed. The significance level is .050.

The P-value 0.931 (p> 0.05) suggests to accept the null hypothesis. The findings show that there are no appreciable differences in decision-makers' understanding of the Balanced Scorecard (BSC) theme across Kailali's manufacturing sectors.

Table 5

*Investment in Learning & Growth(L&G) * Nature of organization Cross tabulation*

| | | Nature of organization | | | | Total |
		Floor Mill	Backery and Biscuit Factory	Dairy Industry	Others	
Investment in L&G	Yes	7	3	3	4	17
	No	2	4	1	2	9
Total		9	7	4	6	26
Investment in CP	Yes	7	4	3	4	18
	No	2	3	1	2	8
Total		9	7	4	6	26
Investment in IBP	Yes	5	6	2	5	18
	No	4	1	2	1	8
Total		9	7	4	6	26

Descriptive Statistics for familiarity of SMAT-BSC

(Source: Questionnaire Survey)

The dimensions of BSC are highly practicable. If the decision makers are aware of all four dimensions of BSC, they can lead their organization with high acceleration in support of all dimensions of BSC. Based on the data regarding decision makers' awareness of BSC dimensions, it can be observed that over 65% of them are conscious of learning and growth, customer perspective, and internal business processes. The majority of decision-makers are aware of the four dimensions of BSC-SMAT and how it can be used to improve business. Decision makers in Floor mill and Bakery & Biscuit factory have higher understanding in BSC- dimensions than in dairy and other industries of Kailali.

H1: The above statistics table proves that the most of the decision makers are familiar about the practices of BSC dimensions and their practices.

Table 6

Inferential statistics for correlation between dependent and independent variables

Correlations

	Average of L and G	Average of IBP

Average of learning and growth	Pearson Correlation	1	.815**
	Sig. (2-tailed)		.000
	N	26	26
average of internal business process	Pearson Correlation	.815**	1
	Sig. (2-tailed)	.000	
	N	26	26

**. Correlation is significant at the 0.01 level (2-tailed).

First, the relationship between the learning and growth dimension and the internal business process dimension (r = 0.81, p<0.05) is displayed while illustrating the relationships for the variables listed in the research model. Which demonstrates the close connection between these two BSC dimensions. The decision-makers' beliefs indicate that improving internal business processes will be strongly aligned with increased organizational learning and growth

Table 7

Correlations

		Average of Internal Business Pocess	Average of Customer perspective
Average of internal business process	Pearson Correlation	1	.686**
	Sig. (2-tailed)		.000
	N	26	26
Average of Customer perspective	Pearson Correlation	.686**	1
	Sig. (2-tailed)	.000	
	N	26	26

**. Correlation is significant at the 0.01 level (2-tailed).

Second, while illustrating the relationships for the variables listed in the research model, the relationship (r = 0.68, p<0.05) between the internal business process dimension and the customer dimension is shown. Which shows how these two BSC dimensions have a moderate relationship. The moderate correlation shows the perception of decision makers that enhancing internal business process lead customers' major moderately.

Table 5

Correlation

		Average of Customer perspective	Average of Financial growth
Average of Customer perspective	Pearson Correlation	1	.553**
	Sig. (1-tailed)		.002
	N	26	26

Average of Financial Growth	Pearson Correlation	.553**	1
	Sig. (1-tailed)	.002	
	N	26	26

Lastly, the relationship between the customer and financial dimensions is displayed, along with the relationships for the variables listed in the research model. Which shows the average (r = 0.553, p<0.05) relationship between these two BSC dimensions. This figure of r shows that there is average impact of improving customers' perspectives in financial perspectives of the organization.

Table 8

Inferential statistics for impact of independent variable on dependent variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418^a	.175	.018	.224

For the dependent variable, the predictive power of the independent variables is insufficient. The R square (coefficient of determination) is only.0175. It indicates that the decision makers of Kailali district's industries are supposed to achieve 17.5% of their predicted strategic efficiency and effectiveness due to increase in investment averages in internal business processes, learning and growth, financial plans, and customer perspectives. The Kailali district's manufacturing industries decision makers have achieved 82.5% strategic efficiency and effectiveness due to other unidentified factors. The overall 41.8% correlation between the dependent and independent variables is likewise excessively low.

Table 9

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.075	.189		5.694	.000
	Average of Financial growth (AFP)	.311	.153	.507	2.035	.055
	Average of Customer perspective (ACP)	.016	.173	.028	.091	.928
	average of internal business process (ABP)	-.011	.142	-.026	-.075	.941
	Average of learning and growth (AL&G)	-.079	.115	-.270	-.683	.502

a. Dependent Variable: Average score in Strategic efficiency and effectiveness

ASEE=1.075+.311*AL&G+.016*AIBP+-.011*ACP+-.079AFP+ϵ

The baseline Average score of strategic efficiency and effectiveness (ASEE) value when all independent variables (AFP, ACP, AIBP, and AL&G) are zero is known as the intercept value, which is 1.075. Assuming all other variables remain constant, ASEE should rise by 0.507 units for every unit increase in AL&G. Assuming all other variables remain constant, ASEE should rise by 0.028 units for

every unit increase in AIBP. Assuming all other variables remain constant, ASEE should decrease by 0.026 units for every unit increase in ACP. Assuming all other variables remain constant, ASEE should decrease by 0.270 units for every unit increase in AFP.

The model is not significantly fit. But, this partially fit model can be acceptable in this research work. Because of the exploratory nature of this research work for testing the practicing trend and understanding level of BSC.

H2: There is significant impact of BSC-dimensions on attaining Strategic efficiency and efficiency

This suggests that, within the parameters of this study and the data analyzed, the independent variables (Financial growth, Customer perspective and learning and growth) may not exert a statistically significant influence on the dependent variable (Average score in Strategic efficiency and effectiveness).Given alternative hypothesis is not accepted because of all p-values for taken independent variables are greater than 0.05. (p.values:0.928, .924, .0502> 0.05)

Discussion

The understanding about the BSC-dimensions among the decision makers of food industries of Kailali is supposed to be significant but its result as an output, in achievement of strategic effectiveness and efficiency because of BSC- dimensions is significantly low. The correlation between learning and growth, and internal business process is comparatively high. Impact of learning and growth into internal business process also seems high. Similarly, investment in internal business process has moderate impact in customers perspective, the correlation between these two dimensions also show comparatively low. Finally, correlation between internal business process and financial growth has also poor. Impact of internal business process into financial growth is also poor. The overall impact of learning and growth, internal business process, customer perspective and financial growth perspective has not significant role on attainment of strategic efficiency and effectiveness of manufacturing companies of Kailali district.

There is certain correlation among the selected independent variables and dependent variable. But the main objective of this study is to measure the overall impact BSC-dimensions for attainment of strategic efficiency and effectiveness of manufacturing companies of Kailali district. Which is supposed to be insignificant after completion of this study. The lack of a complete understanding and application of BSC and its dimensions may be the cause of the independent variable's negligible influence on the dependent variable. The result of Nyukorong (2022) significantly predict organizational performance in Ghanaian public universities that does not match with the findings that the four dimensions of the Balanced Scorecard (BSC) in this study. Al-mawali (2023) research has also demonstrated contrast finding to this research that internal process and financial perspectives were recognized as critical outputs, and that the most important predictor in the model was sustainability, which was followed by the customer and learning and growth dimensions. Learning and growth to internal processes, internal processes to customers' perspectives, and ultimately customers' perspectives to financial worth have been formulated by as a research model in this research work. But findings of the research work of Protalinsky, Khanova, Bondareva, Averianova, and Khanova (2020) has explored priorities of four dimension as the internal process and financial perspectives were identified as crucial outputs, with

sustainability being the most critical predictor in the model, followed by customer and learning and growth dimensions. Similarly, Al-Halabi 's (2016) study shows that the Syria's manufacturing companies saw a notable increase in operational efficiency as a result of the application of BSCs, which also supported control and auditing systems.

Reference

Aduvaga, E. V. (2020). Effect of Strategic Management Accounting Techniques on Investment Decisions Among Manufacturing Firms in Kenya (Doctoral dissertation, University of Nairobi).

Aleksandra, Bošković., Ana, Krstic. (2018). Combined Use of BSC and DEA Methods for Measuring Organizational Efficiency. 82-88.

Al-Sayyed, S. M. (2015). The impact of the use of modern management accounting techniques to streamline decision-making in the Jordanian industrial companies. *Development*, *7*(10).

Branko, Mikula., Iveta, Vajdová., Peter, Koščák., Edina, Jenčová. (2020). Learning and Growth Perspective in Balanced Scorecard. doi: 10.1109/NTAD51447.2020.9379091

Dilip, Prarajuli. (2020). Status of Customer Perspective of BSC Approach in Nepalese Commercial Banks. *6*(2):16-30. doi: 10.3126/BATUK.V6I2.34488

Goncharuk, A. G. (2011). Benchmarking for investment decisions: A case of food production. Benchmarking: *An International Journal, 18*(5), 694–704.

Hamzah, Al-mawali. (2023). Proposing a strategy map based on sustainability balanced scorecard and DEMATEL for manufacturing companies. *Sustainability Accounting, Management and Policy Journal, 14(*3):565-590. doi: 10.1108/sampj-04-2022-0170

Han, Y., Hua, M., Huang, M., Li, J., Cheng, S., & Wei, X. (2023). Change and convergence of innovation efficiency among listed health companies in China: Empirical study based on the DEA–Malmquist model. *Frontiers in Psychology, 14*, 1100717.

Jbarah, S. S. (2018). The impact of strategic management accounting techniques in taking investment decisions in the jordanian industrial companies. *International Business Research,* 11(1), 145–156.

Jha, D. K., Yorino, N., & Zoka, Y. (2008, April). Analyzing performance of distribution system in Nepal and investigating possibility of reorganization of distribution centers. In 2008 *Third International Conference on Electric Utility Deregulation and Restructuring and Power Technologies* (pp. 1312-1317). IEEE.

Julia, Armenian. (2022). A Methodology for Performance Measurement and Benchmarking in SMEs. *Journal of enterprise and business intelligence*, doi: 10.53759/5181/jebi202202013

K., Milis., Michel, Meulders., R., Mercken. (2003). A quasi-experimental approach to determining success criteria for projects. doi: 10.1109/HICSS.2003.1174751

Kagrowth, R. S., & Norton, D. P. (1992). The Balanced Scorecard: Measures that Drive Performance. *Harvard Business Review*, *70*(1), 71-79.

Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating Strategy into Action*. *Harvard Business School Press.*

Kaplan, R. S., & Norton, D. P. (2001). The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment. *Harvard Business School Press*.

Kumaat, G. E., Morasa, J., & Suwetja, I. G. (2023). Application of Target Costing in Management of Production Costs to Optimize Profits at UMKM Brownice Manado. *Jurnal Ekonomi dan Bisnis Digital, 2*(1), 77-90.

Marr, B. (2012). Key Performance Indicators*:* The 75 Measures Every Manager Needs to Know. *Pearson Education*.

Mingrui, Geng., Joe-el, S., Marcelo. (2023). Marketing Strategies of Public HospitalsTake A Public Hospital in Hebei as an Example. *Highlights in Science, Engineering and Technology*, doi: 10.54097/hset.v36i.6255

Nabil, Bashir, Al-Halabi. (2016). The Impact of Applying Balanced Scorecards on Increasing the Operational Efficiency of Activities in Manufacturing Companies. *Innovative Systems Design and Engineering, 7*(7):53-63.

Najafi, E., Aryanegad, M. B., Lotfi, F. H., & Ebnerasould, A. (2009). Efficiency and effectiveness rating of organization with combined DEA and BSC. *Applied mathematical sciences*, *3*(25-28), 1249-1264.

Oleg, Protalinsky., Anna, Khanova., Irina, Bondareva., Kristina, Igorevna, Averianova., Yulya, Khanova. (2020). Cognitive Model of the Balanced Scorecard of Manufacturing Systems. 575-586. doi: 10.1007/978-3-030-65283-8_47

Putter, H., Eikema, D. J., de Wreede, L. C., McGrath, E., Sánchez-Ortega, I., Saccardi, R., ... & van Zwet, E. W. (2022). Benchmarking survival outcomes: A funnel plot for survival data. *Statistical methods in medical research, 31*(6), 1171-1183.

Remy, Nyukorong. (2022). What is the Relationship between the Four Dimensions of the Balanced Scorecard and Organization Performance of Ghanaian Public Universities?. *European scientific journal, 18*(1):20-20. doi: 10.19044/esj.2022.v18n1p20

Rohana, Bandara, Weerasooriya. (2013). Universities Strategic Evaluation Using the Balanced Scorecard (BSC) – Focus on Internal Business Process Perspective (IBPP). *Social Science Research Network*,

Selim, Kilic. (2016). Cronbach's alpha reliability coefficient. *Journal of Mood Disorders, 6(*1):47-48. doi: 10.5455/JMOOD.20160307122823

Silalahi, Edward ,Efendi. (2023). The Balanced Scorecard Model for Strategic Business Management. *International Journal of Current Science Research and Review*, doi: 10.47191/ijcsrr/v6-i5-40

Talebnia, G., Baghiyan, F., Baghiyan, Z., Moussavi, F., & Abadi, N. (2017). Target costing, the linkages between target costing and value engineering and expected profit and kaizen. *International Journal of Engineering*, *1*(1), 11-15.