



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

“Measurement Of Financial Performance Through BSC In Agro Food Industries.”

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Abstract:

This research explores the measurement of financial performance in the agro-food industry, involving both national and multinational entities. The Balanced Scorecard (BSC) framework, combined with SPSS for independent t-tests and regression analysis, the study examines a separate sample of agro-food companies. Independent t-tests are utilized to discern variations in financial metrics between national and multinational firms, offering insights into their comparative performance. Meanwhile, regression analysis identifies influential factors affecting financial outcomes. The results of this research furnish valuable insights for industry stakeholders, policymakers, and executives, guiding them in the formulation of strategies and policies aimed at enhancing financial performance in agro-food businesses. These insights are vital for ensuring the flexibility and prosperity of companies operating on both national and global scales within this dynamic and competitive industry.

Keywords: - Financial performance, BSC tools, Agro Food industries.

Introduction: -

Financial performance within the Balanced Scorecard framework is about aligning financial objectives with an organization's strategic vision, measuring performance in the context of cause-and-effect relationships, and ensuring a holistic approach to performance management. This allows organizations to not only track their financial success but also understand how financial outcomes are influenced by activities in other areas, ultimately contributing to sustained growth and competitiveness.

The Balanced Scorecard (BSC) is a globally recognized performance measurement system that enjoys widespread adoption. Created by Kaplan and Norton in 1992, it effectively combines financial and non-financial metrics, making it applicable across organizations of various sizes. Kaplan and Norton (2001) also noted that the BSC has proven to be effective in achieving positive outcomes in sizable non-profit entities.

(As observed by Gurler et al., 2000) The agro-industry holds significant importance, particularly in developing economies where several agricultural crops often lack essential processing or local utilization due to limited capacities within agro-food sectors. (as shown in studies by Aksoy and Inan, 1996; Altin and Orhan, 1999; Azabağaoğlu et al., 2003) Agro-food companies also have a crucial economic role as they source from domestic markets and establish their operations in rural areas to be close to input markets. Numerous research investigations have examined the structural, financial, and marketing attributes on various levels, including local, regional, and sub-sectoral dimensions.

Literature Review: -

Performance measurement: -

As per Neely et al. (1995, p. 80), performance measurement can be described as the procedure of quantifying how well actions are carried out in terms of efficiency and effectiveness. A performance measurement system can be defined as a collection of metrics employed to quantify the efficiency and effectiveness of these actions.

Lebas (1995, p. 24) contended that there is an inseparable link between performance measurement and performance management. He further emphasized that managers and those evaluating performance must address two essential questions: the reasons behind measuring performance and what specific aspects they intend to measure.

Braam and Nijssen (2008) discovered that the Balanced Scorecard, when employed as a strategic measurement system, proves to be more adept at guiding and overseeing organizations as opposed to its role as a performance measurement tool. They underscored the crucial role of robust engagement from top management in ensuring the successful adoption of both approaches. The interplay between top management involvement and centralization demonstrated a substantial impact on the effectiveness of the Balanced Scorecard as a strategic management system. In general, leveraging the Balanced Scorecard for strategic purposes has a positive influence on competitive positioning and firm performance. Simultaneously, its utilization as a performance measurement system remains a fundamental necessity for effective business management in most markets.

Balanced scorecard: -

Kaplan and Norton (1992) offered a definition of the Balanced Scorecard (BSC) as follows: The Balanced Scorecard model, developed by Kaplan and Norton in the early 1990s, was designed to help businesses assess their performance by incorporating both financial and non-financial data.

According to Kaplan and Norton (1996, p.2), the Balanced Scorecard serves as a tool to translate an organization's mission and strategic goals into a comprehensive set of performance metrics. This forms the foundation for a strategic measurement and management system.

In other words, Kaplan and Norton are asserting that the Balanced Scorecard acts as a bridge between a company's high-level mission and its day-to-day operations. It does so by taking the broad, often abstract, objectives of an organization and breaking them down into specific, measurable, and actionable performance indicators. These indicators cover various aspects of the business, including financial, customer, internal processes, and learning and growth perspectives.

Kaplan and Norton (1992) argue that the Balanced Scorecard enables organizations to evaluate their performance from four unique viewpoints, as depicted in Figure 1:

1. Customer Perspective – How does our organization appear in the eyes of our customers?
2. Internal Perspective – Where should we focus on excellence in our internal processes?
3. Innovation and Learning Perspective – Is our capacity to sustain improvement and generate value assured?
4. Financial Perspective – How is our perception among shareholders?

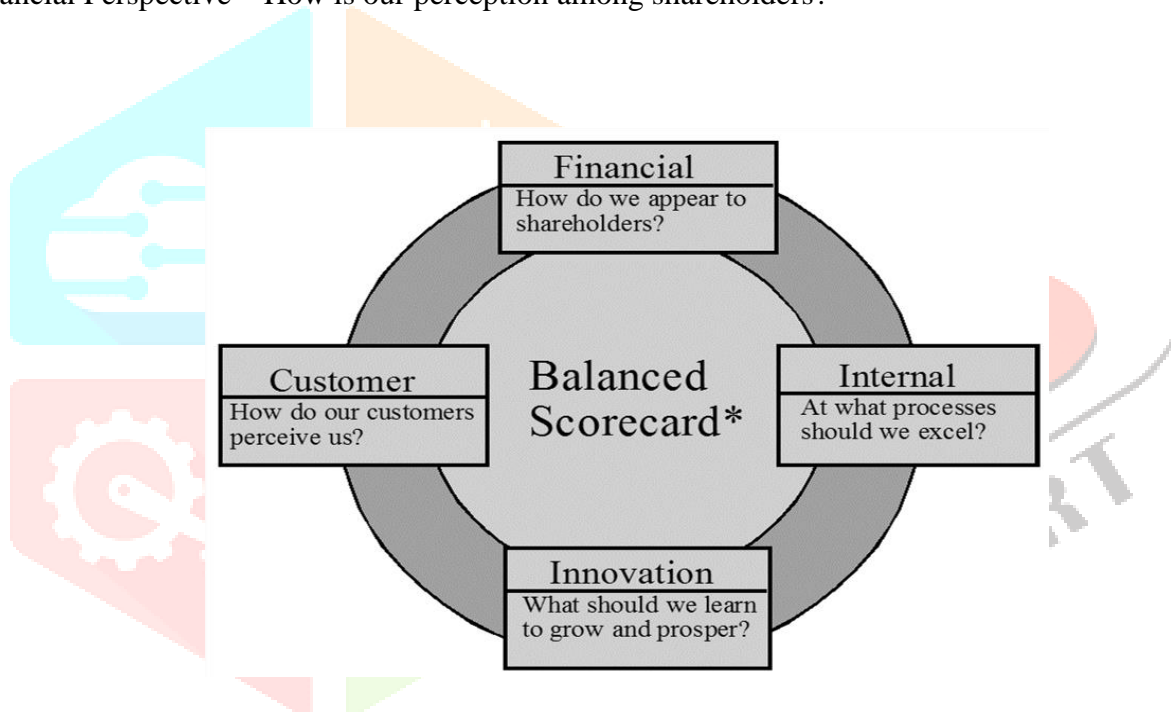


Figure 1: The Balanced Scorecard Model

As outlined in Kaplan and Norton's publication in 2001, they emphasized the importance of a strategy map in translating an organization's strategy into a cohesive framework that consists of clear and easily understandable focal points. These focal points serve as a guide for both organizational divisions and employees. Furthermore, the discussion expanded to highlight the role of the strategy map in clarifying the interconnections and cause-and-effect relationships among different metrics within the Balanced Scorecard.

Objectives of the study

- 1: - To analyze the difference in the respondent's opinion towards financial performance with respect to selected national and multinational industries.
- 2: - To analyze the effect of dimensions of BSC tool on financial performance at selected national and multinational agro food industries.

Hypothesis of the study

- 1: - There is no significant difference in the respondents' opinion towards the financial performance of the organization performance with respect to selected National vs. Multinational Agro Food Industries.
- 2: - There is no significant effect of dimensions of BSC tool on financial performance at selected national and multinational agro food industries.

Research methodology

Research is a methodical investigation that leads to a structured documentation of processes and the reporting of findings and outcomes. Research is described as "a systematic and organized approach to analysis."

Data Collection: The research titled "Measurement of financial performance through BSC in agro-food industries" is characterized as descriptive rather than analytical in nature. The study employs the questionnaire method for data collection.

Sampling: Sample consisted of 400 respondents. However, after excluding outliers and addressing missing values in the questionnaires, the final sample size for the study stands at 367 respondents.

Statistical tool use: Regression used to determine the effect of independent variable and dependent variable. The data were encoded and made ready for analysis using the Statistical Package for the Social Sciences (SPSS).

Demographic profile of the respondents: The individual demographic variable considered was the work experience of the employees.

Reliability Analysis: A reliability analysis using Cronbach's alpha yielded an alpha reliability coefficient of .778, which signifies a consistent pattern of responses across the 3 scale items.

Reliability Statistics	
Cronbach's Alpha	N of Items
.778	3

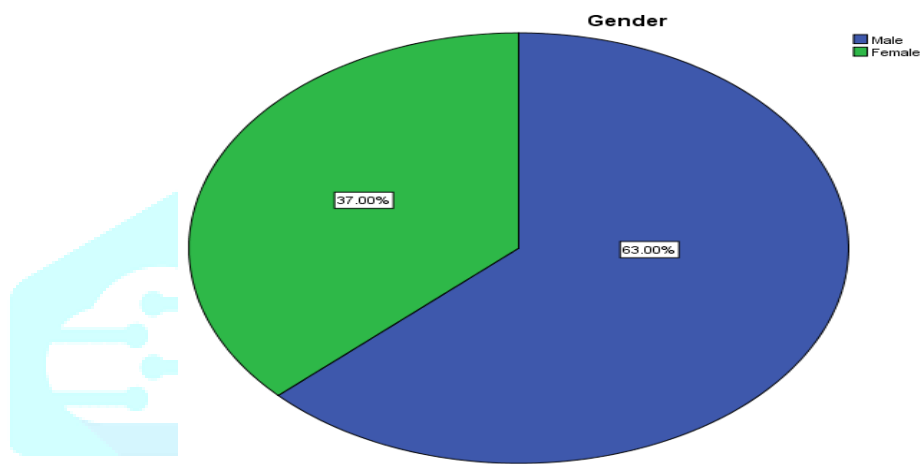
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Information was gathered through closed-ended questions. The primary objective of employing a quantitative research design was to enhance the study's reliability and validity when using SPSS for analysis.

Result and Discussion: -

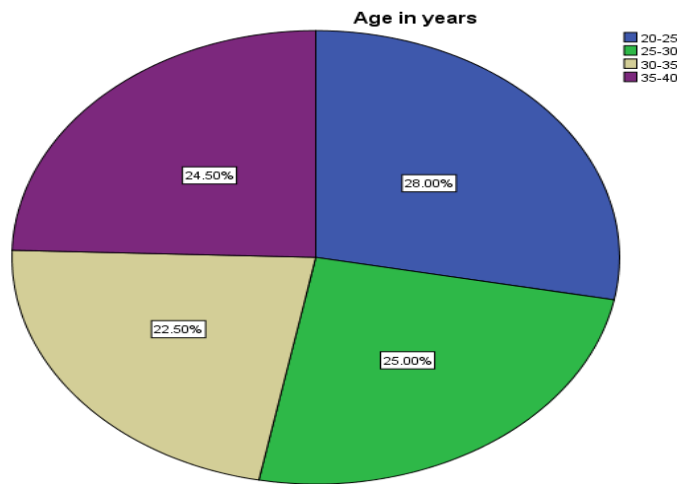
Categorization of Participants by Gender: The table shows that participants by gender, with 252 males (63.0% of the total) and 148 females (37.0% of the total) out of 400 participants. This data is essential for gender-related analyses in the research.

	Frequency	Percent
Male	252	63
Female	148	37
Total	400	100



Categorization of Participants by Age in years: - The table shows that age distribution of survey participants, offering the number and percentage of respondents in various age groups relative to the total sample of 400 participants. It is essential for age-specific analyses and research focusing on age-related insights.

	Frequency	Percent
20-25	112	28
25-30	100	25
30-35	90	22.5
35-40	98	24.5
Total	400	100



Hypothesis Testing

Hypothesis 1: - There is no significant difference in the respondents' opinion towards the financial performance of the organization performance with respect to selected National vs. Multinational Agro Food Industries.

Independent t-test: - The independent t-test compares means between two groups to determine if observed differences are statistically significant.

Group Statistics					
	Companies	N	Mean	Std. Deviation	Std. Error Mean
Financial Performance	National agro food industry	200	3.2175	1.01360	.07167
	Multinational agro food industry	200	3.4655	.77451	.05477

General employee satisfaction scores averaged 3.2175 with a standard deviation of 1.01360, while the "multi-National agro food industry" scored 3.4655 with a lower standard deviation of .77451, indicating more consistent responses in the multinational industry regarding surveyed criteria.

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	T	Df	Sig. (2-tailed)
Financial performance	Equal variances assumed	9.092	0.003	-2.749	398	0.006
	Equal variances not assumed			-2.749	372.301	0.006

The table's significance value of .006 (below 0.05) rejects the null hypothesis, indicating differences in opinions on financial performance between National and Multinational Food Industry. It also shows significant differences in variances, supporting distinctions in both variances and means among the groups.

Hypothesis: - There is no significant effect of dimensions of BSC tool on financial performance at selected national and multinational agro food industries.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.241 ^a	.058	-.026	1.03704

a. Predictors: (Constant), Learning and Growth Perspective, Financial Perspective, Customer Perspective, Internal business process perspective

b. Dependent Variable: Financial performance

From the above table of model summary, we can observe that the value of R square change is 0.058 which implies that 58% variation in dependent variable.

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.982	4	.746	.693	.601 ^b
Residual	48.396	45	1.075		
Total	51.378	49			

a. Dependent Variable: Financial performance

b. Predictors: (Constant), Learning and Growth Perspective, Financial Perspective, Customer Perspective, Internal business process perspective

Coefficients'

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.771	.399		6.944	.000
Financial Perspective	-.054	.046	-.081	-1.177	.240
Customer Perspective	.111	.028	.207	3.922	.000
1 Internal business process perspective	.150	.063	.119	2.376	.018
Learning and Growth Perspective	.150	.063	.119	2.376	.018

a. Dependent Variable: Financial performance

The table shows that regression analysis with various independent variables predicting a dependent variable.

The "Customer Perspective" has a positive and statistically significant impact on the dependent variable, as indicated by the positive Beta value and a significant t-value.

The "Internal Business Process Perspective" and "Learning and Growth Perspective" also have positive and significant impacts on the dependent variable.

The "Financial Perspective" shows a negative Beta value and is not statistically significant as the p-value is above the typical significance level of 0.05.

Overall, this table helps you understand how each perspective contributes to the dependent variable, considering their standardized coefficients and significance levels.

Findings: -

The finding shows that a significant difference in opinions on financial performance between the national and multinational food industry, supported by a p-value of 0.006 (below 0.05). Statistically, there are substantial variances and mean differences, indicating notable variations in how financial performance is perceived.

The major findings indicate that the "Customer Perspective," "Internal Business Process Perspective," and "Learning and Growth Perspective" have positive and statistically significant impacts on the dependent variable, suggesting their importance in predicting changes in the outcome. In contrast, the "Financial Perspective" does not significantly affect the dependent variable and is not statistically significant.

Conclusion: -

India's growing food industry faces increased competition and operational challenges. To cross these complexities and enhance performance, businesses are turning to the Balanced Scorecard framework. This globally recognized system integrates financial and non-financial indicators, helping organizations address the limitations of traditional metrics. The Balanced Scorecard has already demonstrated its effectiveness in various companies, including those in India, offering a structured approach to comprehensive performance evaluation and improvement in the evolving food industry landscape.

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