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Impact of State Special Economic Zone (SEZ) Act/Policy on Investment – A State Level Analysis in India

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Abstract

Special Economic Zones (SEZs) are considered as a model for economic growth and development. The central SEZ Act, 2005 is the mother act to govern and regulate SEZs in India. In addition, state governments are allowed to make their own SEZ Act and policy to prescribe state-specific SEZ law for better regulation of SEZs. SEZ developers and units, both enjoy certain fiscal and non-fiscal benefits provided by both central and state SEZ Act and policy. All the states in India have not enacted state SEZ Act/Policy. In this backdrop, this paper identifies regional disparity among state-wise investment in SEZs. Further, this paper identifies the impact of the state SEZ Act and policy on the investment of the respective state. Panel data regression (Random Effect Model) is used on the available data for the period 2011-12 to 2022-23. The study reveals that state level SEZ Act and/or policy is quite a significant variable in bringing investment in a state in India.

Keywords: Special Economic Zone; SEZ Investment; State-wise SEZ Investment: State SEZ Act; SEZ Policy

Introduction

Special Economic Zone (SEZ) is a demarcated area within the national boundary of a country specifically designed to expedite economic development. India is the first country in Asia to set-up Export Processing Zone (EPZ) as early as in 1965 in Kandla, Gujarat . Motivated by the China's success story in SEZ, the central government set up another six SEZ till 1990 in different parts of the country. All these EPZs were multi-product EPZ and primarily aimed to enhance India's export of goods and services. In 1994, the central government allowed state government(s) and private entities to set-up and operate EPZ. In the year 2000, all the EPZs were converted to SEZs. The primary difference between EPZ and SEZ is that the former one is dedicated industrial estate and the latter one is an industrial township. To invite more private investment and have a stable policy framework, the government enacted SEZ Act, 2005 which came into force in 2006.

SEZs enjoys both fiscal and non-fiscal benefits provided by central and state governments. Fiscal benefits include exemption from payment of income tax , upfront exemption from payment of Goods and Service Tax (GST), exemption from excise and customs duty, inter alia. Non-fiscal benefits are single window clearance, dedicated payment gateway, easy clearance of goods from ports, among others. The central benefits are same for all states.

One of the major objectives of SEZ Act is to bring investment from domestic as well as foreign sources. The government was predictable that the SEZ Act will trigger a large flow of foreign and domestic investment in infrastructure and productive capacity (C&AG Performance Audit, 2014), leading to generation of additional economic activity and creation of employment opportunities. State governments also intended to take most of the benefits of SEZ scheme for enhancement of state's socio-economic condition through increased employment prospects and industrial development. Many state governments have developed State SEZ Policies in accordance with Government of India (GoI) recommendations for SEZs to offer a thorough framework for the development, operation, and sustainability of the SEZ in the State.

After the enactment of SEZ Act, 2005, SEZs started mushrooming in India. By the end of 31st March, 2024, 280 SEZs were operational in the country, including 7 central and 12 state government / private sector SEZs which were set-up prior to the enactment of SEZ

Act, 2005 . The total investment attracted by these SEZs till 31st December, 2023 is shown in Table 1. The investment increased by more than 160 times during the period 2006 to 2023. The central government invested heavily on EPZs in the early days. Apart from the seven central SEZs which were set up before SEZ Act came into force, the central government has not invested any amount on any new SEZs notified under the SEZ Act, 2005. Moreover, after the introduction of SEZ Act, no SEZs has been developed by central government.

Table 1: Investment in SEZ as on 31.12.2023

				(Figures in INR)
Investment	**Central Government SEZs**	**State/Pvt. SEZs set up before 2006**	**SEZs notified under the SEZ Act, 2005**	**Total**
Investment (as on February, 2006)	2,279.20 Cr.	1,756.31 Cr.	-	4,035.51 Cr.
Incremental Investment	29,694.45 Cr.	12,459.77 Cr.	6,46,723.84 Cr.	6,88,878 Cr.
Total Investment (As on 31st December, 2023)	31,973.65 Cr.	14,216.08 Cr.	6,46,723.84 Cr.	6,92,914 Cr.

(Source: Fact Sheet on SEZ as on 30.04.2024 available at www.sezindia.nic.in*)*

SEZ Act, 2005 very explicitly stated that SEZs can be developed either by central government or state governments or private sectors or any combinations thereof . Between February 2006 and December 2023, investment in SEZs surged from INR 4,036 crores to INR 6,92,914 crores. This increase is mainly made by private players after the enactment of SEZ Act in 2006. However, when we see the state-wise investment data, we find asymmetric SEZ investment among the states. Only 16 states in India have attracted SEZ investment as on 31st March, 2023 . Among these, only 3 states account for 62% of total investment. These states are Gujarat, Karnataka, and Maharashtra. Likewise, none of the north eastern states or Himalayan states have received any investment in SEZ scheme. Now the obvious questions come, that, if central government benefits in respect of SEZs are same to all states, then why there is difference in investment among states? Does state SEZ Act or Policy have any impact in bringing investment in SEZ?

This paper addresses the above questions. Section 2 discusses about the present status of state-wise SEZ Act or Policy and asymmetric distribution of SEZ investment among states. Existing literatures and research objectives have been discussed in section 3. Period of study, research methods and source & collection of data is addressed in section 4, section 5 and section 6 respectively. Section 7 shows the analysis and interpretation of the result. Section 8 notes policy recommendation followed by conclusion at last section.

Current Status of State SEZ Act/Policy and Investment in SEZ

Not all the states in India have been able to attract investment in SEZ scheme. Reasons might be manifold. One probable reason is the state's willingness to attract investment in SEZ scheme. This willingness may be made by making dedicated state SEZ Act / Policy which many states have already made. This helps investor to understand state's exact stand on the SEZ issue. The states which have not formulate policy may have similar willingness but absence of written document makes it difficult to let investor know government's thinking. Absence of such document indicates policy instability for long run. It may be noted that, in addition to central SEZ Act, 2005 which has been given effect from 2006, many state governments have their own set of SEZ Act / Policy. Some of the states made policy even before the central SEZ Act was passed. Like, the state of West Bengal made the SEZ policy in 2001 and SEZ Act in 2003. Table 2 shows states having SEZ Act/policy with their year of enactment or implementation. While states like Maharashtra, Kerala, Karnataka, and Uttar Pradesh have SEZ policies, no Act(s) or Rule(s) relevant to SEZ have been passed in those states, which is an important point to note. These states account for 39% of operating SEZs in the country . On the other hand, despite having a decade old SEZ Act and Rules, states like West Bengal, Madhya Pradesh and Haryana, could not bring in much investment as expected. The state of West Bengal even after having an active SEZ Act and Policy did not give recommendation for set up SEZ in recent past.

Table 2: State-wise enactment details of SEZ Act and / or SEZ Policy

States	Year in which SEZ Policy was passed	Year in which SEZ Act was passed
Chandigarh	2005	No
Gujarat	No	2004
Haryana	2006	2006
Jharkhand	2003	No
Karnataka	2009	No
Kerala	2008	No
Madhya Pradesh	2001	2003

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Maharashtra	2001	No
Punjab	2005	2009
Tamil Nadu	2003	2005
Uttar Pradesh	2007	No
West Bengal	2001	2003

(Source: Compiled from available data at http://www.sezindia.nic.in/ and Lok Sabha Starred Question No. 483, for answer on 2nd April, 2018; Note: The word "No" above indicates that the state has not yet passed a separate SEZ Act. / Policy)

Another reason may be geographical location of state. Coastal states will have better investment opportunity for export of goods. Similarly states with availability of any particular mineral may attract investment. As SEZs primary thrust is to export, manufacturing SEZs shall tend to locate near port for easy transportation facility. However, service SEZs like, Information Technology / Information Technology enabled Services (IT/ITeS) SEZ, engineering service SEZ, financial service SEZ may not be located near port. These SEZs will locate where skilled labour and easy connectivity is established.

The third reason may be infrastructure facility. A state with higher infrastructure facility will have better likelihood to attract investment. Infrastructure facility includes, road connectivity, availability of port, power, banking services etc. Hence, taking all discussions together, it can be said that ability of a state to get investment in SEZ shall depend in more than one factor.

Only 16 states in the country had operational SEZs as on 31st December, 2022 . State-wise investment made in SEZs in India are given in Table 3. As stated in previous section, there are 16 states in India which have received SEZ investment as on 31st March, 2023. Out of these 16 states, only 11 states have either SEZ Act or Policy. It implies there are some states that has not formulated any SEZ Act or Policy but has received SEZ investment over a considerable period. This is depicted in Figure 1.

Figure 1: SEZ Act/Policy and SEZ Investment Matrix

<table>
<tr><td colspan="2" rowspan="2"></td><td colspan="2">Investment Received</td></tr>
<tr><td>Yes</td><td>No</td></tr>
<tr><td rowspan="2">SEZ Act / Policy</td><td>Yes</td><td>11 States/UT[1]
Investment value Rs.5,41,146 crore as on 31.03.2023</td><td>1 State[2]</td></tr>
<tr><td>No</td><td>5 States[3]
Investment value
Rs.1,19,038 crore as on 31.03.2023</td><td></td></tr>
</table>

(Source: Author's own compilation from state-wise investment data provided by SEZ Section, Dept. of Commerce, Govt. of India)

It is seen from the above figure that around 18% of SEZ investment as on 31st March, 2023 is in those 5 states which have not formulated any SEZ Act or Policy. These 5 states also comprise 27% and 26% of notified SEZs and Operational SEZs respectively of the country as on 31.12.2022 . Thus, it is evident that even if there is no state SEZ Act or Policy, some states are receiving investment in SEZs and that is quite significant. So having state SEZ Act or Policy is not the sole factor to attract investment in any state. This statement can again be validated by looking at the state of Jharkhand where even after having a SEZ Policy since 2003 no investment has been attracted. Thus, it can be said that there are some other factors, other than SEZ Act/Policy, which attracts investment in SEZs.

Further to test whether state SEZ Act/Policy has the sole effect in attracting investment, year-on-year growth in investment is analysed for those states which have formulated state SEZ Act/Policy. The result of the same is depicted in Table 4.

Data reveals that there is high volatility in year-on-year growth in investment. Even in some states, the investments have been withdrawn which is represented by negative figure in the table. While Karnataka recorded an average

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growth rate of 30%, both Kerala and Maharashtra recorded 13% each. Except the state of Gujarat and Uttar Pradesh, the standard deviation in growth rates for all other states exceeds 8% and above; which indicates high uncertainty and volatility in investment. For the state of Karnataka and Kerala, the standard deviation remained 0.41 and 0.25 respectively. Hence within the state and among the states, there are deviations in respect of investment in SEZs. This again validates, having SEZ Act/Policy cannot be sole variable to bring investment in any state. There are other factors which also plays an important role in investment decision.

Combining the above observations, it is clear that a thorough review of literature shall help to identify investment attracting variable(s). Nevertheless, an analyse of each state's SEZ Act/Policy will be useful to check homogeneity among them and to check its effect on investment decision. [subsequently analysed].

Review of Literature and Research Objective

Previous studies have shown that private investment depends upon physical infrastructure (Krishna, M. J., & Venugopal, J., 2003), quality of governance (Aysan, A.F. et. al., 2006), government expenditure (Akinlo, T., & Oyeleke, O. J., 2018), economic uncertainty (Öge Güney, P., 2020), labour productivity (Stundziene, A. & Saboniene, A., 2019), low production cost and low labour wage (Nackhavong, K. & Thanitbenjasith, P., 2020) among others. Studies have also shown political stability (Kurecic, P. & Kokotovic, F., 2017) and fiscal reforms (Hasan, M.A. et. al., 1996) are the two most important factors determining investment inflows across states. It is worth to mention that factors like easy availability of port, natural resources, suitable weather conditions etc., also play a vital role in determining investment proposals (Chakraborty, T. et. al., 2017). Sharma, S.P. et.al (2015) in their study has found that operating in Domestic Tariff Area (DTA) has become more beneficial as compared to operating within SEZs especially after withdrawal of exemption for Minimum Alternate Tax (MAT) and Dividend Distribution Tax (DDT) for the SEZs. Naeem, S. et. al (2020) have suggested that competitiveness, not financial incentives, should be the basis for zone promotions; and for sustainable operations inside the zones, joint ventures and PPP should be promoted. Susanne, A. et al. (2023) have also stated that investment is attracted by an effective industrial infrastructure, strategic location, and service availability within the zones. Contrarily, fiscal incentives have a negligible impact on investment choices.

So, some factors are man-made and controllable while others are non-controllable. Disparities in investments in SEZs, among states and regions within the state, have been steadily increasing in past few years, in spite of high growth rates. The benefits of high growth rates did not reach to backward regions/states.

As on 31.12.2022, Tamil Nadu has highest number (50) of operational SEZs followed by Maharashtra (37), Telangana (36), Karnataka (34), Andhra Pradesh (25), Gujarat (21) & Kerala (20). These states account for 82% of total operating SEZs in country .

Thus, it is noted that any investment in SEZ is made after taking into account many factors, including benefits provided by state government through state SEZ Act and/or Policy. In this context, it is pertinent to check the impact of State SEZ Act/policy in bringing the investment to the State. Though various studies have already established the determinants of investment among states, no study has been found on investment determinants among states in relation to SEZs and the importance of SEZ Act/Policy thereof. As no studies has yet covered this aspect, there exist a research gap. This research gap is addressed by making the following research objective.

To study the impact of State SEZ Act and Policy on investment made in SEZs in the concerned State.

Table 3: State-wise Investment Made in Special Economic Zone (SEZs) in India (2011-12 to 2022-23)

State/UT	Investments# (in Rupees Crore)											
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**
Andhra Pradesh	17,941	25,425	31,275	20,149	25,555	23,881	24,721	25,656	27,842	31,174	39,470	41,738
Chandigarh	229	213	228	260	282	349	368	382	390	398	438	552
Chhattisgarh	0	617	218	864	1,076	1,470	1,741	1,741	1,635	1,635	1,635	1,635
Goa	297	297	297	297	297	297	297	297	297	297	0	0
Gujarat	91,520	98,529	1,03,600	1,22,702	1,35,135	1,50,302	1,69,335	1,81,986	1,93,174	2,08,067	2,19,565	2,23,398
Haryana	6,166	6,426	7,022	7,331	9,988	9,499	11,218	12,286	12,988	14,319	14,287	14,616
Karnataka	9,073	11,910	29,810	37,967	37,967	54,460	62,582	75,016	97,496	1,04,489	1,05,911	1,06,650
Kerala	5,557	5,536	6,158	6,003	6,114	7,174	13,539	13,591	16,553	17,034	17,192	17,984
Madhya Pradesh	2,821	3,119	3,884	3,980	3,995	4,307	6,022	6,205	6,363	7,291	7,350	7,612
Maharashtra	21,919	32,939	39,898	47,997	48,127	51,429	57,899	60,276	67,195	72,235	75,571	79,718
Odisha	6,537	3,118	21,978	21,981	24,124	17,165	17,713	18,792	20,119	20,434	20,444	20,444
Punjab	529	551	560	673	679	837	866	921	934	940	961	983
Rajasthan	762	1,105	1,115	1,216	1,387	1,537	1,637	1,822	2,248	2,315	2,505	2,611
Tamil Nadu	27,485	33,871	37,168	41,487	48,476	56,037	61,578	56,803	62,997	66,157	64,903	54,908
Telangana	0	0	0	12,457	17,416	26,160	24,448	28,024	34,706	42,658	48,100	52,610
Uttar Pradesh	8,426	10,012	10,664	10,778	12,555	14,804	16,470	18,636	20,825	22,105	24,408	27,759
Uttarakhand	23	23	0	0	0	0	0	0	0	0	0	0
West Bengal	2,590	3,026	2,788	2,651	3,032	3,483	4,485	5,210	5,974	5,951	6,966	6966
India	**2,01,875**	**2,36,717**	**2,96,663**	**3,38,794**	**3,76,494**	**4,23,189**	**4,74,917**	**5,07,644**	**5,71,735**	**6,17,499**	**6,49,706**	**6,60,184**

(Source: Data Provided by SEZ Section, Dept. of Commerce) # Calculated on cumulative basis.

Table 4: Year-on-Year Percent growth in investment for the States having SEZ Act/Policy

States/UTs	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Mean	S.D.
Chandigarh	(7%)	7%	14%	8%	24%	5%	4%	2%	2%	10%	26%	*9%*	*9%*
Gujarat	8%	5%	18%	10%	11%	13%	7%	6%	8%	6%	2%	*9%*	*4%*
Haryana	4%	9%	4%	36%	(5%)	18%	10%	6%	10%	0%	2%	*9%*	*10%*
Karnataka	31%	150%	27%	0%	43%	15%	20%	30%	7%	1%	1%	*30%*	*41%*
Kerala	0%	11%	(3%)	2%	17%	89%	0%	22%	3%	1%	5%	*13%*	*25%*
Madhya Pradesh	11%	25%	2%	0%	8%	40%	3%	3%	15%	1%	4%	*10%*	*12%*
Maharashtra	50%	21%	20%	0%	7%	13%	4%	11%	8%	5%	5%	*13%*	*13%*
Punjab	4%	2%	20%	1%	23%	3%	6%	1%	1%	2%	2%	*6%*	*8%*
Tamil Nadu	23%	10%	12%	17%	16%	10%	(8%)	11%	5%	(2%)	(15%)	*7%*	*11%*
Uttar Pradesh	19%	7%	1%	16%	18%	11%	13%	12%	6%	10%	14%	*12%*	*5%*
West Bengal	17%	(8%)	(5%)	14%	15%	29%	16%	15%	0%	17%	0%	*10%*	*11%*

(Source: Author's own computation from state-wise investment data provided by SEZ Section, Dept. of Commerce, Govt. of India; Note: Figures in bracket indicates negative growth)Period of Study

The study is based on the period from 2011-12 to 2022-23. Data for earlier periods were not available and thus could not be used.

Research Methods

Existing literature shows that there are broadly four factors which directly or indirectly affect the locational decision of investment. These are state of economy, labour, infrastructure and government policy . Each of these factors can be measured by a single or many variables. For the purpose of present study, the representative variables as shown in Table 5 have been taken against their factor. The reason for choosing these representative variables against their factor are given below.

Table 5: Investment attracting factors and their representative variables

Sl. No.	Factors	Representative Variables
1	Economy of the State	Per capita Net State Domestic Product (NSDP)
2	Labour	Availability of labour
3	Infrastructure	Availability of power
4	Government Policy	State specific SEZ Act/Policy

Per Capita Net State Domestic Product (NSDP): The net book value of all the finished products and services produced geographically inside a state over a specific time period is measured by the NSDP. When we divide the NSDP by the total population of the state we get per capita NSDP. The NSDP is regarded as a more accurate economic indicator than the GSDP since it includes information on the amount of money invested in maintaining and upgrading outdated machinery. The GDP level can rise due to an increase in depreciation alone, but this does not mean that the social and economic conditions of the nation have improved. NSDP thus serve as a production-based indicator of a state's economic health.

Availability of Labour: Industry location decisions are significantly influenced by the availability of an educated, competent workforce at competitive cost in a supportive labour environment (Parmar, C. K. & Ghosh, P. P., 2021). Hence, availability of labour represents the entire labour factor.

Availability of Power: A state's infrastructure is represented by many variables like road density, power shortage and average power production, rail network in state, number of bank branches in a state, cargo handled in port etc. Among these, for the present study, availability of power has been chosen. It is accepted that SEZs are mainly established for export of goods after manufacturing. Being a manufacturing unit, requirement of power is essential. Hence higher the power consumption, higher the production (may be assumed). Thus, availability of power represents the business infrastructure in that state.

State Specific SEZ Act/Policy: For the purpose of present study, State SEZ Act / Policy is the best representative of government policy. To attract investment in a state, if state makes a policy it indicates, there exist government policy and vice-versa. To understand the effect of State SEZ Act / Policy, only those states which have formulated any Act and/or Policy are being considered in the present study.

Decomposing State SEZ Act/Policy:

Next, to understand the degree of effectiveness of state SEZ Act / Policy, each of the policy have been decomposed. For this purpose, for every state, state SEZ Act/Policy has been analysed. After going through the Act/Policy, major components which work as stimulus to developer or unit to make investment, have been identified. These components vary from state to state. It is assumed that more the number of components in an Act/Policy, more the Act/policy is 'investment friendly'. As these components are qualitative sub-variables and to measure the impact of entire Act/Policy as a whole, an equal weight has been assigned to each component. Thus, the summation of components has been recognized as total score for that Act/Policy. The identified components of each state along with total score have been depicted in Table 6.

The present study is conducted with state SEZ investment, being dependent variable and other considered variables as independent variables (as shown in Table 5). The study is based on 11 states which has formulated state SEZ Act/Policy and received SEZ investment. Panel Data regression analysis method has been done to study the economic relationship using cross section series with a time dimension. The group of independent variables has been combined which represent investment potential. Thus, the model is given as follows:

Investment in SEZ = f (State Economy, Labour Measure, Infrastructure, State SEZ Act/Policy)

The estimated equation of the form is given by -

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$$\boldsymbol{Y_{it} = \alpha_i + \beta x_{it} + \varepsilon_{it}} \ldots \quad \ldots \quad \ldots \quad \ldots (1)$$

Where i represent the state and t represent the time for the dependent variable Y and independent variable x. α is the parameter specific to each state and does not vary with time. Taking following variables, after testing linearity, the regression equation is represented below:

$$\boldsymbol{INVT_{i,t} = \alpha + \beta_1 NSDP_{i,t} + \beta_2 AVALLB_{i,t} + \beta_3 ENERGY_{i,t} + \beta_4 SEZAP_{i,t} + \varepsilon_{i,t}} \ldots \quad \ldots (2)$$

Where *INVT* represents SEZ investment, *NSDP* represents Net State Domestic Product (Current Price), *AVALLB* represents availability of labour, *ENERGY* represents availability of power (net crore units), *SEZAP* represents score in State SEZ Act/Policy and β_1 to β_4 are the parameters to be estimated.

Tools Used

The stated research method has been used using the Eviews-11 statistical programme. It is assumed that intercept is different for different states. Also, it is considered that time period does not have different intercept. Thus, the present study has only one-way effect.

Source and Collection of Data

Required Data	Source of Data
State-wise investment in SEZs	Data in respect of state-wise investment in SEZ provided by SEZ Section, Department of Commerce.
State-wise NSDP & availability of power	RBI Handbook of Statistics on Indian States 2022-23.
State-wise availability of labour	Lok Sabha unstarred question No. 2366 answered on 8th July, 2019 and Employment Exchange Statistics 2018 to 2023, Directorate General of Employment.
State SEZ Act/Policy	Official website of SEZ, Govt. of India www.sezindia.nic.in [Accessed between May, 2024 to November, 2024] Lok Sabha Starred Question No. 483, answered on 2nd April, 2018[1]

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Table 6: Decomposing State SEZ Act/Policy and Identification of Score

States/UT	State SEZ Act/Policy Parameters									
	Single Point Clearance	Provision for collection of User Charges by the Developer or Co-developer	Exemption of Stamp Duty and Registration fees for Registration of Land and Loan/Credit Documents	Exemption of Electricity Duty	Exemption of 1% Labour Welfare Cess	One-time capital subsidy	Consolidated Return under various laws	Delegation of Power of Labour Commissioner to Development Commissioner	Interest Subsidy to MSME	Score
Chandigarh	×	×	✓	✓	×	×	×	×	×	2
Gujarat	✓	✓	✓	✓	×	×	✓	✓	×	6
Haryana	✓	×	✓	✓	×	×	×	×	×	3
Jharkhand	✓	×	✓	✓	×	×	×	×	×	3
Karnataka	✓	✓	✓	✓	✓	✓	✓	✓	×	8
Kerala	✓	×	✓	✓	×	×	×	×	×	3
Madhya Pradesh	✓	×	✓	✓	×	×	×	✓	×	4
Maharashtra	×	×	×	✓	×	×	×	×	×	1
Punjab	✓	✓	✓	✓	×	×	×	✓	×	5
Tamil Nadu	✓	×	×	×	×	×	×	×	×	1
Uttar Pradesh	✓	×	✓	✓	×	×	×	✓	✓	5
West Bengal	×	×	✓	✓	×	×	×	✓	×	3

(Source: Author's own compilation from various States' SEZ Act/Policy obtained from www.sezindia.nic.inAnalysis and Interpretation of Result

Before moving for panel regression analysis, among all the explanatory variables, pair wise correlation test is conducted to check whether there exists any multicollinearity or not. The result of correlation is given in Table 7. Pair wise correlation matrix shows, investment in SEZ is positively related with state of the economy (11%), labour availability (7%), availability of energy (39%) and existence of SEZ Act/Policy (44%). As none of the pair among any of the variables is highly correlated (0.80<), it may be said that the problem of multi-collinearity does not exists

Table 7: Correlation Matrix

	INVT	NSDP	AVALLB	ENERGY	SEZAP
INVT	1.00				
NSDP	0.11	1.00			
AVALLB	0.07	-0.30**	1.00		
ENERGY	0.39**	0.19*	0.24*	1.00	
SEZAP	0.44**	0.12	-0.21	0.05	1.00

*(Source: Author's own computation using Eviews 11; Notes: ** and * indicates correlation is significant at the 1% and 5% (2-tailed) respectively)*

However, to check the severity of multicollinearity, Variance Inflation Factor (VIF) is computed as shown in Table 8. The VIF value for all variables is less than 10, and the tolerance value (1/VIF) is more than 0.10. This demonstrates that although multicollinearity exists, is not significant.

Table 8: VIF Computation

Variable	VIF	1/VIF
NSDP	4.84	0.207
AVALLB	2.38	0.420
ENERGY	5.69	0.176
SEZAP	1.81	0.552

(Source: Author's own computation using Eviews 11)

Next, the equation (2) is regressed in pooled model (OLS). The result of OLS model is shown in **Table 9**. The results validate that state of the economy, availability of labour in that state and infrastructure of the state does not have significant impact on investment made in SEZs in any state. However, it is significantly dependent on State SEZ Act/Policy. The effect of cross-section and time has also been tested through Breusch Pagan (BP) test and the results are reported in **Table 10**. The result of the test indicates that there exists only cross-section effect (p-value is less than 5%) and time has no effect. The p-value of combined effect comes to less than 5% and hence null hypothesis of BP test is rejected. Next the equation (2) is again estimated with Random Effect Model (REM). The result of REM is also shown in **Table 9.**

Table 9: Panel Data Regression Result

Dependent Variable = INVT			
Variables	**OLS**	**Random Effect**	**Fixed Effect**
NSDP	0.00 (0.00)	4.14 (0.00)	4.46 (0.00)
AVALLB	0.60 (0.82)	0.91 (0.81)	0.74 (0.92)
ENERGY	0.42 (0.12)	0.54 (0.47)	0.15 (1.09)
SEZAP	983.45*** (187.65)	930.15 *** (372.95)	-
Constant	-3884.74*** (1921.90)	-4021.09 *** (2804.76)	1812.88 (3711.08)
Observations	121	121	121
R squared	0.34	0.35	0.13

*(Source: Author's own computation using Eviews 11. Notes: The symbols ***, **, and * denote significance at minimum 1%, 5%, and 10%, respectively. Standard errors are shown by figures in brackets.)*

Table 10: Result of Breusch Pagan (BP) Test

Cross Section	Time	Both
27.45 (0.000)	0.766 (0.381)	26.78 ***(0.000)***

(Source: Author's own computation using Eviews 11. Note: Figures in parenthesis are probability values.)

The REM confirms no significant influence is there of all the regressors, except SEZ Act/policy of state, on dependent variable. The coefficients of all the variables are positive; thus indicates, the positive effect of variables in bringing the investment in SEZs. The fixed effect model shows no significant impact of any of the regressors on investment. However, all the variables have a positive value. To check the suitability of model, Hausman Test is carried out with the null hypothesis that REM is appropriate than Fixed Effect Model (FEM). As the p-value of Hausman Test comes to more than 5%, null hypothesis is accepted and confirms that **REM is appropriate techniques in the present case**. The result of Hausman Test is given in **Table 11**.

Table 11: Result of Hausman Test

Chi-Sq. Statistic	Chi-Sq. d.f.	Prob
1.11	3	***0.918***

(Source: Author's own computation using Eviews 11)

Policy Recommendation

Based on analysis and interpretation of results in previous section, it is recommended to bring state SEZ Act and Policy by respective state governments. Further, State Governments may be encouraged to amend state SEZ Act/Policy to have more clarity on fiscal and non-fiscal benefits and to bring investment in SEZs.

Conclusion

The present study established that State SEZ Act/Policy has significant impact to bring SEZ investment in any state. However, state of the economy, infrastructure of the state and availability of labour though have positive impact in bringing SEZ investment, are not significant variables. Further, the study finds regional concentration of SEZ investment and more particularly in some developed and coastal states. As the basic objective of SEZ is to export of goods and services, selection of coastal states is justified for manufacturing sector. However, state of Odisha and West Bengal even after having coastal region could not bring much of investment in SEZs. States with no SEZ Act/Policy could not achieve much in bringing investment. States like Haryana, Telangana and Karnataka being technology hub and having skilled work-force have attracted large amount of investment in IT/ITeS sector.

The environmental, social, and governance (ESG) performance of a nation's industrial base can be improved via modern SEZs. In SEZs, controls and enforcement as well as support services (such as, health services, waste management, and renewable energy installations) can be offered more readily and affordably. High ESG standards are becoming a more important factor in new zones' competitiveness. The adoption of digital technology, advanced robotics, 3-D printing, big data, and the internet of things across industries is altering the manufacturing sector. SEZs will be significantly impacted by the falling weight of labor costs as an investment location factor.

The state government must be clear about its SEZ policy. Many of the decade old policy is neither updated nor replaced with time. Moreover, in the public domain the policy is not available vividly. The government's policy should be transparent and unambiguous. As land is subject matter of state government, it should provide all necessary support in acquisition and establishment of SEZ. Overlapping procedures for clearances in state government departments may be eliminated. This may be done only by clear operating/approval guideline or procedures. At last, target may be fixed by the respective government to bring SEZ investment in the comparative advantage industry.

Thus, the present study contributes to the policy makers who can reframe or design policies to attract investment decisions in SEZs of large corporates or MNCs. The study can further be elaborated by incorporating more microeconomic variables.

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