A Comparative Analysis of Socio-Economic Development in Communities Near Special Economic Zones: A Global and Indian Perspective

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Abstract: The study examines the socio-economic effects of Special Economic Zones (SEZs) on adjacent communities nationally and globally. It assesses how SEZs promote industrial expansion, draw foreign investment and enhance local economic development, focusing on their impact on neighbouring areas. By comparing data from various countries, the research identifies common challenges and successes, highlighting the superior performance of Indian SEZs. Indian SEZs outperformed others in policy implementation and operational efficiency, with a mean score of 3.488 versus 2.940 for other countries, showing significant statistical relevance (p-value < 0.001). The t-value is 60.660 for Indian SEZs and 49.000 for those in other nations, each with 499 degrees of freedom. The 95% confidence interval for the mean difference is 3.375 to 3.601 for India and 2.822 to 3.058 for other countries. The comparison between policy implementation and operational performance of SEZs in India and those in other countries reveals notable differences. The mean score for policy implementation and operational performance in Indian SEZs is 3.488, while the mean score for SEZs in other countries is 2.940. This suggests that, on average, SEZs in India are perceived to be more efficient than their counterparts in other countries.

The study addresses key questions: How do SEZs impact socio-economic growth in nearby communities? How do Indian SEZs compare to those in other countries? Regression analysis confirms that communities near SEZs see greater socio-economic development, with a Beta value of 0.707 indicating a strong positive correlation. These findings contribute to policy debates and guide future research on maximizing SEZ benefits for inclusive and sustainable development.

Introduction
As key drivers of global economic development, SEZs (Otchia and Wiryawan, 2024) have emerged as crucial instruments for attracting international investment (Egger et al., 2023), boosting industrialization (Industrialization: Trends and Transformations, 1987), and promoting commerce (Chen et al., 2021). While the benefits of these zones are well-documented, their impact on the socio-economic development (Niaz, 2022) of nearby communities is still a matter of intense debate and research. This study explores the socio-economic outcomes of communities near SEZs (Brusevich, 2024a) from two perspectives: the global and the Indian context. The complex interplay of factors like legislative frameworks (Garrett, 2004), institutional capabilities (Rahman et al., 2022), and local socio-economic conditions (Fink et al., 2023) can be attributed to the varied degrees of success that SEZs have achieved in different countries around the world. India, with its dynamic legislative environment and diverse array of SEZs, presents a unique case study.

How well SEZs are implemented and their effectiveness in the Indian context remain open questions, particularly when compared to other countries. The aim is to evaluate the socio-economic impact of special economic zones (SEZs) on neighbouring communities.
both nationally and globally, as well as to identify patterns, challenges, and effective strategies for addressing these issues in SEZ development. The findings from this study are expected to enrich policy discussions and guide future research toward maximizing the benefits of SEZs for inclusive and sustainable development (Mensah, 2019). Furthermore, the study emphasizes the need for tailored strategies for designing and managing SEZs, considering each region's distinct socioeconomic characteristics. This approach will enhance our comprehension of how SEZs contribute to social and economic development.

**SEZ Policy and Implementation**

SEZs play a vital role in promoting export performance, attracting FDI, and stimulating economic growth (Brussevich, 2024a; Farole & Akinci, 2011; Mensah, 2019; Niaz, 2022). Despite differences in economic priorities, governance systems, and development levels, the policy framework and execution of SEZs differ significantly across countries. In the early 2000s, India established its SEZ policy, which has undergone numerous adjustments with the aim of fostering investment and industrial growth (Special Economic Zones, 2017). The Indian government's SEZ policy offers several advantages to both domestic and foreign investors, such as tax breaks, streamlined customs procedures, and funding for infrastructure (Mukherjee et al., 2016; Palit, 2009). Despite these perks, the establishment of SEZs in India has been plagued by a number of obstacles, including bureaucratic red-tape (Hattke et al., 2020), land acquisition difficulties (Xiao and Murray, 2019), and inconsistent policy implementation (Hudson et al., 2019). The protracted administrative procedures that postpone project approval and operation often lead to ineffective SEZs (Parwez, 2020). Moreover, the uncertainty brought on by the frequent changes to the legal and policy frameworks can negatively impact the productivity of SEZs (Mugano, 2021c). China and other countries have achieved tremendous success with SEZs, which are attributed to their well-developed infrastructure, constant governmental backing, and simplified administrative procedures (Knoerich et al., 2021). Fast project execution and efficient operations are hallmarks of China's SEZs, resulting from a highly coordinated government effort. Strategic location, an integrated development approach, and ongoing policy innovation have all been said to be why SEZs in China have succeeded (Lin et al., 2020). Other SEZs have also shown successful policy implementation; these SEZs are known for their investor-friendly policies (Farole, 2011), well-defined regulatory frameworks (Mugano, 2021a), and robust institutional backing (Hazakis, 2014). Attracting long-term investments requires a secure and predictable business environment, which these countries have achieved (Portales Undurraga and Rodríguez Chiffelle, 2021). Reducing bureaucratic red tape, improving coordination among different government departments, and making policy execution consistent are necessary to address the relative inefficiencies of Indian SEZs (Pandey et al., 2007). Enhancing the operational effectiveness of SEZs in India requires resolving land acquisition challenges and enhancing infrastructure amenities (Bajpai et al., 2022). To achieve its development objectives, India can maximize the socio-economic benefits of its SEZs by studying the successful models of SEZs in other nations. The research shows that SEZ policies should be implemented in a comprehensive and coordinated manner that satisfies the demands of investors while conforming to national development goals.

**Importance of Studying Socio-Economic Development in SEZ Vicinities**

There are a number of reasons for studying economic and social growth around SEZs (Abdi et al., 2022). First, SEZs are set up primarily to spur economic growth, bring in foreign investment, and generate jobs (Zeng, 2021). To determine whether these zones achieve their goals, it is necessary to understand how they will affect nearby communities (Zhan et al., 2020). Furthermore, the socioeconomic dynamics of neighbouring communities might be impacted by the incentives and exemptions that SEZs frequently obtain from government restrictions (Brinkley and Visser, 2022). The distributional impacts of these policies, such as their influence on local inhabitants' income levels, employment patterns, and living standards, can be better understood by examining the development outcomes of SEZ vicinity (Hu et al., 2024). Third, there are concerns about social equity and justice regarding SEZs because they are frequently linked to land acquisition and the displacement of communities (Aggarwal, 2012). Examining the distribution of advantages and costs among various social groups, particularly marginalized and vulnerable communities, is possible by studying the socioeconomic growth of SEZ vicinities (Brinkley and Visser, 2022; Brussevich, 2024a). Policymaking and decision-making are both aided by familiarity with the socio-economic dynamics of SEZ vicinities. To maximize the advantages for local communities while limiting potential negative consequences, policymakers should utilize empirical knowledge of SEZ development outcomes to create more tailored policies and regulatory frameworks (Farole,
More generally, questions on regional growth, urbanization, and industrialization can be better understood by examining SEZ vicinities (Wang, 2013). Economic development programs can be made more inclusive, sustainable, and resilient if scholars and politicians can decipher the intricate relationship between SEZs and local socioeconomic circumstances (Brussevich, 2024a; Niaz, 2022). To promote fair and sustainable progress, cultivate social cohesiveness and advance the welfare of communities impacted by SEZs, it is essential to examine socio-economic development in SEZ vicinities (Sarangedevot et al., 2014).

Review of literature

The literature review serves as a comprehensive summary and assessment of prior research on a particular subject. It highlights prevailing trends, identifies areas that require further exploration, and distills crucial discoveries. Integrating diverse sources facilitates the understanding of existing knowledge and contributes to the formulation of research questions and methodological approaches. The following are the reviews of the study:

Nallathiga (2007) explored the benefits of Special Economic Zones (SEZs) as isolated export zones, highlighting lower tariffs, higher productivity, and access to new technologies and management strategies. The study focused on India's adoption of SEZs to boost exports and industrial output, drawing parallels to China's economic success with SEZs.

Dhingra et al. (2009) examined the competitiveness of SEZs in India, emphasizing the importance of location in enhancing competitiveness according to the Resource Based View. The study suggested that SEZs serve as experimental grounds for market economies, aiding developing countries in improving their international trade standings.

Levien (2012) investigated the impact of "accumulation by dispossession" (ABD) in rural India, critiquing the capitalist-driven land grabs associated with SEZs. The study emphasized the socio-political implications of land dispossession for economic accumulation.

Pandit and Patel (2014) compared global SEZs with those in Gujarat and India, analyzing their structure, organization, and export performance. The study identified policy shortcomings at both central and state levels, suggesting areas for improvement.

The export Performance and Efficiency of Special Economic Zone in Haryana was studied by Kumari and Kumar (2017), which analyzed the economic success of three SEZs in Haryana, focusing on export performance and economic characteristics. Despite the policy initiative's limited response, the study provided insights into the operational dynamics of SEZs. Munyoro et al.'s 2017 study, The Significance of Special Economic Zones in the Economic Development of Zimbabwe: A Case Study of Zim Asset, recommended better stakeholder communication and consistent policy announcements in light of the lack of a direct correlation between SEZs and economic growth factors in Zimbabwe. Jamwal (2017) highlighted SEZs as tools for economic development in India, emphasizing the attraction of foreign direct investment (FDI) and the creation of employment. The study advocated for sustainable development practices to ensure long-term economic benefits. Chakraborty et al. (2017) analyzed FDI flows into Indian states via SEZs from 2001 to 2014, concluding that operational SEZs and their policies significantly enhance FDI inflows. The study recommended early policy implementation to maximize benefits.

Parwez (2018) assessed India's SEZ program, noting job creation, technological expertise, and export-focused investments. The study proposed institutional reorganization to boost industrialization and competitiveness. Pastusiak et al. (2018) evaluated SEZs in Poland using P. Warr's enclave model, finding positive impacts on the local economy and fostering new economic linkages. The study showcased Poland's extensive SEZ network as a successful model. Zia et al. (2018) compared SEZs under the China-Pakistan Economic Corridor (CPEC) with those in other developing and advanced economies. The study analyzed SEZs' social and economic impacts, offering insights into their role in attracting FDI and economic development. Narula and Zhan (2019) discussed the evolution and future of SEZs, focusing on adapting to changing comparative advantages and economic development levels. The study highlighted the need for targeted locational advantages and the sustainable growth of SEZs. Karambakuwa et al. (2020) identified success factors for SEZs and transnational zones in Southern Africa, drawing lessons from international best practices. The study emphasized the role of SEZs in economic growth, investment, and job creation. Butt (2021) explored the development and management of integrated SEZs under the CPEC, proposing policy recommendations to stimulate economic growth. The study highlighted SEZs' rapid expansion and positive economic effects in developing economies.
the effectiveness of Pakistan's SEZ framework, promoting economic development. Alhassan et al. (2023) assessed the impact of SEZs on sustainable development in Nigeria, finding significant contributions to exports and employment. The study suggested that traditional financing methods for the mining sector are insufficient for achieving development goals.

Brussevich (2024) examined the socio-economic impact of SEZs in Cambodia, highlighting their role in reducing income inequality, particularly benefiting female workers. The study also noted significant increases in land values in SEZ districts. Iqbal & Ahmad (2024) analyzed the relationship between SEZs and social development in Pakistan, drawing comparisons with China's SEZ success. The study focused on business proficiency and facilitation, using secondary data from China and Pakistan to advocate for human involvement and economic progress.

**Hypothesis Development**

**H1: SEZs in India are less efficient in terms of policy implementation and operational performance than SEZs in other countries.**

Limited research has been conducted in India to assess the influence of place-based policies. Notable among these studies is Görg and Mulyukova (2024), which examines Special Economic Zones (SEZs) in India and finds no evidence of positive developmental spillovers. Gallé et al. (2022) investigated the employment effects of SEZs established between 2005 and 2013. Blakeslee et al. (2022) examine the effects of the Industrial Areas program in one Indian state, noting a significant increase in firm creation and employment in affected villages. Hasan et al. (2021) focus on industrially backward districts, identifying the short-term effects of a tax-exemption program in the better-off backward districts. Shenoy (2018) evaluates the developmental impact of investment subsidies in a newly created Indian state, finding improvements in nightlight activity and household welfare. Chaurey (2017) studies the federally financed New Industrial Policy in two states, observing significant increases in employment, the number of factories, total output, and wage bills in treated states. While these studies provide valuable insights into the effects of place-based policies in India, they predominantly focus on specific states, whereas the SEZ program was available to all states.

**H2: Higher levels of stakeholder engagement in SEZ governance are correlated with better regulatory compliance and operational transparency.**

Engaging stakeholders signifies a dedication to improving performance, fuelled by a particular mindset towards the organization and its principles (Fernandes et al., 2022). The feeling of psychological presence, or the sense of fitting in and being part of the organizational culture, contributes to behaviours that lead to successful outcomes. Engagement is a basic human characteristic in the workplace, characterized by enthusiasm, dedication, and efficiency (Kahn, 1990). It encompasses a positive, comprehensive, and enduring affective state with behavioural, emotional, and cognitive dimensions reflected in vigour, dedication and absorption (Schaufler et al., 2002).

**Objectives and Methodology**

1. The primary objective is to examine India's policy frameworks and operational efficiencies of special economic zones (SEZs).
2. To assess the policy framework and operational efficiencies of special economic zones (SEZs) in India in comparison to those in other nations.

This will be achieved through a comprehensive analysis of SEZs, which will also evaluate the policy implementation and operational performance of Indian SEZs relative to their international counterparts.

The main data source for this study was managers from companies located in Special Economic Zones (SEZs) across four Indian states: Uttar Pradesh, Maharashtra, Tamil Nadu, and Karnataka. The researchers initially invited these managers to participate through emails and followed up with emails, phone calls, and personal visits to improve response rates. The researchers used Google survey response forms to gather data and personal interactions for clarity. A representative sample of 500 respondents was selected using a random sampling method, with 125 participants chosen from each state. The data collection process spanned six months, from February to August 2023. The researchers employed Cochran's formula to determine the required sample size, which indicated a need for 384 participants; however, the target was set at 500 to reduce statistical errors. The data collection instrument was a well-structured questionnaire developed based on previous research, divided into two parts: demographic profiles (age, gender, educational qualification, state and work experience) and assessments of study variables. The questionnaire contained 42 questions addressing 12 variables relevant to the study's objectives. This systematic approach ensured the collection of high-quality, relevant data for a robust analysis of export promotion measures in India's SEZs. Statistical tools like mean, coefficient of variation (Brown, 1998), standard deviation and Pie Charts, ANOVA (Stöhrle and Wold, 1989) and Linear Regression were used to make predictions based on the collected data.
The survey respondents were distributed across different age groups, with the 46-55 age range being the most prevalent, representing 33.6% of the total. This is followed by those aged 56 and above and the 26-35 age group, each accounting for 20% of the population. The younger age groups, including 18-25-year-olds and 36-45-year-olds, were less represented, making up 10% and 16.4% of the total, respectively. The age distribution indicates that middle-aged individuals were more involved in the survey, as shown in figure 1.

The data showed a predominance of male respondents, accounting for 66.4% of the total, while females only comprised 33.6%. This stark difference highlights a gender disparity in survey participation, demonstrating that males were almost twice as likely as females to participate in the study as shown in figure 2.

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**Table 1. Descriptive Statistics.**

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>18-25</td>
<td>50</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>26-35</td>
<td>100</td>
<td>20.0</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>36-45</td>
<td>82</td>
<td>16.4</td>
<td>16.4</td>
</tr>
<tr>
<td></td>
<td>46-55</td>
<td>168</td>
<td>33.6</td>
<td>33.6</td>
</tr>
<tr>
<td></td>
<td>56 and above</td>
<td>100</td>
<td>20.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
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</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Valid</th>
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<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
<tbody>
<tr>
<td>Valid</td>
<td>332</td>
<td>66.4</td>
<td>66.4</td>
<td>66.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>168</td>
<td>33.6</td>
<td>33.6</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Educational Qualification**

<table>
<thead>
<tr>
<th>Qualification</th>
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<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>High School</td>
<td>213</td>
<td>42.6</td>
<td>42.6</td>
</tr>
<tr>
<td></td>
<td>Bachelor's Degree</td>
<td>79</td>
<td>15.8</td>
<td>58.4</td>
</tr>
<tr>
<td></td>
<td>Master's Degree</td>
<td>78</td>
<td>15.6</td>
<td>74.0</td>
</tr>
<tr>
<td></td>
<td>PhD or equivalent</td>
<td>130</td>
<td>26.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Authors compilation

**Gender Distribution**

The data showed a predominance of male respondents, accounting for 66.4% of the total, while females only comprised 33.6%. This stark difference highlights a gender disparity in survey participation, demonstrating that males were almost twice as likely as females to participate in the study as shown in figure 2.

**Figure 1. Age Group Statistics.**
Educational qualifications

The educational level of the participants varied, with a significant number (42.6%) holding a high school diploma. Those with a PhD or equivalent represented 26% of the total, indicating a substantial presence of highly educated individuals. Bachelor’s and master’s degree holders are relatively fewer, accounting for 15.8% and 15.6%, respectively. This varied educational background suggests diverse groups in terms of their knowledge and expertise, as shown in figure 3.

Results and Discussion

Testing of Hypothesis

H1: SEZs in India are less efficient in terms of policy implementation and operational performance than those in other countries.
Table 2: One-Sample Statistics.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy implementation</td>
<td>500</td>
<td>3.4880</td>
<td>1.28575</td>
<td>0.05750</td>
</tr>
<tr>
<td>and operational performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in India</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy implementation</td>
<td>500</td>
<td>2.9400</td>
<td>1.34164</td>
<td>0.06000</td>
</tr>
<tr>
<td>and operational performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in other countries</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: Authors compilation

Table 2.0 shows a comparison between SEZs in India and those in other countries on policy implementation and operational performance revealing notable differences. The mean score for policy implementation and operational performance in Indian SEZs was 3.488, whereas the mean score for SEZs in other countries was 2.940. This suggests that, on average, SEZs in India are perceived to be more efficient in these aspects than their counterparts in other countries.

Table 3. One-Sample Test.

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Policy implementation</td>
<td>60.660</td>
<td>499</td>
<td>0.000</td>
<td>3.48800</td>
<td>3.3750 - 3.6010</td>
</tr>
<tr>
<td>and operational performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Upper</td>
</tr>
<tr>
<td>in India</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy implementation</td>
<td>49.000</td>
<td>499</td>
<td>0.000</td>
<td>2.94000</td>
<td>2.8221 - 3.0579</td>
</tr>
<tr>
<td>and operational performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in other countries</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors compilation

Table 3 indicates that the one-sample t-test (Francis and Jakicic, 2022) results for both groups are statistically significant (p-value < 0.001), indicating that the mean scores for policy implementation and operational performance in both Indian and other countries are significantly different from zero. The t-value for Indian SEZs is 60.660, for SEZs in other countries, it is 49.000 with 499 degrees of freedom. The 95% confidence interval for the mean difference in India was between 3.375 and 3.601 and for other countries, it was between 2.822 and 3.058.

Interpretation

These results suggest that, while SEZs in India are rated higher on average for policy implementation and operational performance, the difference is significant and noteworthy. However, it should be considered that this interpretation depends on the context and specific indicators used to measure policy implementation and operational performance. Moreover, while statistical significance is high, it is essential to consider other qualitative aspects and contextual differences between countries when evaluating the overall efficiency of SEZs.

In summary, these data do not support the hypothesis that SEZs in India are less efficient in terms of policy implementation and operational performance than SEZs in other countries. Instead, the data indicate that Indian SEZs are perceived to have better policy implementation and operational performance, on average.

**H2: Higher levels of stakeholder engagement in SEZ governance correlate with better regulatory compliance and operational transparency.**

Correlation analysis explores the relationship between stakeholder engagement in SEZ governance, regulatory compliance, and operational transparency. The results indicated strong positive correlations between these variables.

**Stakeholder Engagement and Regulatory Compliance**

Table 4 demonstrates a strong positive correlation between stakeholder engagement in SEZ governance and regulatory compliance. This is evidenced by a Pearson correlation coefficient of 0.751, which is statistically significant at the 0.01 level (p-value = 0.001).
in these areas than those in other countries. Conversely, average, SEZs in India are perceived to be more efficient for SEZs in other countries. This indicates that, on operational performance was higher for Indian SEZs than the mean score for policy implementation and confidence intervals indicating clear differences. Values (60.660 for India, 49.000 for others), and significant t

The Pearson correlation coefficient between regulatory compliance and operational transparency is 0.733, with a p-value of 0.000. This indicates a strong positive relationship, suggesting that better regulatory compliance is associated with higher operational transparency.

**Interpretation**

The significant positive correlations among stakeholder engagement, regulatory compliance, and operational transparency support the hypothesis that higher levels of stakeholder engagement in SEZ governance (Mugano, 2021b) are correlated with better regulatory compliance and operational transparency. These findings highlight the importance of involving stakeholders in governance processes to enhance compliance with regulations and improve operational transparency. In practical terms, SEZs that foster active engagement with stakeholders are likely to experience more effective regulatory adherence and cleaner and more transparent operational practices.

**Conclusion**

Statistical analysis shows Indian SEZs outperform others, with higher mean scores in policy and operational performance (mean score: 3.488 vs. 2.940), significant t-values (60.660 for India, 49.000 for others), and confidence intervals indicating clear differences. The study concludes that Hypothesis H1 is rejected. The mean score for policy implementation and operational performance was higher for Indian SEZs than for SEZs in other countries. This indicates that, on average, SEZs in India are perceived to be more efficient in these areas than those in other countries. Conversely, Hypothesis H2 is accepted. Correlation analysis shows a strong positive relationship between stakeholder engagement, regulatory compliance, and operational transparency.

In summary, it can be concluded that Indian SEZs generally demonstrate higher policy implementation and operational performance but still face challenges like bureaucratic inefficiencies and land acquisition issues. The study emphasizes the importance of stakeholder engagement, improved regulatory compliance, and operational transparency, advocating for inclusive governance practices. These insights can guide policy reforms to enhance the effectiveness of SEZs (“Special Economic Zones) as an Element of Sustainable Development in Emerging Countries: A Case of Poland,” 2023), maximizing their potential for sustainable and inclusive economic growth. By bridging policy design and on-ground implementation, this research offers practical recommendations for policymakers and stakeholders to optimize SEZ benefits. The insights drawn from this study provide significant information about the real-world and important effects of the points outlined below.

**Theoretical Implications**

The study highlights the critical role of stakeholder engagement in enhancing regulatory compliance and operational transparency. This supports theories that emphasize the importance of inclusive governance practices in achieving effective policy implementation. The findings suggest that institutional structures and processes, such as streamlined regulations and participatory governance, significantly impact the operational efficiency of SEZs. This aligns with institutional theory, which posits that the surrounding institutional environment influences organizational success. The study contributes to development economics by providing empirical evidence on how SEZs can drive socio-economic development. It underscores the need for balanced regional development, addressing both economic growth and social equity.

### Table 4. Correlations between stakeholder engagement in SEZ governance, regulatory compliance, and operational transparency.

<table>
<thead>
<tr>
<th></th>
<th>Stakeholder engagement</th>
<th>Regulatory compliance</th>
<th>Operational transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.751**</td>
<td>.834**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.751**</td>
<td>1</td>
<td>.733**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.834**</td>
<td>.733**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

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

A value of 0.834 indicates a strong positive association, and this value is statistically significant at the 0.01 level, with a p-value of 0.000, indicating that the relationship is unlikely to be due to chance. This suggests that increased stakeholder engagement is strongly associated with greater operational transparency in SEZ governance.

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Practical Implications

The insights from this study can inform policymakers on the need to streamline regulations and reduce bureaucratic barriers. This can increase the operational efficiency of SEZs. It includes reforming land acquisition policies to ensure transparency, fair negotiations, and fair compensation, which can help minimize conflicts with local communities. Practical recommendations include reforming land acquisition policies to ensure transparency, fair negotiations, and fair compensation, which can help minimize conflicts with local communities. Benchmarking Indian SEZs against international counterparts and adopting successful practices can refine operational strategies and enhance competitiveness. Developing robust monitoring and reporting systems, including regular audits and the use of digital platforms, can ensure transparency and accountability in SEZ operations. Encouraging the adoption of green technologies and eco-friendly infrastructure within SEZs can help balance economic growth with environmental stewardship. Allocating resources to improve physical and social infrastructure in and around SEZs can attract businesses and improve the quality of life for neighbouring communities. Designing policies to ensure equitable distribution of benefits among all stakeholders, particularly marginalized communities, can support inclusive growth and improved living standards. Implementing key performance indicators (KPIs) and conducting regular evaluations can help continuously monitor and assess SEZ performance, identifying areas for improvement and measuring socio-economic impact.

Suggestions and Recommendations

Regulations should be streamlined to improve SEZ efficiency, and bureaucratic barriers should be reduced with a single-window clearance system for faster approvals. Transparent and fair land acquisition policies can ensure fair compensation and reduce conflicts with local communities. Enhancing stakeholder involvement through participatory governance and regular consultations can improve regulatory compliance and foster a sense of ownership. Benchmarking Indian SEZs against global counterparts and adopting best practices can refine strategies and boost innovation and competitiveness. Updating policies to align with international best practices and current economic conditions is essential. Implementing robust monitoring and reporting systems with regular audits and digital platforms ensures transparency. Promoting environmentally sustainable practices within SEZs (Ahmed et al., 2020) by encouraging green technologies and eco-friendly infrastructure is crucial for balancing economic growth with environmental stewardship. Investing in physical and social infrastructure around SEZs, such as transportation, healthcare, and education, can attract businesses and improve the quality of life for nearby communities. Policies should ensure equitable benefits for all stakeholders, especially marginalized groups, and support job creation and better living standards. Continuous monitoring and assessment of SEZ performance through key performance indicators (KPIs) and regular evaluations can help identify areas for improvement and measure socio-economic impact.

Limitations and Future Research Directions

The study's limitations primarily rely on quantitative data, which may neglect qualitative factors like socio-economic consequences for local communities and long-term environmental effects. Furthermore, the data only extends up until 2023, which may not include the most recent trends. The study's focus on specific Special Economic Zones (SEZs) limits its applicability to other regions in India. The reliance on secondary data sources and variations in state and local policies could introduce biases. Lastly, the study does not address internal management practices and corporate governance within SEZs. Integrating qualitative methods, such as case studies and interviews, for future research can provide a more comprehensive perspective on SEZ impacts. Longitudinal studies can track SEZs' long-term sustainability and adaptability. Investigating the impact of Industry 4.0 technologies on SEZs can enhance their productivity and competitiveness. Comparative analyses with SEZs in other countries can provide benchmarks and best practices. Finally, examining internal management practices and corporate governance within SEZs can improve their operational efficiency and overall performance.

Conflict of interest

The authors declare that they have no conflict of interest.

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