

Special Economic Zones in India: Interrogating the Nexus of Land, Development and Urbanization

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Abstract

In the context of the ongoing debate on land acquisition in India and its relationship to development, this article presents an in-depth investigation of the characteristics of special economic zones (SEZs) in India. This includes the nature of exports and economic activity, their use of land and their location. It finds that a large majority of the SEZs are less than 1 sq. km, their exports focused on the information technology/information-technology-enabled service (IT/ITES) sector and refined petroleum, and located in a limited number of relatively advanced districts in a few states. Further, it is not the new SEZs, but the seven erstwhile EPZs and the 12 SEZs established between 2000 and 2005, which account for 90 per cent of the manufacturing exports from SEZs. Crucially, SEZs occupying 3 per cent of the land are responsible for 81 per cent of the total non-petroleum exports from SEZs. The nature of governance in these SEZs, which are also often seen as incipient urban settlements, is tenuous and non-representative. The article concludes with a discussion on the nexus of land, development and urbanization. It argues that the resistance to land acquisition is related to both acquisition processes and the relative costs and benefits of recent development initiatives, of which SEZs are an integral part.

印度特殊经济区：探索土地、开发和城镇化之间的关系

在正在进行的有关印度土地征收及其和开发的关系的争论背景下，本文对印度特殊经济区（Special Economic Zones, SEZ）的特点展开了深入的调查。这包括出口和经济活动的性质、以及他们对土地的利用和区位。研究发现大量的特殊经济区面积都在1平方公里以内，它们的出口集中在信息技术及其带动的服务业（IT/ITES）领域和成品油，位于一些邦数量有限的相对发达区域。此外，相对于新的特殊经济区而言，7个已有的出口加工区（EPZ）和12个2000–2005年成立的特殊经济区，占据了所有特殊经济区制造业出口额的90%。最关键的是，特殊经

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济区只占据了3%的土地，但81%的非石油出口均来自于特殊经济区。特殊经济区的管理特点，往往也被看作城市移民的初期，是脆弱而不具有代表性的。文章在结论中对土地、开发和城镇化的关系进行了讨论。研究认为，征地的阻力，既和征地过程有关，也和近期开发计划的相对成本和收益有关，这些都是特殊经济区不可分割的部分。

Keywords

Special economic zones, development, exports, employment, IT/ITES, manufacturing, land acquisition, land use, resistance, urbanisation, India

Introduction

On 31 December 2014, the newly elected union government promulgated an ordinance¹ to amend the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (RTFCATILARR Act), which was legislated by the parliament just a year earlier, in September 2013, with near-unanimous support, including from the current ruling party. Versions of the RTFCATILARR Act have been debated in parliament since 2007, it had been through standing committees and was the subject of intense debate in the media and civil society. This was not a hurriedly rushed through piece of legislation. The RTFCATILARR Act was legislated after a period of sustained, widespread and occasionally violent agitation against land acquisition in a number of states, led largely by civil society groups. One exception was West Bengal, a state in eastern India, where the agitation was led by the current ruling party, the Trinamool Congress, ironically, against a leftist government that was trying to acquire land for private industry. Eventually, it brought an end to 33 years of leftist rule, based on six electoral victories since 1977, in the state. Yet, the government was trying to radically alter the law barely a year later. Given its lack of majority in the Council of the States (Rajya Sabha), it had, as of March 2015, been unable to get the bill through parliament, but as of date the ordinance's amendments stands.

Land Acquisition and SEZs

One significant common basis for this widespread agitation across different states was the acquisition of land for special economic zones (SEZs), though the nature of the political mobilization around this varied from one state to another, as documented in Jenkins et al. (2014). The predecessors of SEZs, the export promotion zone (EPZ) has been around in India since 1965, when the first EPZ was established in Kandla, Gujarat. These EPZs were state owned and small (Kandla, the largest was 4 sq. km in size), but they were diversified in the composition of their constituent units. In 2000, the policy was amended to allow the current version of SEZs, which were conceived as largely privately owned enclaves, though a number of the existing SEZs are also owned, either partly or occasionally, fully, by state-owned industrial development agencies. 'The big push however came from the Special Economic Zone Act 2005, which provided a legal framework for the establishment of SEZs or 'distinct regulatory spaces' (Jenkins, 2014, p. 39). While the preamble to the SEZ Act 2005 says that SEZs have been established 'for the promotion of exports', Section 5 of the Act says that the central government will be guided by the following principles while notifying any area as an SEZ, namely: '(a) generation of additional economic activity, (b) promotion of exports of goods and services, (c) promotion of investment from

domestic and foreign sources, (d) creation of employment opportunities, [and] (e) development of infrastructure facilities'. A reading of the brief discussion in parliament on the Bill in 2005 indicates that, more than exports, investment and the growth of manufacturing and employment were very much on the mind of the lawmakers. Indeed, during the parliamentary debates, the then minister for commerce and industry, Mr Kamal Nath, stated in the Lok Sabha (House of the People) on 10 May 2005:

In this span of 14 years, we no more talk of exports to earn foreign exchange. The Foreign Trade Policy...had one sole intention...how we would generate employment. In fact, exports today represent one of the most important employment-generating activities.²

Thus, exports were not an end but a route to increasing employment. Speaking in the Rajya Sabha (Council of the States) on 11 May 2005 the minister reiterated:

A concern expressed by almost all the Members was that the development which takes place, the SEZs which takes place, don't happen in a localised area. What happened in China? Largely the development and SEZs are highly localized.... We have always stated that our developmental process has to be all-inclusive...must encompass all States. That is not the Chinese belief. So, we cannot have a Chinese concept.³

The Parliamentary Standing Committee on Commerce, concerned with land acquisition, recommended limits on the maximum size of the SEZs, acceded to by the then government by putting a cap of 50 sq. km. So, given this inclusivity, what fuelled the agitation? Was, and is, the Indian polity inimical to the kind of development envisaged through these SEZs?

On this, there are, *inter alia*, two contrasting viewpoints. Some make the case that '[e]mployment generation, both direct and indirect, has thus far been the most important channel, through which SEZs have impacted on human development and poverty reduction in India (Aggarwal, 2007, p. 45) and SEZs have the potential to enhance human capabilities' (Aggarwal, 2007, p. 48), while others have argued that SEZ-driven accumulation by dispossession is feeding 'forms of rentier, non-labor absorbing capitalism and the heterogenous classes of informal labor that are resulting, look nothing like classical notions of capitalist transition [and that]... development...generated by dispossession [is not] producing significant livelihood improvements, not just for the dispossessed, but for the rural poor more generally' (Levien, 2012, p. 44).

In the midst of academic debate and agitations that culminated in the RTFCATILARR Act, the establishment of SEZs has continued. According to the Fact Sheet on Special Economic Zones (as on 5 December 2014), apart from 18 prior SEZs, there are 491 formally approved SEZs of which 352 are notified (i.e., have land in their possession), occupying 382.5 sq. km of land. Of these, 178 are operational, that is, are exporting. Cumulative total exports of USD 421 billion and additional employment of about 1.2 million have been generated since 2005–2006. Despite these numbers, benefits of SEZs remain contested. What is the reason for this ambivalence, indeed resistance?

To address this, this article presents an in-depth investigation into the characteristics of SEZs in India. In brief, it finds that a large majority of the SEZs are tiny (less than 1 sq. km) focused on the information technology/information-technology-enabled service (IT/ITES) sector, and located in a limited number of relatively advanced districts in a few states. Crucially, SEZs occupying 10 per cent of the land are responsible for 90 per cent of the total exports. The major export from the new SEZs established after 2005 is petroleum from the Reliance Jamnagar SEZ refinery and IT services. The seven erstwhile EPZs and the 12 SEZs established between 2000 and 2005 account for 90 per cent of the manufacturing exports from SEZs. The nature of governance in these SEZs, which are also often seen as incipient urban settlements, is tenuous, confused and non-representative. The paper then speculates on the nature of continued resistance to SEZs and land acquisition.

Basic Characteristics of SEZs in India

SEZs are classified across two categories, into four size classes, namely, tiny (less than 1 sq. km), small (1 to 3 sq. km), medium (3 to 10 sq. km) and large (more than 10 sq. km) and four broad sectors, which are (a) existing strengths, including textiles, apparel, pharmaceuticals, gems and jewellery and footwear, that is, our existing export basket; (b) IT and ITES; (c) multi-product zones; and (d) new sectors, which includes everything else. In the official classification, Reliance Jamnagar SEZ is a multi-product SEZ, though it exports only varieties of petroleum products.

In Table 1, we see that a full 95 per cent of notified SEZs are either tiny or small, 70 per cent belong to either IT/ITES or existing strength sectors. Only 23 per cent of the SEZs are in potentially new export sectors. This follows the pattern in the formally approved SEZs. Further, even among the tiny SEZs, as shown in Figure 1, almost 90 per cent are below 0.5 sq. km and over half are between 0.1 sq. km and 0.2 sq. km.

The differences in size mean that the 206 tiny IT-/ITES-notified SEZs occupy 10.4 per cent (43.1 sq. km) while the 14 large SEZs (all of which are multi-product) occupy 53 per cent (219 sq. km) of the approximately 413 sq. km of land under notified SEZs. The proportions are similar for formally approved SEZs. To summarize, almost all SEZs are either small or tiny. Most Tiny SEZs are for IT/ITES and most IT/ITES SEZs are tiny. Even in sectors such as existing strengths and new sectors, only four out of 112 notified SEZs are medium sized and there is no large SEZ.

Performance of SEZs

The total exports from SEZs have increased from USD 5.1 billion or 5 per cent of the total exports in 2005–2006 to USD 82.4 billion or 26 per cent of total exports in 2013–2014 (Figure 2). According to SEZ-wise data from the Ministry of Commerce and Industry for the year 2010–2011 (the latest complete year for which we were able to find data in the public domain), total exports from SEZs was ₹3.16 trillion. This was from 133 operational SEZs, which includes the original seven EPZs of the union government, which were converted to SEZs, 12 SEZs whose establishment predated the SEZ Act and 114 that have been notified after the

Table 1. Type and Size of SEZs

Broad Sector	Formally Approved					Notified				
	Large	Medium	Small	Tiny	Total	Large	Medium	Small	Tiny	Total
Existing Strengths		1 0%	20 4%	16 3%	37 8%		1 0%	18 5%	11 3%	30 9%
IT/ITES			11 2%	292 59%	303 62%			10 3%	206 59%	216 61%
Multi Products	17 3%	5 1%	11 2%		33 7%	14 4%	2 1%	8 2%		24 7%
New Sectors		3 1%	63 12%	52 11%	118 24%		3 1%	44 13%	35 10%	82 23%
Grand Total	17 3%	9 2%	105 21%	360 73%	491 100%	14 4%	6 2%	80 23%	252 72%	352 100%

Source: Ministry of Commerce data at <http://sezindia.nic.in>

Note: Figures may not add up due to rounding.

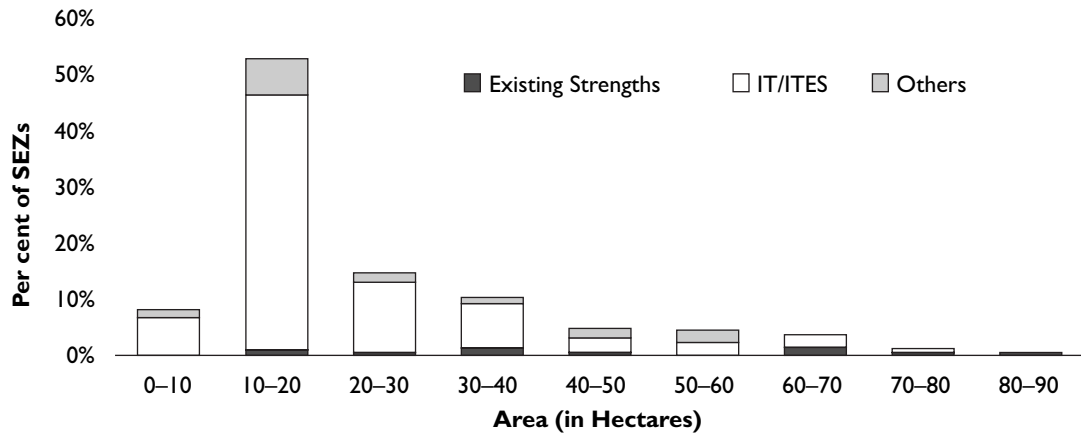


Figure 1. Size Distribution of Tiny SEZs (below 1 sq. km)

Source: Ministry of Commerce and Industry (<http://sezindia.nic.in>).

Note: 100 hectares = 1 sq. km.

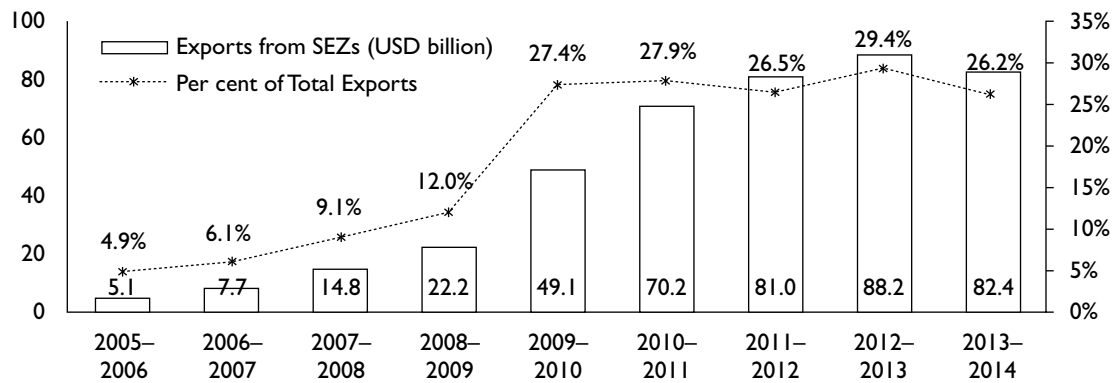


Figure 2. Total Exports from the Operational SEZs

Source: Ministry of Commerce and Industry (<http://sezindia.nic.in>) and Handbook of Statistics on Indian Economy, Reserve Bank of India. It includes SEZs established before the SEZ Act 2005.

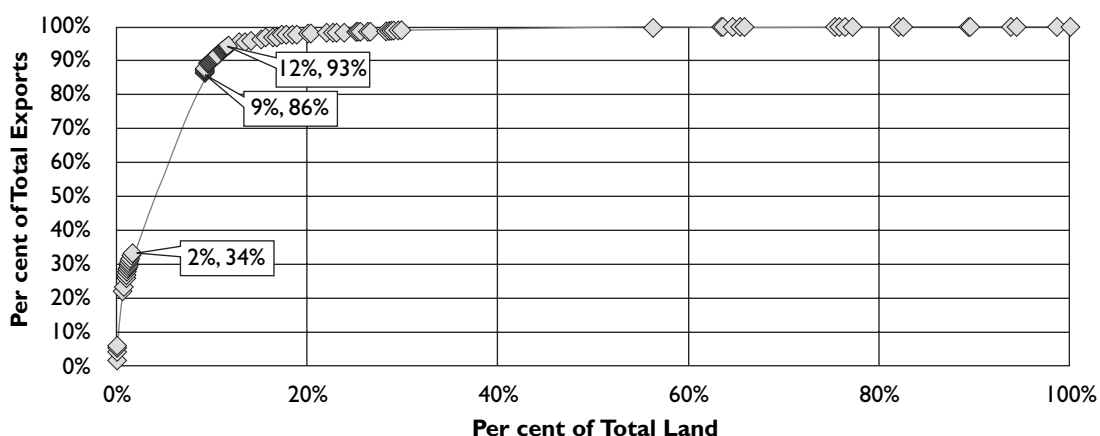
SEZ Act of 2005. Of those notified after the Act, 11 were from existing strengths, 70 were IT/ITES, eight were multi-product and 25 were new sectors. We have used these data for disaggregated analysis below.

Table 2 shows the sectors of exports and the vintage of SEZs. A large share, almost a third, of exports is that of petroleum from Reliance Jamnagar refinery SEZ, which constitutes more than 87 per cent of non-IT/ITES exports from the post-Act SEZs. As refining is a processing industry, it has high import content. For 2009–2010 (data were not available for 2010–2011), imports of Reliance Jamnagar refinery SEZ were 97.7 per cent of physical exports. Thus, though manufacturing was a key rationale for the establishment of the new post-Act SEZs, almost 89 per cent of all non-IT/ITES, non-petroleum manufacturing exports from SEZs (which constitute 41.5 per cent of total exports) are from the older SEZs, including those focusing on existing strengths such as gems and jewellery.

Table 2. Total Exports by Types (2010–2011)

Type of SEZs	Erstwhile EPZ (Union Govt.)	Pre-Act	Post-Act	Total
IT/ITES	0.0%	1.1%	24.7%	25.8%
Existing Strengths	3.7%	2.9%	1.8%	8.3%
Multi-product	13.3%	12.5%	33.4%	59.1%
Reliance Jamnagar SEZ	0.0%	0.0%	32.7%	32.7%
New Sectors	0.0%	4.5%	2.2%	6.7%
Non-IT/ITES, Non-petroleum export	16.9%	19.9%	4.7%	41.5%
Total	16.9%	21.0%	62.1%	100.0%

Source: Based on Ministry of Commerce and Industry data. (Available at http://www.sezindia.nic.in/writereaddata/updates/exports_31.3.11.pdf)

**Figure 3.** SEZ Exports and Land (2010–2011)

Source: Based on Ministry of Commerce and Industry data.

A key axis of mobilization against SEZs has been land acquisition. The data on SEZ-wise exports for 2010–2011 were matched with public domain data on the land area of these SEZs. Figure 3 shows that 12 per cent of land accounted for 93 per cent of the exports (the large shift from 34 per cent to 86 per cent is because of Reliance Jamnagar Refinery SEZ). Excluding petroleum, 81 per cent of SEZ exports, mostly IT/ITES, are from 3 per cent of the land. Reliance Jamnagar and IT/ITES SEZs together account for 92 per cent of the total exports from post-Act SEZs.

Like exports, total employment from SEZs has reportedly increased from 134,704 in February 2006 to 1,350,071 in September 2014. Current data disaggregated at the SEZ level are unavailable. However, in 2013–2014, with only 6 per cent of the total employment from SEZs in India, Gujarat accounted for 46 per cent of the total export, partly because Reliance Jamnagar refinery SEZ provided limited employment.⁴ The general perception is that manufacturing SEZs are relatively more labour intensive and it is true that the states with large employment shares, that is, Maharashtra, Tamil Nadu, Karnataka

Table 3. Employment Generation by SEZs 2010–2011

Type of SEZs	Erstwhile EPZ (Union Govt.)	Pre-Act	Post-Act	Reliance Jamnagar#	Total
IT/ITES	7%	5%	86%	..	28%
Trading	1%	48%	2%	..	11%
Others, incl. Manufacturing	92%	47%	12%	..	29%
Petroleum	100%	33%
Total Exports (₹ bn.)*	534.67	661.86	928.90	1,033.25	3,158.68
Employment#	210,434	66,031	400,143	1,141	677,749
Persons/₹ billion	393.6	99.8	430.8	1.1	214.6

Source: CAG (2014).

Notes: *Total Exports (source: *ibid*). #Total employment for Reliance Jamnagar SEZ (Annual Report: 2012–2013, Ministry of Commerce and Industry); Other employment figures

and erstwhile Andhra Pradesh (including the new state of Telangana), which account for three-fourths of the employment, have a relatively low proportion of IT/ITES SEZs (as a share of operational SEZs), varying from 52 per cent in Tamil Nadu to 68 per cent in Karnataka. However, this may not be the full story. If one considers the employment generation by the four groups of zones, namely, the original seven EPZs, the 12 pre-Act SEZs, the post-Act SEZs and Reliance Jamnagar refinery SEZ, a different picture emerges. In Table 3, even though the post-Act group of SEZs have a high share of IT/ITES exports, they have a high employment per export ratio, similar to the erstwhile EPZs, which have a high share of manufacturing. Pre-Act SEZs, with a high share of trading, have a low employment per export ratio. This questions the popular association of manufacturing with employment.

Location of SEZ

Nine states, namely, Andhra Pradesh, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Tamil Nadu, Telangana and Uttar Pradesh, accounted for 89 per cent of the 352 notified post-Act SEZs. Even more than states, Figure 4 shows that notified SEZs were concentrated at the district level. This is also true for formally approved SEZs. With regard to exports, just six states, Gujarat (46 per cent), Tamil Nadu (14 per cent), Maharashtra (11 per cent), Karnataka (10 per cent), Andhra Pradesh and Telangana (7 per cent together) account for 89 per cent of the exports. The high share of Gujarat is largely due to Reliance Jamnagar refinery SEZ and also established zones such as Kandla and Surat. Haryana, Kerala, Uttar Pradesh, West Bengal, Madhya Pradesh, Rajasthan and Chandigarh are the other states/union territories (UTs) with substantively operational SEZs.

To investigate this further, a dataset is assembled to examine the relationship between the size of SEZs and the urbanization level of a district, as given in the Census of 2001. The Ministry of Commerce data on SEZs contain information that is used to determine the district of an SEZ. Data from the Census of India 2001, which covers 593 districts, are used to determine the associated district characteristics (the data are available from the authors on request). Each district is classified into one of four quartiles, that is, the top 25 per cent (top 148 districts) in terms of share of urban population, the next 25 per cent, etc. Census 2001 rather than 2011 is used to avoid issues of endogeneity, since many SEZs have started operation before 2011 and they may have influenced urbanization in these districts.

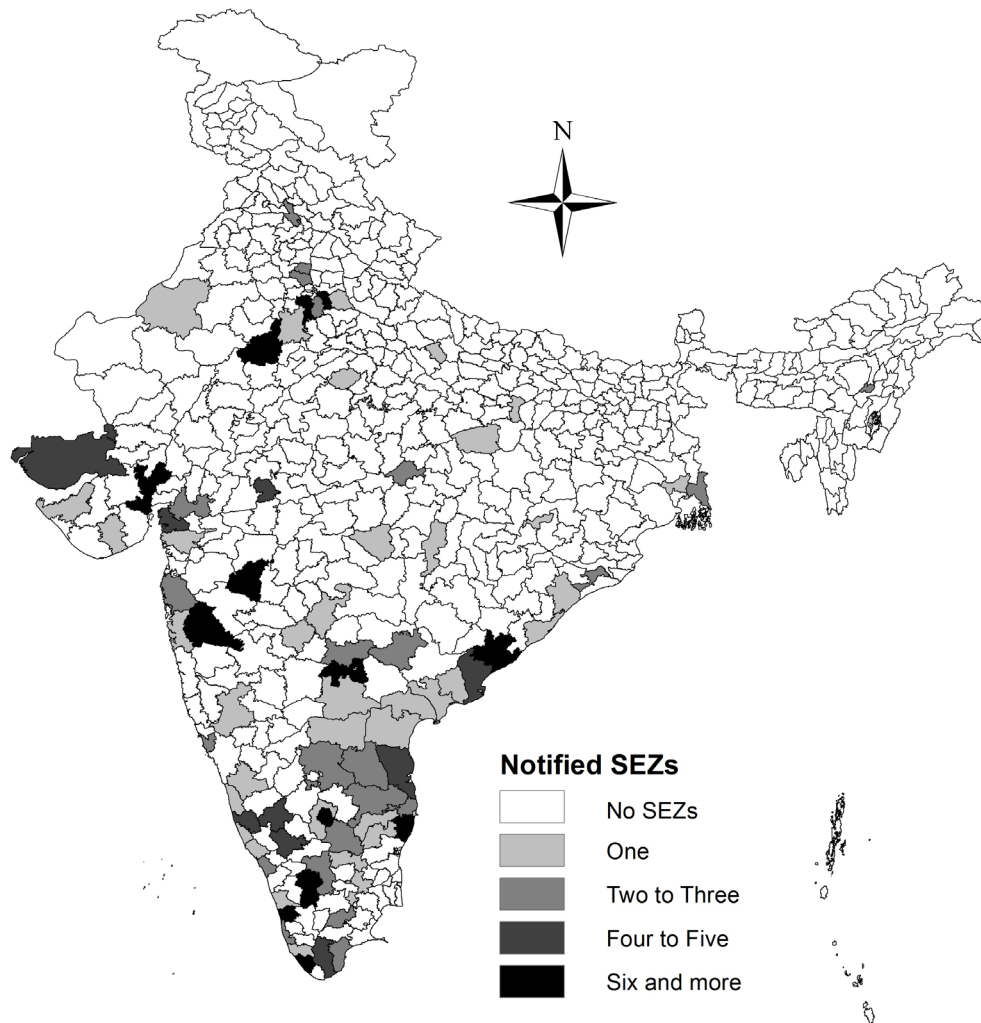


Figure 4. District-wise Distribution of Notified SEZs

Source: Authors, based on information on location from <http://sezindia.nic.in>

The figures in parentheses in the first column of Table 4 show that 88 districts have notified SEZs. Of these, 51 are in the first quartile and 24 are in the second quartile, that is, 75 districts are above the median levels of urbanization. Strikingly, none of the notified SEZs is located in the lowest quartile or in the group of least urbanized districts. The first row shows that 270 of 351 notified SEZs (77 per cent) are in the 51 districts in the uppermost quartile of which 207 are tiny and 52 are small. The picture becomes even more skewed if one adjusts for some apparent anomalies in classification. In particular, of the 62 SEZs in the 24 districts of the second quartile, 19 SEZs (all tiny) are in Gurgaon, which is close to Delhi. In the second panel of Table 5, the preference of IT/ITES SEZs for urban locations is clear, with 181 out of 216 notified SEZs in districts that are in the uppermost quartile of urbanization. While the preference

Table 4. Urbanization of District, Size and Sectors of Notified SEZs

Level of Urbanization	Size				Sectors				Total
	Large	Medium	Small	Tiny	Existing Strengths	IT/ITES	Multi-Product	New Sectors	
U1Q (51)	6	5	52	207	21	181	14	54	270
U2Q (24)	8	1	16	37	4	31	9	18	62
U3Q (13)			12	7	5	4	1	9	19
U4Q (0)									0
Total (88)	14	6	80	252	30	216	24	82	351
Megacity District (38)		2	16	125	2	117	3	21	143

Source: Authors' calculation, based on data at <http://sezindia.nic.in> and Census of India 2001. One notified SEZ in Saraikela-Kharsawan is not included since the district did not exist in Census 2001.

Table 5. Marginal Effects of District Characteristics on Probability of SEZ Presence

Share in Population	Formally Approved		Notified		Operational	
	All SEZs	ITES SEZs	All SEZs	ITES SEZs	All SEZs	ITES SEZs
Literates	-0.000 (0.003)	0.002 (0.002)	0.001 (0.003)	0.001 (0.002)	0.003 (0.002)	0.002* (0.001)
Scheduled Castes	-0.002 (0.004)	-0.003 (0.003)	-0.002 (0.004)	-0.002 (0.002)	-0.000 (0.002)	-0.001 (0.001)
Scheduled Tribes	-0.004* (0.002)	-0.002 (0.001)	-0.003 (0.002)	-0.002 (0.001)	-0.001 (0.001)	-0.000 (0.001)
Male Non-Farm Worker (Urbanization)#	0.009*** (0.002)	0.005*** (0.001)	0.007*** (0.002)	0.003*** (0.001)	0.003*** (0.001)	0.001** (0.001)
Pseudo R²	0.306	0.334	0.354	0.365	0.317	0.352
N¹⁰	433	421	422	398	403	387

Source: Authors' calculation.

Notes: The first row in a cell is the estimated value of the coefficient and the figure in parentheses is the standard error of the estimate. Significance level: * for $p < 0.05$, ** for $p < 0.01$ and *** for $p < 0.001$; # share of the male main workers in non-farm work is used as a measure of urbanization (see text).

for urban areas is still strong, the other types have a slightly less skewed distribution. There also appears to be a preference for megacities.⁵ The last row shows that 40 per cent of the total notified SEZs are in districts that are geographically proximate to six largest megacities of Delhi, Mumbai, Kolkata, Hyderabad, Bangalore and Chennai. For IT/ITES SEZs this preference is even more, at 54 per cent. Given the striking nature of the results, a more structured statistical analysis is conducted to examine whether district characteristics affect the 'presence of SEZs' and the 'intensity' of SEZs (i.e., the number of SEZs) in the district.

The effect of district characteristics is estimated using a probit model. The probit model is used when the response is binary in nature. Unlike a regression model where the objective is to find out the expected value of the dependent variable as a function of fixed explanatory variable(s), the probit model estimates

the probability of occurrence of an event as a function of given explanatory variable(s), assuming normally distributed errors. The model used is:

$$\text{Presence of an SEZ in a district} = f(\text{share of male workers in non-farm occupations, extent of literacy, share of scheduled tribes, share of scheduled castes, state dummies}),$$

where

Presence of an SEZ in a district = 1 if any SEZ is situated in that district and 0 otherwise.

This model is estimated separately for formally approved zones, notified zones and operational zones. Literacy, scheduled tribes and scheduled castes are measured as a share of the total district population. The share of male workers in non-farm occupations is a measure of urbanization of the district. We use this rather than the share of the urban population in a district, as in the tables given, as the urban definition imposes a discontinuous character to the variable. The definition of urbanization in India is unique and applied at the settlement level. It is based on three parameters namely size (of more than 5,000 persons), density (more than 400 per sq. km) and economic activity (at least 75 per cent of the male main workforce must be in the non-farm sector). The urbanization rate of a district depends on how many settlements cross these thresholds of density and size (which many would) and the high threshold (75 per cent) of share of non-farm workers in the male workforce, which few would. This introduces an artificial discontinuity in the data, which is avoided by taking the share of male workers in non-farm occupations.

Table 5 reports the result of the probit regression as a marginal effect of district characteristics, calculated at the mean,⁶ on the probability that an SEZ would be located in a district. The first two columns provide the results for the presence of formally approved SEZs, the next two for notified SEZs and the final two for operational zones. The first row for each variable gives the marginal effect, while the figure in parentheses below gives the standard error of estimation. The last two rows indicate the pseudo R², a measure of goodness of fit and number of observations. The statistically significant coefficients are indicated by star signs. The urbanization variable (measured by the share of male non-agricultural workers) is the only variable that is statistically significant for all models. Thus, the probability that a district will have a formally approved SEZ increases by 18.2 per cent, in a district where the urbanization measure is higher by one standard deviation (19.8 per cent), with all other variables kept at their mean values.

Since many of the districts have more than one SEZ, are any of the district characteristics related to the number of SEZs in a district? To examine this, we regress the number of SEZs in a district on district characteristics. To control for state effects, state dummies are introduced in the equation. As can be seen in Table 6, the more urbanized districts are likely to have more SEZs. The somewhat muted strength of the effect can be because the effort required to operationalize an SEZ is different from that of establishing an SEZ. For exports to occur from a SEZ, firms, often independent of the SEZ promoter, have to establish their businesses in the SEZ and secure export orders. If there is already one operational SEZ, it may slow down the operationalization of another, since firms may prefer to go to the first SEZ, which would provide agglomeration economies as well as shorter start-up times. Thus, *ceteris paribus*, there will be one more notified SEZ in a district where the urbanization measure is higher by one standard deviation.

Furthermore, the effect differs across types of SEZs. Table 7 shows that the effect of urbanization is higher in a statistically significant manner for IT/ITES than non-IT/ITES SEZs, across all three stages of SEZs. The statistical analysis robustly bears out the hypothesis that the location decisions of IT/ITES SEZs, which comprise the overwhelming majority of post-Act SEZs, are significantly affected by levels of the urbanization measure of the district.

Table 6. Relationship between District Characteristics and the Number of SEZs (with State Dummies)

Share of	Formally Approved		Notified		Operational	
	All SEZs	ITES SEZs	All SEZs	ITES SEZs	All SEZs	ITES SEZs
Literates	-0.020 (0.02)	-0.01 (0.01)	-0.013 (0.01)	-0.008 (0.01)	-0.002 (0.010)	-0.001 (0.000)
Scheduled Caste Population	0.000 (0.03)	-0.009 (0.02)	0.002 (0.02)	-0.006 (0.02)	0.004 (0.010)	-0.001 (0.010)
Scheduled Tribe Population	-0.001 (0.01)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.002 (0.00)	0.001 (0.00)
Male Non-farm Worker (Urbanization)#	0.069*** (0.02)	0.051** (0.02)	0.050*** (0.01)	0.037** (0.01)	0.025** (0.010)	0.018** (0.010)
Constant	-4.563* (1.89)	-3.757* (1.65)	-3.455* (1.36)	-2.682* (1.18)	-2.095* (0.810)	-1.502* (0.660)
Adjusted R²	0.061	0.044	0.063	0.051	0.057	0.043
N	593	593	593	593	593	593

Source: Authors' calculation.

Notes: The first row in a cell is the estimated value of the coefficient and the figure in parentheses is the standard error of the estimate. Significance level: * for $p < 0.05$, ** for $p < 0.01$ and *** for $p < 0.001$; # share of the male main workers in non-farm work is used as a measure of urbanization (see text).

Table 7. Effects of Male Non-farm Worker (Urbanization)# on Number of Different Types of SEZ in a District (with State Dummies)

Formally Approved			Notified			Operational		
All SEZs	ITES SEZs	Non-ITES SEZs	All SEZs	ITES SEZs	Non-ITES SEZs	All SEZs	ITES SEZs	Non-ITES SEZs
0.069*** (0.02)	0.057*** (0.02)	0.018*** (0.00)	0.050*** (0.01)	0.037** (0.01)	0.013*** (0.00)	0.025** (0.010)	0.018** (0.010)	0.007** (0.00)

Source: Authors' calculation.

Notes: The first row in a cell is the estimated value of the coefficient and the figure in parentheses is the standard error of the estimate. Significance level: * for $p < 0.05$, ** for $p < 0.01$ and *** for $p < 0.001$; # share of the male main workers in non-farm work is used as a measure of urbanization (see text).

Discussion

Based on the experience of SEZs so far, their promise of development seems limited and the suspicion that SEZs are more about land than exports and employment cannot be dismissed. In addition, given their possible implications for urbanization, their governance, as discussed further, has not been thought through. Thus, a certain amount of ambivalence seems warranted.

The preceding discussion indicates that the current crop of SEZs are unlikely even to accelerate the growth of economic activity and employment, which were the declared core objectives of the SEZ Act 2005. Most of the new post-Act SEZs are less than 1 sq. km in size (i.e., smaller than the Infosys campus in Bangalore) and concentrated in the IT/ITES sector. Over half the gross exports from these new SEZs is petroleum from the Reliance Jamnagar refinery SEZ, where the net export after accounting for

the import of crude oil is minimal. Most of the remaining is IT/ITES exports, where 3 per cent of the land is responsible for 81 per cent of exports. Furthermore, most of these SEZs, especially those in the IT/ITES sector, are located in relatively urbanized areas. The Comptroller and Auditor General (CAG) shares this concern. In its performance report on SEZ, it notes that the 'SEZs had indicated preference for urban agglomeration...undermining the objective of promoting balanced regional development. Another significant trend in the SEZ growth has been the preponderance of IT/ITES industry' (CAG, 2014, p. 5). Indeed, the SEZs can be seen as an indirect and indefinite continuation of the arguably constructive benefits extended to IT/ITES exports, which were scheduled to expire in 2009. Surely, this could have been done so as to avoid the costs associated with SEZs. This leads to the following conclusions.

- (a) The SEZ policy is likely to generate costs in lost fiscal revenue without corresponding benefits in additional employment. Since the SEZs are close to developed areas, new activity in existing firms may now be located in the SEZs, since the distance-induced costs are minimal. This, while, not generating additional economic activity over that which would have already occurred in the normal course, will result in fiscal losses. Indeed, the CAG report notes that 'there was a large scale shift from the STPI units (45 per cent) to SEZs' (ibid. p. 15). Even votaries of SEZs have argued for a more focussed and selective tax incentive system than the existing 'all or nothing (horizontal) approach' (Aggarwal, 2015).
- (b) The SEZs are not likely to create new infrastructure. Rather, since most of them are less than 1 sq. km and are located in and around developed areas and existing megacities, it is possible that they may free-ride on pre-existing infrastructure. This may further congest the infrastructure in existing megacities, affecting their attractiveness as industrial locations.
- (c) The SEZ policy will exacerbate regional imbalance,⁷ since they are being disproportionately located in districts that already have high levels of non-farm activity. However, in their reply (June 2014) to the CAG the Dept. of Commerce stated that 'balanced regional and sectoral development has never been an objective of the SEZ Act' (CAG, 2014, p. 21). This is in direct contradiction to the statement by the minister in the Rajya Sabha on 11 May 2005 (referred to earlier), that the 'developmental process...must encompass all States'.
- (d) A new manufacturing base is not being created, since the overwhelming share of post-Act SEZs by number is IT/ITES (62 per cent) and, to a lesser extent, existing strengths in exports, namely, textiles, apparel, pharmaceuticals, gems and jewellery and footwear (8 per cent).

The last conclusion needs some elaboration. Investment, especially foreign direct investment (FDI) in manufacturing, in India is focused on not just export processing but also the domestic Indian market. If, as noted in the minister's speech, the focus of SEZs was employment, sales from SEZs to the domestic tariff area (DTA) should have been easy. On the ground, however, there were many difficulties (Mishra & Sethi, 2013). As export incentives for DTA firms continued, manufacturing exporters preferred to locate outside the SEZ. This was compounded by policy confusion towards SEZs, in particular, the withdrawal of exemption of SEZs from levy of dividend distribution tax (DDT) in June 2011 and the minimum alternate tax (MAT) in April 2012, which worsened the relative profitability of units in the SEZs. Subsequent to this levy, the CAG report on performance of SEZs shows that 'the tax paid by DTA units is less than the tax paid by SEZ units' (p. 60) and further, that 'working in DTA is beneficial' (p. 61). Consequently, SEZs were ineffective in promoting manufacturing in general and manufacturing exports in particular.

A significant section of objections to SEZs has focused on land acquisition and the consequent effect on the livelihood of farmers and agricultural labourers, the displacement of people who earn their livelihood from the land and reduction in agricultural output. From the inception of this policy, some have

seen the SEZs as a form of land grabbing (Bowers, 2006). Ten years later, it is difficult to refute these objections. Land, as the CAG report says ‘appeared to be the most crucial and attractive component of the scheme’ (p. v). Yet, it is useful to note that there seem to be multiple types of issues regarding land.

For the tiny and IT/ITES SEZs, where the amount of land does not appear to be a primary issue, the pattern of concentration in urban areas can be seen as being consistent with the hypothesis that SEZs are driven by motivations of acquiring real estate or, as some have noted, by a logic of ‘accumulation by dispossession’ (Levien, 2015; Banerjee-Guha, 2008). Even though the quantum of land requirement is relatively low, the high land value and people’s awareness makes this a complex issue. Further, as noted in Mukhopadhyay (2008), the issue is not just of compensation for land, it also relates to compensation for giving up the gains of capital appreciation and participation in the new forms of economic growth.

This is also related to the rising phenomenon of denotification of SEZs. The CAG report has argued that ‘denotification was...resorted to within a few years to benefit from price appreciation’ (CAG, 2014, p. 5). The notification of SEZs increases the land value due to speculation and the magnitude is more for IT/ITES SEZs as they are located near existing urban centres and ‘owing to lack of a deterrent provision in the Act to discourage denotifications, developers resort to denotification of the entire SEZ or a part of the of land allotted to them for SEZs, and in many cases they are diverted for commercial purposes’ (CAG, 2014, p. 48).

The experience of Goa (Solano, 2014) is well known, as all of the seven approved SEZs were denotified due to strong anti-SEZ protests. However, while Goa’s requests for denotification were met with initial stonewalling, subsequent requests for denotification from SEZ developers led to the development of guidelines on the issue. A developer can now withdraw fully or partly from a project after paying the amount of concession, if any, he has availed from either the union or state government. Till March 2013, there were 54 requests from developers for denotification.⁸ However, the trend of denotification has accelerated. Between August and December 2014, 36 SEZs were denotified. The common reasons provided by developers are unfavourable global economic conditions, poor market response, lack of skilled labour and the withdrawal of exemptions from DDT and MAT, referred to earlier. Based on a sample of six states (Andhra Pradesh, Maharashtra, Karnataka, Gujarat, Odisha and West Bengal), the CAG report finds that 5,402 ha (or 14 per cent of land under notified SEZs) in 52 SEZs were denotified (partially or fully) in this process. Many of these lands were acquired invoking the ‘public purpose’ clause but the land acquired was not serving the objectives of the SEZ Act. In some states, land acquired for SEZs was reclaimed by the state, as in Jhajjar, Haryana (Kennedy, 2010).

Another issue relates to obtaining land allotments under, what some might call, false pretences. The CAG report documents in detail several shortfalls from the benefits projected by the developers in their applications. To begin with, only 7 per cent of the employment projection was met for a set of 117 units examined. Instead of the promised 3.9 million, the actual number employed was 284,785 (CAG, 2014, p. 12). On investment, the audit notes that the shortfall in investments in 79 developers/units in 11 selected states was 58.81 per cent and the shortfall in FDI was larger, at 66.83 per cent (CAG, 2014, p. 15). Sectorally, multi-sector SEZ saw a shortfall of 67 per cent while IT/ITES had a lower shortfall of 26 per cent. Even on exports, based on 84 units, the shortfall was 74.57 per cent (CAG, 2014, p. 16) and a related shortfall of 79.5 per cent in foreign exchange earnings (CAG, 2014, p. 17). In most cases, state governments have not taken any action against developers who had not met the commitments made when being allotted land, and this may be because there were no ‘enabling provisions’ (CAG, 2014, p. 13), that is, no consequences were specified for failing to meet the commitments when the land was allotted. The report notes that the Dept. of Commerce and Industry is ‘silent about...performance indicators in line with objectives and functions of SEZ scheme to measure the actual performance’ (CAG, 2014, p. 18).

A third issue is related to SEZs with a large amount of land, and much of this issue would seem to be concentrated in a limited number (26 formally approved and 20 notified) of medium and large SEZs. The multi-product SEZs are present in just five (erstwhile four) states namely, Andhra Pradesh and Telangana, Gujarat, Tamil Nadu, Karnataka and Maharashtra, where only one of the six notified multi-product SEZs has become operational. As others (Sud, 2014; Jenkins et al., 2014) have noted, the land assembly process varies considerably across states. In states such as Gujarat (Asher, 2014; Sud, 2012), Tamil Nadu (Vijayabaskar, 2014; Sud, 2014), Karnataka (Mody, 2014) and Andhra Pradesh (Srinivasulu, 2014), the process has been considerably different from that of Maharashtra (Mujumdar & Menezes, 2014) and West Bengal (Banerjee, 2014; Sud, 2014). In Gujarat, the use of novel methods of land assembly such as town planning schemes (Ballaney & Patel, 2009) limits the need to use land acquisition. In addition, the government has provided land from existing land banks and also facilitated the acquisition of common property lands. In Tamil Nadu too, the spread of urbanization and manufacturing and the gradual process of land assembly and the use of 'consent awards' has muted agitations against land acquisition. In the erstwhile Andhra Pradesh, agencies such as the Andhra Pradesh Industrial Infrastructure Corporation (APIIC) played a key role in the process and are also co-promoters of SEZs.

However, even in states such as Gujarat, Andhra Pradesh and Tamil Nadu, almost half the SEZ land is lying idle (CAG, 2014, p. 37) and in Maharashtra, 70 per cent of SEZ land is vacant. Here, a history of farmers' and workers' mobilizations along with relatively strong local governments led to the first (and only) referendum on a SEZ and its subsequent abandonment. The use of force has not assisted SEZ developers either. Almost none of the land in Odisha and West Bengal is used, with over 96 per cent lying vacant.

Banerjee (2014) documents the nexus between criminal enterprises and land acquisition in Rajarhat, West Bengal, and the use of force in POSCO SEZ, Odisha, to contain protesters. While not conclusive, it is indicative that multi-product SEZs, to the extent they have been established are in states with relatively business-friendly land policies as also polities. A better understanding of these dynamics may have limited land acquisition in states without such policies and polities.

Finally, this pattern of SEZ location, with concentration in urbanized districts is also noteworthy in the context of the discussion in Sivaramakrishnan (2009). As he points out, we have not prepared for the urban demands of the smaller SEZs and there is no clarity on the structure of urban governance in the larger SEZs. Of the various states, only Gujarat has a clearly articulated policy on the governance of SEZs. It uses the proviso to Article 243Q of the constitution to do away with representative government in these areas and bestows authority on a triumvirate, consisting of representative each of the union government, the state government and the developer. In some states such as Rajasthan and Andhra Pradesh, the industrial investment corporations, such as Rajasthan State Industrial Development and Investment Corporation (RIICO) and APIIC, respectively, manage these areas. APIIC has been endowed with powers of an industrial area local authority under the Panchayati Raj Act. However, in most other states, the governance arrangement is unclear. As entities like the Special Investment Region in Gujarat and the Capital Area Development Authority in Andhra Pradesh proliferate, these models of non-representative local government may be a lasting legacy of SEZs.

Conclusion

Land acquisition in India has always been a contentious issue and dispossessing poor farmers to subsidise SEZs is *prima facie* unconscionable. In the land acquisition process, it is important to ensure (a) security for families whose livelihood is being affected, (b) fairness, that is, enabling them to share in

the gains and (c) opportunity, that is, the capability to take advantage of the emerging economic options (Mukhopadhyay, 2008). The old land acquisition act of 1894 ensured none of these. The RTFCATILARR Act, 2013, which replaced it, tries to increase the amount of compensation substantially, narrow the definition of public purpose to limit forcible land acquisition and goes beyond landowners to include other project-affected people to be determined through a social impact assessment (SIA), in its ambit. The recent amendments by ordinance, by removing the SIA, on grounds of difficulty in implementation, recants from this shift.

On fairness, states such as Haryana made independent efforts to address the issue of compensation, by fixing a minimum land acquisition rate for various regions of the state (which is regularly revised for inflation) and, in addition, provided landowners and land acquisition oustees with a fixed annuity sum for 33 years as well as commercial and residential plots (Kennedy, 2014). In town planning schemes in Gujarat, referred to earlier (Ballaney & Patel, 2009), the landowners retain a portion of developed land. A cruder version of this has recently been proposed for use in Andhra Pradesh, as part of its Capital Region Development Authority.⁹ This leads to sharing in the gains, if the expected increase in land values actually materialises. However, given the large amounts of vacant land in SEZs and the concentrated location of operational SEZs, this may not always happen, thus turning farmers into involuntary land speculators.

Finally, on opportunity, despite the minister's protestations that India 'cannot have a Chinese concept', the rationale for SEZs in India continues to be their purported role in building manufacturing exports in China. However, China's initial four SEZs were large and encompassed both production units and social infrastructure (IDFC, 2012). Indian SEZs are neither similar to China's nor are they creating opportunity. While the negative impacts of land acquisition are quite real, the benefits are, according to the CAG 'yet to accrue (CAG, 2014, p. 18)' and 'are contributed by a few SEZs... in some developed States... mostly established prior to enactment of the SEZ Act' (CAG, 2014, p. v). SEZs in India have promised much but have delivered little and the ambivalence with which they are treated seems well deserved.

Notes

1. A method of law making by the executive, when the legislature (in this case the parliament) is not in session. It is valid for a limited period of time (but can be renewed) and is expected to be approved by parliament when it is in session.
2. Discussion on the Special Economic Zones Bill, 2005, 10 May 2005, Lok Sabha, <http://164.100.47.132/LssNew/psearch/result14.aspx?dbsl=2564>
3. Discussion on the Special Economic Zones Bill, 2005, 11 May 2005, Rajya Sabha, http://rsdebate.nic.in/bitstream/123456789/47194/1/PD_204_11052005_36_p291_p319_16.pdf
4. See Annual Report: 2012–2013, Ministry of Commerce and Industry, Government of India (http://commerce.nic.in/publications/pdf/annualreport_chapter7-2012-13.pdf), where only 1,141 people were employed by this SEZ. In addition, for 2010–11, 83 per cent of the exports from Surat SEZ in Gujarat were classified as trading and only 17 per cent were attributed to manufacturing.
5. There are 38 such districts that are close to these six megacities. A full list is available on request. Of these 38, only 27 are in the top urbanisation quartile, seven are in the second quartile and four in the third quartile.
6. In the case of a non-linear model, like probit, the coefficients of the model are not straightforward estimates of marginal effects. Estimated coefficients do not quantify the influence of the explanatory variables on the probability that the dependent variable takes on the value one. A more useful coefficient is the 'marginal effect', which measures the change in predicted probability associated with change in an explanatory variable at a point, with the assumption that other variables remain constant.
7. In and of itself, this may not be objectionable. No country has a regionally even spread of industrial growth. Usually, migration ensures that even though growth is not regionally even, the benefits from growth are more

evenly spread out. However, these linkages need to be established and it is not clear whether the existing pattern of sectoral concentration in SEZs, biased towards IT/ITES, would be able to absorb populations in the less developed areas, for example, Bihar, many of whom are not ready to make the shift to industry in terms of basic educational preparation, leave alone industry-specific skills.

8. <http://commerce.nic.in/pquestion/lsl8032013.pdf> 'Assessment of SEZs', Starred Question No. 286, Lok Sabha, 18 March 2013.
9. This has since generated substantial commentary, both laudatory and otherwise. The relevant notification is at http://crda.ap.gov.in/APCRDA/Downloads/Notifications/01012015MAUD_MS1.PDF
10. In a probit model with state dummies, such states where all the districts have SEZs or those where no districts have SEZs, will be excluded from the regression, since they predict perfectly. Thus, only those states can be included, for which at least one district has formally approved SEZs, but not all districts have formally approved SEZs (such as in Chandigarh, Dadra and Nagar Haveli and Goa). Hence, different models have different sample size as each of them only include those states which satisfy the above condition for a particular type of SEZs (all and IT/ITES).

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