A STUDY ON PERFORMANCE MEASUREMENT OF AHMEDABAD SEZ UNITS WITH REFERENCE TO BALANCED SCORECARD METHOD

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ABSTRACT

With a view to overcome the shortcomings experienced on account of the multiplicity of controls and clearances; absence of world-class infrastructure, and an unstable fiscal regime and with a view to attract larger foreign investments in India, in 2000, the Export-Import (EXIM) Policy of India shifted towards a new scheme of Special Economic Zones (SEZ), wherein EPZs were converted into SEZ. Special Economic Zones (SEZ) have been recognized as an important mechanism for trade and investment promotion, creation of infrastructure, employment generation, promotion of regional development, increase in foreign exchange earnings, improving export competitiveness and transfer of skills and technology. Government has passed special economic zone Act (SEZ Act, 2005) and came into effect on 10th February, 2006, providing for drastic simplification of procedures and for single window clearance on matters relating to central as well as State Governments. Through this paper an attempt is made to the performance measurement systems of SEZ units in Gujarat with special reference to Ahmedabad SEZ units and explores the latest trends in this area of research. Reviewing the relevant literature approach was adopted as a methodology for conducting the present research. Previous academic, theoretical and empirical papers from early stages and up to date papers were reviewed and analyzed. This paper finds that although literature shows significant changes and movements towards using the balanced scorecard (integrated) systems, more work still required in terms of developing more dynamic performance measurement systems that consider significant stakeholders who contribute in achieving better competitive advantage and success for an organization.

KEYWORDS: *SEZ, Performance Measurement, Balanced Scorecard.*

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Introduction

Indian country has considered as an Asia's 3rd largest economy as well as 6th largest in the world by nominal GDP and 3rd largest by purchasing power purity. From the year 1947-1991 after independence Indian economy was mixed economy and under fiscal crisis. With a view to overcome of fiscal crisis in 1991, India had liberalized its economy for international market and adopted free market principles. (An Analysis of Special Economic Zones in India : A Case Study of Haryana, 2011. But, In New Business Era where Liberalization, Privatization and Globalization for Economic Growth; is a big question for Surviving in today's competition; which is more important to set up and raise a Business for a requirement to modernization, expansion and diversification the technology which is need for Export Promotion to achieve the economy growth in Developing Countries. So, the concept of Free Trade Zones was existed for many years. SEZ / FTZs have evolved and transformed from the original concept of industrial estates, which were usually fenced areas of 10-300 hectares focused on manufacturing for export purposes. The 1st example of such a zone is the Shannon Export- Processing Zone in Ireland, which was set up in 1958.

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Special Economic Zones

Different economic institution and government departments have defined it in different ways. As per Ministry of Commerce and Industry they have defined as "Special economic zone is a specifically duty fee enclave and shall be deemed to be foreign territory for the purpose of trade operations and duties and tariffs". (Tandel, 2014). In the context of organization's financial performance; performance is a measure of the change of the financial state of an organization, or the financial outcomes that results from management decisions and the execution of those decisions by members of the organization. (Bijendersingh, 2014)

Performance Measurement

Performance measurement is a process by which an organization monitors important aspects of its programs, systems, and care processes. Data is collected to reflect how its processes are working, and that information is used to drive an organization's decisions over time. Typically, performance is measured and compared to organizational goals and objectives. Results of performance measurement provide information on how an organization's current programs are working and how its resources can be allocated to optimize the programs' efficiencies and effectiveness. (Tantri). According to the marketing perspective, organizations achieve their goal, which is they perform, by satisfying their customers with greater efficiency and effectiveness than their competitors. (Kalpan & Norton, 1993)

Balanced Scorecard

It aims to provide management with balanced measures based on four perspectives (*Financial*, *Customer*, *Internal processes* and *Innovation and learning*). From the Concept of performance measurement, the theory of BSC (Balanced Score Card) has been used for the selected research subject. The BSC was developed in the early 1990's by Robert Kaplan, an accounting professor at Harvard Business School, and David Norton, president of Renaissance Solutions, Inc., an international consulting firm specializing in performance measurement and organizational renewal. The BSC is a tool used for describing, implementing and managing strategy at all levels in the organization. The BSC assists organizations in developing a better performance measurement system than one solely dependent on financial measures.

Literature Review

A brief review of the earlier research studies in the global context is pertinent here to highlight the role of SEZ in the economic transition and growth of nations. There has been extensive Research in the advanced and developing countries to measure the corporate disclosure in Performance Measurement of SEZ sectors.

Krishan (2007) examined the extent and concentration of SEZ in India. He found that as on 3rd October, 2007 there were 173 notified SEZ in India. 19 among them were operational prior to SEZ Act, 2005. Among the various states, Andhra Pradesh takes the lead with 47 SEZ followed by Tamil Nadu, Maharashtra, Karnataka, Haryana, Uttar Pradesh and Punjab. He also found that there is a tendency of clustering the SEZ in a particular district, adjoining Hyderabad in Andhra Pradesh accommodates 24 SEZ, Bangalore in Karnataka 13 SEZ, Kanchipuram in Tamil Nadu 11 SEZ and Pune in Maharashtra 10 SEZ; and other concentration of SEZ is observed in Gurgaon district in Haryana and Gautama Buddha Nagar district of Uttar Pradesh. At least 54 districts have only one SEZ each.

Neely et al (2000) define performance measurement as "the process of quantifying the efficiency and effectiveness of action", "a metric used to quantity the efficiency and/or effectiveness action", and the set of metrics used to quantity both the efficiency and effectiveness of action" Neely et al (2003) argue that the above definitions are precise but do not convey what is being labeled in the literature and in practice as performance measurement. According to them, performance measurement refers to the use of a multi-dimensional set of performance measures. The set of measures is multi-dimensional as it includes both financial and non-financial measures that include both internal and external measures of performance which quantify what has been achieved as well as measures which are used to help predict the future. (Singh D. , 2011)

Otley (2003) wrote on the accounting perspective of performance measurement. According to him, Accounting measures of performance have been the traditional mainstream of quantitative approaches to organizational performance measurement. He however, added that over the past two decades, a great deal of attention has been paid to the development and use of non-financial measures of performance. (Elangovan & Palanisamy, 2013)

Vince (2003) notes that different frameworks for measuring business performance measurement frameworks which was evolved from a variety of origins. These frameworks are approaches to measurement to the business which has frequently adopted, often with significant diversity in their design and use. The approaches are:

- Balanced Scorecard
- Economic Value Added
- Activity-Based Costing
- Quality Management
- Customer Value Analysis

Research Methodology

The present study is Explorative in nature and based on Primary and secondary data.

Research Gap

The above literature survey clearly denotes that research has been focused on Special Economic Zone in India; and also focused on different financial and traditional methods of performance appraisal relating to the economy industry. It is clear from this, that none have carried out research on the BSC method for the performance appraisal of Special Economic Zone Units in (Ahmedabad SEZ). To fill this gap, this research article assumes a significant role.

Objectives

- To analyze the current status of Ahmedabad SEZ in terms of functional, operational, Notified, In - Principle SEZ in the growth of Ahmedabad SEZ (Gujarat) and identify the issues and challenges of SEZ developers'/ SEZ units in Ahmedabad
- To study the importance & Key Performance Indicators of Balanced Scorecard Method (Learning and Growth, Internal Business, Customer and Financial services) which will be practiced in the Ahmedabad SEZ units.

Hypothesis

In relation to the objectives of the study, the following hypotheses have been identified:

H_0 There is no significant relationship of Learning and Growth Perspective, Internal Business Process Perspective, Customer Perspective and Financial Perspective to the Performance Measurement in selected Ahmedabad SEZ Units.

Research Design

For this purpose, a structured questionnaire was administered to sample of respondents from managerial staff of all Ahmedabad SEZ units. In addition, the required data was collected through interaction with the managerial staff of Ahmedabad SEZ Units. The source materials forming the background information were collected from various textbooks, journals, reports, magazines, published papers, annual reports and internet sources. The questionnaire is primarily designed to obtain information on the detailed performance measures being used on five point Likert scale on selected Ahmedabad SEZ Units. Consequently, questionnaire sections mirrored the BSC components (Learning and Growth, Internal Business Process, Customer and Financial Perspectives)

Sampling Plan

- **Sampling Unit:** 3 SEZ Units (Zydus Infrastructure Pvt. Ltd., GIDC Apparel Park, Intas Pharmaceuticals Limited)
- **Sampling Size:** Out three companies 30 respondents as a sample.
- **Sampling method:** Non-Probability Convenience sampling
- **Data Instrument:** Five Point Likert Scale (1- Strongly Disagree to 5-Strongly Agree)
- **Statistical Methods:** Mean, SD, Chi-square through SPSS

Data Collection

Primary Data: A Structured non-disguised questionnaire has been selected to collect the responses. Secondary Data: Annual Reports, magazines, Journals, newspapers have used.

Data Analysis & Interpretation
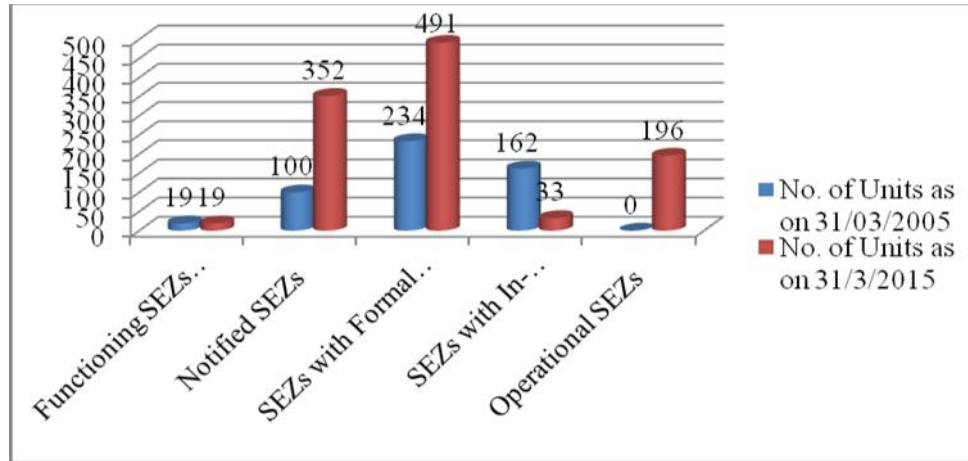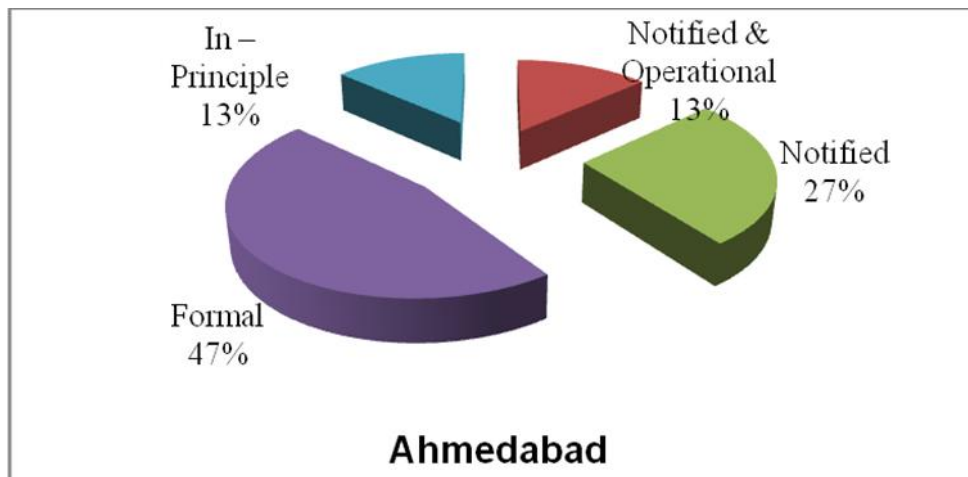
Figure 1: SEZ at a Glance- Gujarat

Figure 2: SEZ at a Glance- Ahmedabad (No. of Units as on 31/03/2015)

Note: In the year 2005 there was one SEZ in Gujarat (i.e. Kandla SEZ). And rests are EPZs (Export Processing Zones).

- **Learning and Growth Perspective**

Table 1: KPIs under Learning & Growth Perspective as per priority given by the respondents

Statements		Frequency Distribution & Weight age					Total	MV	SD	X^2	P - Value
		1	2	3	4	5					
Learning & Growth Perspective	F	0	0	13	12	05	30	3.73	0.73	3.75	0.000
	%	0.00	0.00	43.33	40.00	16.67	100.00				
Employee Satisfaction	F	0	0	09	08	13	30	4.13	0.85	2.57	0.000
	%	0.00	0.00	30.00	26.67	43.33	100.00				
Employee Productivity	F	0	0	04	08	18	30	4.47	0.72	12.37	0.000
	%	0.00	0.00	13.33	26.67	60.00	100.00				
Education Training Programme	F	0	0	13	09	08	30	3.83	0.82	1.86	0.000
	%	0.00	0.00	43.33	30.00	26.67	100.00				
Employee Continuity & Movement	F	0	0	09	13	08	30	3.97	0.75	0.86	0.008
	%	0.00	0.00	30.00	43.33	26.67	100.00				
Employee Motivation	F	0	0	10	14	06	30	3.87	0.72	3.98	0.000
	%	0.00	0.00	33.33	46.67	20.00	100.00				

		1	2	3	4	5	Total	MV	SD	X²	P-Value
Value Added Evaluation Process	F	0	0	12	18	00	30	3.60	0.49	2.06	0.000
	%	0.00	0.00	40.00	60.00	0.00	100.00				
Level of Employee Capabilities	F	0	0	07	15	08	30	4.03	0.71	3.06	0.000
	%	0.00	0.00	23.33	50.00	26.67	100.00				
Healthy Relationships From Top Level to Bottom Level	F	0	0	12	12	06	30	3.80	0.75	2.53	0.000
	%	0.00	0.00	40.00	40.00	20.00	100.00				
Product Novelty & Uniqueness	F	0	0	14	06	10	30	3.87	0.88	2.82	0.000
	%	0.00	0.00	46.67	20.0	33.33	100.00				
Timing to Introduce for Next Generation of Existing Product & Technology Leadership	F	0	0	09	11	10	30	4.03	0.80	0.26	0.502
	%	0.00	0.00	30.00	36.67	33.33	100.00				

* Sig. at 0.05, Source: Field Survey

- **Internal Business Process Perspective**

Table 2: KPIs under Internal Business Process Perspective as per Priority Given by the Respondents

Statements		Frequency Distribution & Weight age					Total	MV	SD	X²	P – Value
		1	2	3	4	5					
On Time Deliveries	F	0	0	09	12	09	30	4.00	0.77	1.51	0.000
	%	0.00	0.00	30.00	40.00	30.00	100.00				
Operating Procedure	F	0	0	14	04	12	30	3.93	0.93	7.74	0.000
	%	0.00	0.00	46.67	13.33	40.00	100.00				
Unit Cost of Operation	F	0	0	13	11	06	30	3.77	0.76	4.25	0.000
	%	0.00	0.00	43.33	36.67	20.00	100.00				
Team Motivation	F	0	0	06	06	18	30	4.40	0.80	11.84	0.000
	%	0.00	0.00	20.00	20.00	60.00	100.00				
Quality of Decision Making	F	0	0	07	14	09	30	4.07	0.73	1.94	0.000
	%	0.00	0.00	23.33	46.67	30.00	100.00				
Staff Benefits & Other Consideration	F	0	0	17	11	02	30	3.50	0.62	11.79	0.000
	%	0.00	0.00	56.67	36.67	06.66	100.00				
Productivity & Cost Reduction	F	0	0	02	14	14	30	4.40	0.61	12.12	0.000
	%	0.00	0.00	06.67	43.33	43.00	100.00				
Product Process	F	0	0	11	13	06	30	3.83	0.73	3.14	0.000
	%	0.00	0.00	36.67	43.33	20.00	100.00				
Quality of R & D Tasks	F	0	0	12	11	07	30	3.83	0.78	1.37	0.000
	%	0.00	0.00	40.00	36.67	23.33	100.00				
Organizational Structure	F	0	0	09	14	07	30	3.93	0.73	3.90	0.000
	%	0.00	0.00	30.00	43.33	23.33	100.00				
Relationship with Employee's & Externals	F	0	0	04	09	17	30	4.43	0.72	8.39	0.000
	%	0.00	0.00	13.33	30.00	56.67	100.00				

Sig. at 0.05, Source: Field Survey

- **Customer Perspective**

Table 3: KPIs under Customer Perspective as per Priority Given by the Respondents

Statements		Frequency Distribution & Weight Age					Total	MV	SD	X²	P - Value
		1	2	3	4	5					
Customer Perspective	F	0	0	11	09	10	30	3.97	0.84	0.06	0.0081
	%	0.00	0.00	36.67	30.00	33.33	100.00				
Role of Customer & Leadership	F	0	0	07	12	11	30	4.13	0.76	0.82	0.003
	%	0.00	0.00	23.33	40.00	36.67	100.00				
New Product Awareness	F	0	0	05	11	14	30	4.30	0.74	4.17	0.000
	%	0.00	0.00	16.66	36.67	43.00	100.00				
Supply of Raw Material	F	0	0	08	13	09	30	4.03	0.75	2.12	0.000
	%	0.00	0.00	26.67	43.33	30.00	100.00				
Customer Satisfaction	F	0	0	15	13	02	30	3.57	0.62	9.50	0.000
	%	0.00	0.00	50.00	43.33	6.67	100.00				

		1	2	3	4	5	Total	MV	SD	X²	P-Value
CSR Policy	F	0	0	06	15	09	30	4.10	0.70	4.04	0.000
	%	0.00	0.00	20.00	50.00	30.00	100.00				
Brand Image	F	0	0	16	08	06	30	3.67	0.79	3.67	0.000
	%	0.00	0.00	53.33	26.67	20.00	100.00				
New Launched Product	F	0	0	13	11	06	30	3.77	0.76	2.93	0.000
	%	0.00	0.00	43.33	36.67	20.00	100.00				
Commercialization	F	0	0	06	09	15	30	4.30	0.78	4.73	0.000
	%	0.00	0.00	20.00	30.00	50.00	100.00				
Customer Retention Policy	F	0	0	07	18	05	30	3.93	0.63	8.10	0.000
	%	0.00	0.00	23.33	60.00	16.67	100.00				
Customer Loyalty	F	0	0	07	04	19	30	4.40	0.84	10.46	0.000
	%	0.00	0.00	23.34	13.33	63.33	100.00				

Sig. at 0.05, Source: Field Survey

- **Financial Perspective**

Table 4: KPIs under Financial Perspective as per Priority Given by the Respondents

Statements		Frequency Distribution & Weight Age					Total	MV	SD	X²	P – Value
		1	2	3	4	5					
Financial Perspective	F	0	0	05	17	08	30	4.10	0.65	5.87	0.000
	%	0.00	0.00	16.66	56.67	26.67	100.00				
Revenue Generation from the Idea from New Product	F	0	0	10	14	06	30	3.87	0.72	3.24	0.000
	%	0.00	0.00	33.33	46.67	20.00	100.00				
Return on Earnings	F	0	0	05	14	11	30	4.20	0.70	4.43	0.000
	%	0.00	0.00	16.66	46.67	36.67	100.00				
Budget	F	0	0	17	06	07	30	3.67	0.83	6.63	0.000
	%	0.00	0.00	56.67	20.00	23.33	100.00				
Net Profit	F	0	0	10	06	14	30	4.13	0.88	4.89	0.000
	%	0.00	0.00	33.33	20.00	46.67	100.00				
Cash Flow	F	0	0	10	18	02	30	3.73	0.57	14.46	0.000
	%	0.00	0.00	33.33	60.00	06.67	100.00				
Quarterly Sales Growth	F	0	0	16	10	04	30	3.60	0.71	7.08	0.000
	%	0.00	0.00	53.34	33.33	13.33	100.00				
Increment of Target Market Share	F	0	0	13	11	06	30	3.77	0.76	3.10	0.000
	%	0.00	0.00	43.33	36.67	20.00	100.00				
ROI From FDI	F	0	0	11	14	05	30	3.80	0.70	2.57	0.000
	%	0.00	0.00	36.67	46.67	16.66	100.00				
Working Capital Management	F	0	0	09	09	12	30	4.10	0.83	0.19	0.0105
	%	0.00	0.00	30.00	30.00	40.00	100.00				
Operating Income Generation	F	0	0	10	17	03	30	4.10	0.87	2.85	0.000
	%	0.00	0.00	33.33	56.67	10.00	100.00				

Sig. at 0.05, Source: Field Survey

From the response of respondents of all selected companies, analysis of the key performance indicators of Balanced Scorecard is done (Table1.1 to 1.4). In the Learning and Growth Perspective, the highest and Lowest mean value score for the KPI of this perspective are 4.47 (Employee Productivity) and 3.60 (Value Added Evaluation Process) and the score of their significant X^2 was observed (X^2=12.37, P = 0.000) and (X^2= 2.06, P = 0.000) which is highly significant. So, null hypothesis is not accepted. In the Internal Business Process Perspective, the highest and Lowest mean value score for the KPI of this perspective are 4.43 (Relationship with Employee's & Externals) and 3.50 (Staff Benefits & Other Consideration) and the score of their significant X^2 was observed (X^2= 8.39, P = 0.000) and (X^2= 11.79, P = 0.000) which is highly significant. So, null hypothesis is not accepted.

In the Customer Perspective the highest and Lowest mean value score for the KPI of this perspective are 4.40 (Customer Loyalty) and 3.57 (Customer Satisfaction) and the score of their significant X^2 was observed (X^2= 10.46, P = 0.000) and (X^2= 9.50, P = 0.000) which is highly significant. So, null hypothesis is not accepted. In the Financial Perspective the highest and Lowest mean value

score for the KPI of this perspective are 4.20 (Return On Earnings) and 3.60 (Quarterly Sales Growth) and the score of their significant X^2 was observed (X^2=4.43, P = 0.000) and (X^2= 7.08, P = 0.000) which is highly significant. So, null hypothesis is not accepted.

Findings & Suggestions

From the above interpretation of all perspectives following findings and suggestions for the Ahmedabad SEZ units are as in below:

- In Learning and Growth Perspective, All KPIs are significant for performance measurement in selected Ahmedabad SEZ Units. But, it is found that the Key Performance indicators (KPI) like Employee productivity and Employee Satisfaction have more importance than other KPIs.

- In Internal Business Process Perspective, All KPIs are significant for performance measurement in selected Ahmedabad SEZ Units. But, it is found that the KPIs like Team Motivation, Productivity & Cost Reduction and Relationship with Employee and Externals have more importance than other KPIs.

- In Customer Perspective, All KPIs are significant for performance measurement in selected Ahmedabad SEZ Units. But, it is found that the KPIs like Customer loyalty, Commercialization and New Product Awareness have more important than other KPIs. Surprisingly, Customer Satisfaction is least importance KPI for Performance Measurement in selected Ahmedabad SEZ Units.

- In Financial Perspective, All KPIs are significant for performance measurement in selected Ahmedabad SEZ Units. But, it is found that the KPIs like Return on Earnings and Net Profit have more importance than other KPIs.

- The research findings of this study can function as precise criteria with respect to the future development of policies of companies in Ahmedabad SEZ units and help upgrade their operational performance and sustain their competitive advantages.

- One important suggestion of this research is to utilize the Balanced Scorecard approach in measuring the performance of the special economic zone units as well as in strategic planning and management.

- It is suggested that companies needs to pay more attention to various indicators when various measures of employee productivity are considered. It also suggested that they should focus their attention on the welfare of their employees to attract loyalty, commitment and satisfaction.

Conclusion

Special Economic Zone Units have gradually become the mainstream of the economy industry in India. With many firms involved in this industry, strong market competition has thus become inevitable. They are often at a disadvantage in terms of services, pricing and promotions. Large fluctuations in the economic and financial environment can make it difficult to make a profit or achieve growth. Despite recent advances in performance measurement, company's managers have to constantly look for a new effective measurement system to evaluate an organization's performance. The Balanced Scorecard provides a framework for selecting multiple key performance indicators that supplement traditional financial measures with non-financial measures of customer satisfaction, internal business process and learning-growth activities.The results indicated give support to the existence of links between the perspectives and their measures with the strategic choice of the organizations. Thus the learning and growth perspective, internal business processes perspective, the customer perspective and the financial perspective has a positive relationship with the Balanced Scorecard approach. Ahmedabad SEZ Units may also come out with their own formula for performance appraisal. This is very essential not only for their survival but also for robust growth at a global level and to face competition for survival.

Limitations of the Study

- The present study is limited to Ahmedabad SEZ Units only. So, the results may not be generalized for the entire state.

- The same study can be conducted for other SEZ Units in Gujarat or in any states in India.

- Comparative study on Performance Measurement using Balance Scorecard Method between two SEZ of different states.

- The same study can be conducted using different methods of Performance Measurement of selected SEZ units.

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