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A STUDY ON CLIENT'S PERCEPTION TOWARDS INFRASTRUCTURE FACILITIES AND SERVICES IN SPECIAL ECONOMIC ZONES IN CHENNAI

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ABSTRACT:

This study aims to explore the perceptions and satisfaction levels of clients regarding the infrastructure facilities and services provided in Special Economic Zones (SEZs) in Chennai. SEZs play a critical role in promoting industrial growth, attracting foreign investment, and generating employment. However, their success is heavily dependent on the quality of infrastructure and services offered to businesses operating within them. The research focuses on identifying the key infrastructure elements—such as transportation, utilities, communication networks, and security—and service-related aspects like administrative support, ease of doing business, and responsiveness of SEZ authorities. Primary data was collected through structured questionnaires distributed among clients operating in various SEZs across Chennai. The study uses both descriptive and inferential statistics to analyze the data. Findings indicate that while clients appreciate the location advantages and basic infrastructure, there is a growing demand for improvements in service efficiency, maintenance, and digital facilities. The study concludes with recommendations for SEZ developers and policymakers to enhance infrastructure standards and service delivery mechanisms to improve client satisfaction and long-term sustainability of SEZs in Chennai.
Keywords:
Infrastructure development, service quality, and client satisfaction

INTRODUCTION:

The real estate and urban development industry is central to the growth of modern cities, influencing both economic progress and quality of life. As urban populations expand, the demand for well-integrated infrastructure and high-quality services has become increasingly critical. Key elements such as transportation, utilities, maintenance, safety, and customer support directly impact the satisfaction of residents, business owners, and employees within these developments. This study explores the relationship between infrastructure development, service quality, and client satisfaction in the real estate and urban development sector. By examining how these factors shape user experiences, the research aims to identify strengths, gaps, and opportunities for improvement.

THEORETICAL BACKGROUND OF THE STUDY:

Special Economic Zones (SEZs) are areas created by the government to help businesses grow by giving them better facilities, tax benefits, and support services. These zones are meant to attract more companies, increase exports, and create jobs. For SEZs to work well, they need good infrastructure like roads, power supply, water, and internet, along with helpful services from the authorities. When these facilities and services are good, companies are more satisfied and willing to stay and grow in the SEZ. This study is based on the idea that better infrastructure and services lead to better client satisfaction. It helps us understand what clients think about the facilities and services they receive in SEZs in Chennai.

REVIEW OF LITERATURE:

Boruszko Dariusz (May 2023) analyzes the challenges of sustainable road infrastructure development in environmentally sensitive areas. The paper highlights issues arising from rapid road expansion, especially in National Parks and Natura 2000 zones in North-Eastern Poland. It focuses on environmental impact concerns and the need for sustainable engineering solutions in such region. **Scott Thacker and Daniel Adshed (January 2019)** highlight that infrastructure systems are vital for delivering essential services like energy, water, and transport. However, they can also pose environmental risks, social challenges, and financial burdens. With global infrastructure investment at an all-time high, current decisions will shape development patterns for future generations. **Dr. Nidheesh K.B. (March 2018)** concludes that Special Economic Zones (SEZs) in India are being supported with necessary infrastructure by the SEZ authorities. However, certain amenities such as residential, educational, and shopping facilities are lacking in the Madras SEZ and need attention. The study found no significant difference in satisfaction levels regarding governance and infrastructure between Madras SEZ and Mahindra World City SEZ, indicating that both are well-governed and capable of successful performance. **Asyraf Afthanorhan (November 7, 2018)** The present study has examined UniSZA Library users via questionnaire survey, attempted to find out the customer importance on every service provided. The results showed a positive relationship between the service quality and the customer satisfaction. **Ana Luiza Carvalho Ferrer (January 2018)** emphasizes that urban infrastructure is a complex concept involving not just physical systems but also governance, economic growth, climate change, and waste management. Sustainability in this context is multidisciplinary, combining engineering, economic, social, and environmental aspects. The study highlights that research in sustainable urban infrastructure is still evolving.

RESEARCH METHODOLOGY:

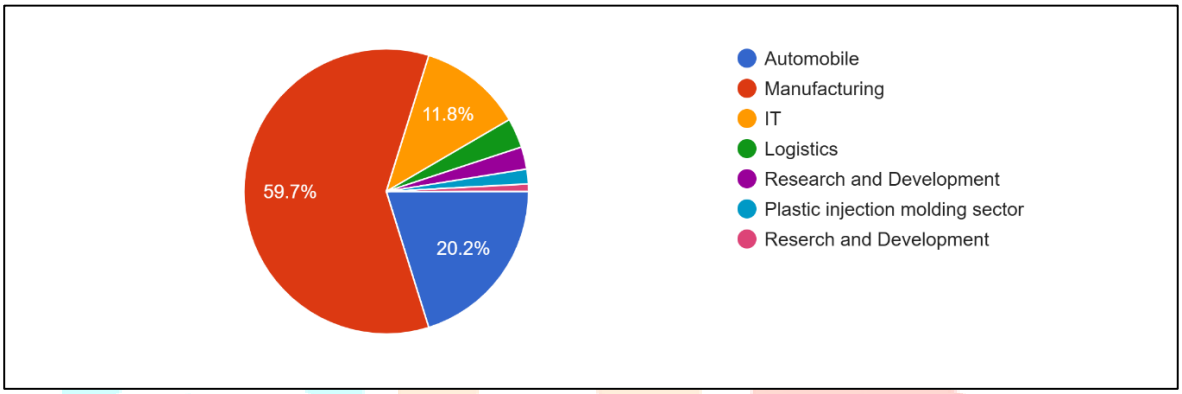
The present study adopts a quantitative descriptive research design to examine the relationship between infrastructure development, service quality, and client satisfaction within the context of Special Economic Zones (SEZs), This design enables the collection and analysis of measurable data to understand how various infrastructure and service-related factors influence client satisfaction. Primary data was collected through the distribution of structured questionnaires to clients. The questionnaire included both closed-ended and Likert-scale questions to gather information on client perceptions of infrastructure quality, service efficiency, and overall satisfaction. In total, 119 clients participated in the study. A simple random sampling method was used to ensure that each client had an equal chance of selection. Secondary data was obtained from published articles, case studies, government reports, industry publications, and previous research studies related to infrastructure development, client satisfaction, and service delivery in SEZs. The data collected was analyzed using descriptive statistical tools such as percentages, averages, and charts to identify trends and summarize responses. For deeper statistical analysis, SPSS software was used. Chi-square tests were conducted to determine the relationship between business types and perceptions of infrastructure improvements. Additionally, ANOVA (Analysis of Variance) was applied to examine significant differences in client satisfaction levels across various groups.

DATA ANALYSIS AND INTERPRETATION:

Table 1:Types of Businesses operating in SEZ

Types of Business	No. of. Respondents	Percentage
Automobile	24	20.2%
Manufacturing	71	59.7%
IT	14	11.8%
Logistics	4	3.4%
Others	6	4.9%

CHART 1: Variety of businesses operating in SEZ



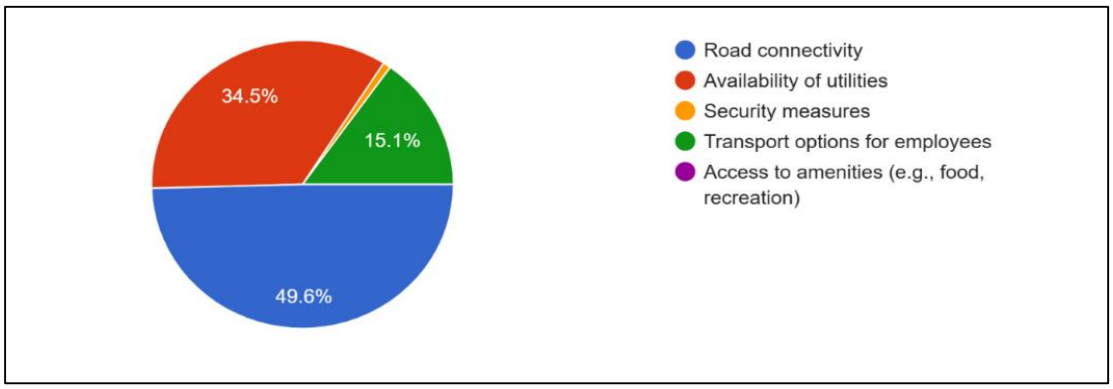
Data Interpretation and Findings:

From the above table, it is inferred that among the total 119 business operating in the SEZ (Special Economic Zone) belong to the manufacturing sector, which constitutes 59.7% of the total. This indicates that SEZs are primarily driven by industrial and production-based units. The next significant category is the automobile sector, accounting for 20.2%, reflecting a strong presence of auto-related enterprises. IT-based companies make up 11.8%, suggestion a growing technology influence within the SEZ. Logistics firms constitute 3.4%, and the remaining 4.9% are classified under "Others," showing a small yet diverse set of business activities. Overall, the data shows that SEZs are dominated by core industrial operations with a gradual inclusion of service-oriented sectors.

Table 2 : Key Infrastructure improvements that positively impacted the Clients Business:

S.No	Particulars	No.of.respondents	Percentage
1	Road connectivity	59	49.6%
2	Utilities availability	41	34.5 %
3	Security measures	1	15.1%
4	Transportation for employees	18	0.8%

Chart 2: Key Infrastructure improvements that positively impacted the Clients Business:



Data Analysis and Findings:

From the above table, it is inferred that among the total respondents, the majority **49.6%** identified **road connectivity** as the most important infrastructural feature in the SEZ. This highlights the critical role that transportation infrastructure plays in the operational efficiency of businesses. The next significant aspect is the **availability of utilities** such as water and electricity, which was prioritized by **34.5%** of the respondents, indicating the importance of consistent and reliable basic services for smooth industrial functioning. **Security measures** were noted by **15.1%** of the respondents, emphasizing the need for safety and secure working conditions within the SEZ. However, only **0.8%** of respondents highlighted **transportation for employees** as a key concern, which may suggest either a relatively lower dependence on company-provided transit options or a potential gap in employee commute services that is currently under-addressed.

Overall, the data shows that while SEZs are performing well in foundational infrastructure such as roads and utilities, there is room for improvement in security and employee transport facilities to ensure holistic development and operational support.

Hypothesis:1

H_0: There is no significant difference between the type of business and their perception towards the infrastructure facilities provided by SEZ.

H_1: There is no significant difference between the type of business and their perception towards the infrastructure facilities provided by SEZ.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	46.010[a]	15	<.001
Likelihood Ratio	39.200	15	<.001
Linear-by-Linear Association	14.651	1	<.001
N of Valid Cases	119		

a. 18 cells (75.0%) have expected count less than 5. The minimum expected count is .03.

Interpretation:

The p-value (< 0.001) is much smaller than 0.05, we reject the null hypothesis (H_0) and accept the alternate hypothesis. The test results indicate a statistically there is no significant difference between the type of business and clent's perception towards the infrastructure facilities provided by SEZ.

Hypothesis: I1

H0: There is no significant association between the type of business owned by the client and their perception towards the quality of roads and connectivity provided by SEZ.

H1: There is a significant association between the type of business owned by the client and their perception towards the quality of roads and connectivity provided SEZ.

ANOVA TABLE

		Sum of Squares	df	Mean Square	F	Sig.
As a client availing services from SEZ Rate of the following aspects of infrastructure services given by Mahindra world city [Quality of roads and connectivity within]	Between Groups	2.783	5	.557	2.549	.032
	Within Groups	24.679	113	.218		
	Total	27.462	118			

Interpretation:

Since the P value (0.032) is less than 0.05, we reject the null hypothesis and accept the alternate hypothesis. Hence there is association between the type of business owned by the client and their perception towards the quality of roads and connectivity provided by SEZ.

Hypothesis: 2

H0: There is no significant association between the type of business owned by the client and their perception towards the water supply reliability and quality provided Mahindra World City.

H1: There is a significant association between the type of business owned by the client and their perception towards the water supply reliability and quality provided Mahindra World City.

ANOVA TABLE

		Sum of Squares	df	Mean Square	F	Sig.
As a client availing services from SEZ Rate of the following aspects of infrastructure services [Water supply reliability and quality]	Between Groups	3.029	5	.606	3.288	.008
	Within Groups	20.820	113	.184		
	Total	23.849	118			

Interpretation:

Since the P value (0.008) is greater than 0.05, we accept the null hypothesis and reject the alternate hypothesis. Hence there is association between the type of business owned by the client and their perception towards the quality of roads and connectivity provided Mahindra World City.

Hypothesis: III

H0: There is no significant association between the type of business owned by the client and their perception towards the electricity supply reliability provided by SEZ.

H1: There is a significant association between the type of business owned by the client and their perception towards the electricity supply reliability provided by SEZ.

ANOVA TABLE

		Sum of Squares	df	Mean Square	F	Sig.
As a client availing services from SEZ Rate of the following aspects of infrastructure services [Electricity supply reliability]	Between Groups	.947	5	.189	.996	.424
	Within Groups	21.490	113	.190		
	Total	22.437	118			

Interpretation:

Since the P value (0.424) is greater than 0.05, we accept the null hypothesis and reject the alternate hypothesis. Hence there is no association between the type of business owned by the client and their perception towards the electricity supply reliability provided by SEZ.

CONCLUSION:

The study concludes that Clients who have established their companies in Chennai's Special Economic Zones (SEZs) express high satisfaction with core infrastructure elements such as electricity reliability, water supply, and road connectivity, there remains a notable need for enhancement in areas like emergency services and public transportation. Statistical analysis using Chi-square and ANOVA tests reveals significant relationships between the type of business and perceptions of certain infrastructure aspects, particularly road connectivity and water supply. These findings underscore the importance of aligning infrastructure development with the specific needs of diverse business sectors to foster sustained satisfaction and operational efficiency. The results highlight actionable insights for SEZ authorities and policymakers to prioritize targeted improvements and strengthen the long-term viability and competitiveness of SEZs.

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