KANDLA SPECIAL ECONOMIC ZONE: AN ANALYSIS OF SECTOR AND UNIT-LEVEL PERFORMANCE

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ABSTRACT

Gujarat contributes a major share of industrial production in India. It also a major contributor in India's export especially in export of petrochemicals, pharmaceuticals and allied products. This state took first step in establishing free trade zone in the country as well as in Asia. Not only this, Gujarat has the distinction of being the first state to enact the Special Economic Zone (SEZ) Act, 2004. The first export processing zone was known as Kandla export processing zone. Later on this zone is converted in SEZ as on November 2000. This conversion in SEZ has a significant impact on export and net foreign exchange earnings from this zone. Though this zone is known as a multi product zone its sectoral composition shows dominance of few sectors in which chemicals and allied sector comes first in export and earning net foreign exchange. Similarly there is found a high concentration of export performance towards little number of units. So this paper indicates towards the need for performance monitoring system.

Introduction

Gujarat is one of the India's most industrialized states in India, with an enviable track records of attracting investments over the last decade became the most favoured investment destination of Indian republic. Gujarat is proved as a model for industrial growth in a developing economy. Investment friendly atmost fear coupled with its vibrant lifestyle makes it a prime industrialist's destination. This industrial development is attributed to increase in industrial investment regions like special economic zones (SEZs), product clusters, industrial parks, and industrial estates etc. Industrial sector of the state contributes nearly 27% to the government of India's exchequer. Gujarat has a variety of industries including engineering, auto manufacturing, food and agri-business, textiles, Gems and jewellery, mineral and mining and ports and ship building. Sum of the other important industries in the state includes chemicals and petrochemicals, pharmaceuticals and tourisms. With nearly 30% of India's petrochemicals business being conducted in Gujarat, while those of chemicals and pharmaceuticals account for almost 50 per cent. Gujarat's share in manufacturing of soda ash, salt and caustic soda is around 90 per cent, 70 per cent and 20 per cent, respectively.

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¹.http://gujaratindia.com.

The history of developing industrial region has started since long back (1965)[i] in Gujarat, now it has the distinction of being the first state to enact the Special Economic Zone (SEZ) Act, 2004 which allows various fiscal benefits. KEPZ the central government established FTZ/EPZ was converted in KSEZ in November 2000. Gujarat has the distinction of being the first state to enact the Special Economic Zone (SEZ) Act, 2004. At present it has around 17 SEZs in electronics, IT/ ITES sectors, 10 in engineering and four each in pharmaceuticals and textiles & apparels. The objectives of SEZ include generation of additional economic activity, promotion of exports of goods and services, promotion of investment from domestic and foreign sources, creation of employment opportunities and development of infrastructure facilities. The SEZ area is specially demarcated and stands outside the Customs territory of India. On country level the SEZ Act & Rules which came into force from February 2006 is said to be a significant development. It provides a policy framework with minimum regulatory regime to provide expeditious and a single window clearance mechanism. The status given by act enables fast clearance of investment proposals as well as a hassle-free environment for running of the units in the SEZ. Following is the details of SEZ approval sectors in Gujarat.

Table No. 1: - Number of SEZs Approved to following Sectors in Gujrat

1	Multi Product SEZ	12
2	Electronics and IT / ITES	17
3	Engineering	10
4	Pharmaceuticals	4
5	Chemicals	4
6	Apparel and Textiles	4
7	Biotech	1
8	Port Based Multi Product SEZ	1
9	Power :	1
10	Gems and Jewellery	1
11	Handicrafts and Artisan	2
12	Non conventional Energy	1
13	Multi services	2
14	Ceramic SEZ	1
15	FTZW	1
	Total	60

Source: - http://www.gujaratindia.com/business/special-economic-zones.htm

Objectives:

There are few studies which analyzed mostly the trade performance (Kumar 1987; Kumar, 1989; Kundra, 2000; Agaarwal, 2004 and 2005; Shah, 2009, Tantri, 2010). However Kumar (1987, 1989) and Kundra (2000) analyzed little in this regard but it was limited to EPZ regime only. The sector-specific and unit-specific performance in

[i] The Kandla Export Processing Zone was converted in the Special Economic Zone in the November 2000.

multiproduct zone has not been evaluated for SEZ regime. Given the limitations associated in the existing literature on SEZs, this paper analyses the sector and unit-wise performance of KSEZ. The objective of this paper is to test whether the ZES policy have significant impact over the previous structure? If yes then what is the contribution of different sectors in SEZ? It is also aimed to find out the unit level concentration of performance especially on the basis of Export, NFEE, Investment and Employment.

Methodology:

To evaluate the aggregate export performance a time series observed (actual) and linear trend has been graphically presented. To test the policy significance of SEZ over EPZ we employed the Structural Stability Model[2] (Dummy Variable Model) for the time series data on Export and NFE since 1965-66 to 2010-11. Sector wise performance is presented by calculating sect oral shares and unit level performance is shown by cumulative percentage.[3]

Kandla Multi Product Zone popularly known as **KSEZ,** was the first Export Processing/ Free Trade Zone in the country incepted in 1965 by central government. This zone is converted in a Special Economic Zone from November 2000 (EXIM Policy 2000). However initially the objectives of establishing KEPZ/**KSEZ was** not focused but it is said that KSEZ aimed to development of backward region. Now the objectives of all SEZs are said to be generation of additional economic activity, promotion of **exports** of goods and services, promotion of **investment** from domestic and foreign sources, creation of **employment** opportunities and development of infrastructure facilities with an internationally competitive and hassle-free environment for investment in export production. Some times in official documents it is found that Zones are given export targets to complete (Outcome Budget 2010-11 and 2011-12).
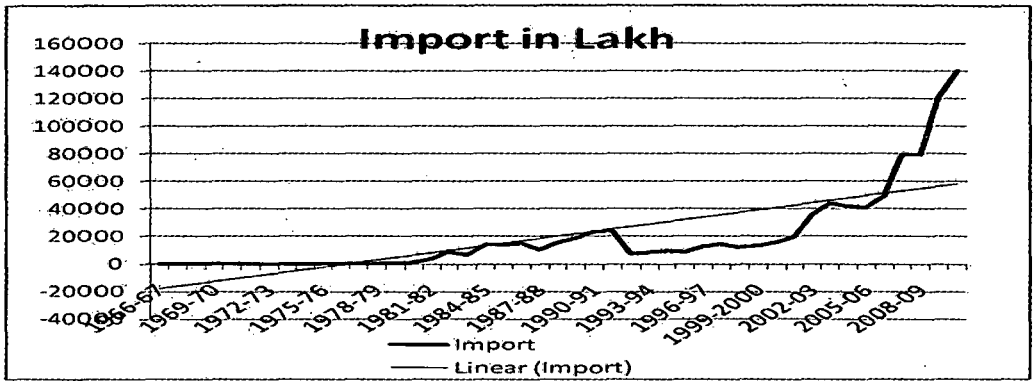
Exports:

Figure 1: Export-Import trend of KASEZ:

Export in Rs Lakh

— Export
— Linear (Export)

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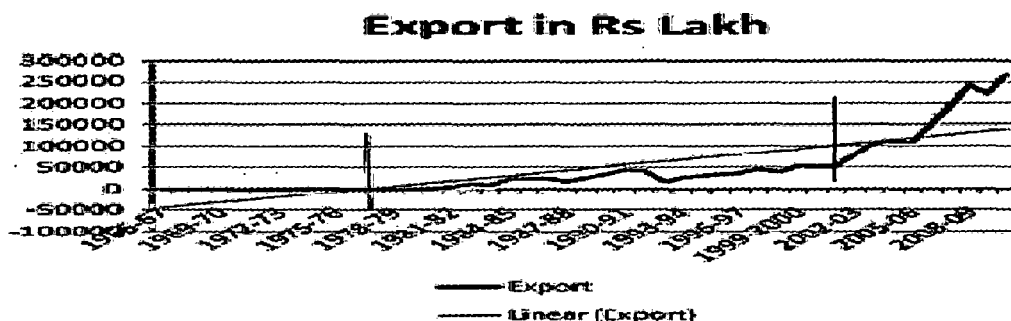
[2]Structural Stability Model used in this paper provides an effective statistical Method over chow test because we lose fewer degrees of freedom in this method than the Chow test.
[3]To obtain cumulative percentage add each new individual percent to the running tally of the percentages that came before it.

Source: - Office of the development commissioner KASEZ.

The above figure 1, (A, B) and figure 2 are showing the time trend of Export, Imports and NFE respectively from KSEZ. The difference between observed and linear trend gives us a rough idea about export and import performance of KSEZ. In the first decade after inception of EPZ there was no significant movement is found in export, import and NFE. Then for a long period of time after 1978-79 there is a slight increase (say up to 2002). Where as in SEZ regime the observed trend of Export and NFE showing fast upward movement (say after 2002). (Figure 2). The observed trend of NFE is more than that of linear trend after 2005-06.

Figure 2: NFE Trend of KSEZ:
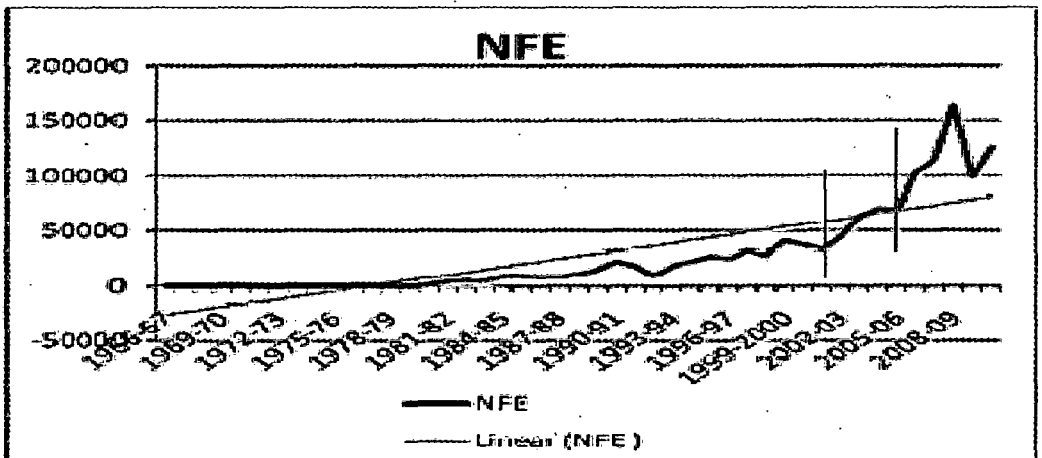
Source: - Office of the development commissioner KSEZ.

Graphically the fast upward moving trend of export and NFE after 2002 supports to the performance of SEZ policy over EPZ[ii]. But the observation derived from graphical movement of line(s) gives us only the rough idea. So to statistically test whether there is any significant performance of SEZ policy regarding Exports and NFE we worked out the Structural Stability Model (SSM). The functional form of SSM is as follows.

$$Y = \alpha_1 + \alpha_2 D_1 + \beta_1 t + \beta_2 (Dt) + u_t \qquad \dots\dots\dots\dots\dots\dots\dots\dots \text{(1)}$$

and

$$Y = a_1 + a_2 D_1 + b_1 t + b_2 (Dt) + u_t \qquad \dots\dots\dots\dots\dots\dots\dots\dots \text{(2)}$$

In this,

Y = Exports in equation 1.

Y = NFE in equation 2.

D = Dummy variable. It takes value 0 for EPZs period (1965-66 to 1999-2000) and one during SEZs period (2000-01 to 2010-11).

t = Trend Variable.

Dt = Trend variable for SEZ period.

From the above model it can be verified that whether the SEZ policy have significant impact on Export and NFE by testing the statistical significance of the slope and the intercept for SEZ period. A long time series data is used for this regression since 1965-66 to 2010-11 thus the results obtained by computer software are as follows.

Table No. 2: Coefficients of the Model 1

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1. (Constant)	-11349.7	3874.447		-2.929	.006
DINTRCEP	731366	42442.238	-4.672	-17.232	.000
TRENDT	1598.345	193.12	.309	8.276	.000
DTREND	20584.995	1070.901	5.282	19.222	.000

a. Dependent Variable : EXPOKSEZ

The coefficients derived from the model 1 where export is dependent variable shows that intercept (constant), dummy intercept, trend and trend for dummy variable all this have highly significant at 1% level of significance. This implies that there is a strong impact of SEZ policy over EPZ. The constants of both the periods are statistically significant but showing the negative sign may indicate the fall in exports in initial period.

Table No. 3: Coefficients of the Model 2

| Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1. (Constant)	-8465.871	3662.923	-3.834	-2.311	.026
DINTRCEP	-344137	40125.311	.344	-8.577	.000
TRENDT	1022.578	182.576	4.425	5.601	.000
DTREND	9887.523	1012.436		9.766	.000

a. Dependent Variable : NFE

Though the imports have negative impact on the NFE, here both are showing the upward moving observed trend. This is due to the fast upward movement in Exports. For the validity check of the NFE performance of KSEZ as per the model no. 2 the coefficients of the dummy intercept and dummy trend are highly statistically significant (Table No. 2).

Sector wise Performance:

The NFE trend in SEZ regime shows fast and significant contribution. But can we say all the sectors and units are performing well in SEZ regime? To answer this question we analyzed the sum of sectoral composition Export, NFE and employment for the period 2005-06 to 2009-10. In the following figure no. 3 it is depicted that chemicals and allied sector has its large contribution in KASEZ with 19953.27 lakh i.e. 58.57% of total export in last five year. This is followed by Garments, Engineering, Plastics, Trading and others both in terms of percentage and per unit contribution.

Figure no.3 A & B

A-Sector-wise Exports (in Lakh)   B-Sector-wise NFE earned (in Lacs)

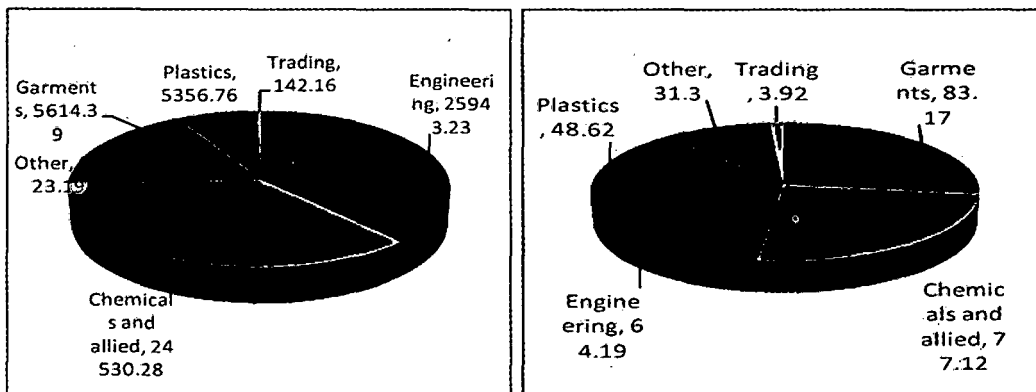Source: http://www.kasez.com/RTI/monitering_report.pdf
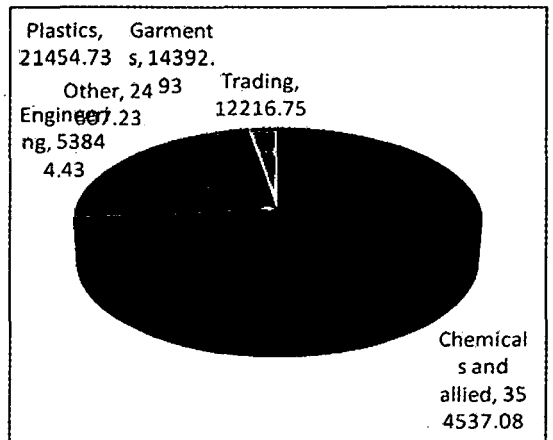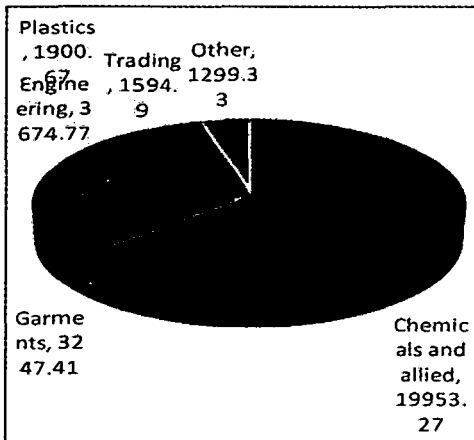
In terms of Net Foreign Exchange earnings Chemicals and allied sector comes first with 354537.08 lakh where as other sectors like engineering, plastics, garments, treding and other contributed in a range of 53844.43 to 12216.75 lakh. Though engineering sector took second place of garments in earning NFE still there is a singal sector dominance in KASEZ (Figure no.3-B).

Figure no. 4 A & B:

(A) Sector wise Investment   (B) Sector-wise Per unit Employment

Source: http://www.kasez.com/RTI/monitering_report.pdf

In terms of Investment Engineering comes first with 25943.23 lakh i.e. 38.14% where as chemicals and allied sectors share is 24530.28 (36.41 %) which put it in second place. Garments share in total investment is only 8.25% and nearly one fifth of the engineering and chemical-allied sectors. But this has good employment potential showing 83 persons employed per unit and nearly 32% of employment in KASEZ.

Unit Level Performance:

One of the objectives of this paper is to highlight the unit level performance of Export, NFE, Investment and Employment due to which we can analyze the concentration in KASEZ. For this purpose a unit level data has been collected and a series of cumulative percentages is presented in the table no.4. To avoid biased outcomes which could be derived from using single year data here we used the data for last five years.

Avery high concentration of Export, NFE and Investment has come from small number of units. The top eight units (about a 7 per cent of 122 operational units) contributed 50.32 per cent of the total export. Similarly 53.80 per cent of NFE is contributed by top five units and 52.64 percent investment from top eight units. Employment performance is also concentrated to first 18 units with 50.72 percent. The series of cumulative percentages has increased very fast in very initial period then it has increased with a falling growth rate. Surprisingly even at the 121 units no one has reached its 100 percent. This shows a very high performance concentration (towards very small number) of units. This could be due to the new entering units in the zone after SEZ act 2005.

Table No. 4: Concentration Ratios of Last Five Years Performance (As on 2009-10)

No.	Exports	Cumu lavtive percent- -age	NFE	Cumu lavtive percent- -age	Invest ment	Cumu lavtive percent- -age	Employ ment	Cumu lavtive percent- -age
1	89820.1	10.54	81863.79	16.34	8260	12.14	520	5.62
2	87380.79	20.80	79028.37	32.11	5849.75	20.74	370	9.62
3	83521	30.61	52236.2	42.54	4429.98	27.26	350	13.40
4	44008.55	35.77	33001	49.13	4382.84	33.70	347	17.16
5	37914.89	40.22	23380.69	**53.80**	4285.36	40.00	344	20.88
6	33131.45	44.11	18667.2	57.52	3197.37	44.70	303	24.15
7	26631	47.24	18204.95	61.16	2751.99	48.75	250	26.86
8	26178.42	**50.32**	17638.79	64.68	2646.61	**52.64**	250	29.56
9	22623.33	52.97	17410.49	68.16	2636.03	56.52	250	32.26
10	21048.37	55.44	15964.73	71.34	2553.31	60.27	238	34.84
11	21016.44	57.91	12042.32	73.75	2122.01	63.39	220	37.22
12	20803.59	60.35	11742.75	76.09	2063.64	66.42	216	39.55
13	19496.59	62.64	9037.79	77.89	2061.81	69.46	211	41.84
14	17641.01	64.71	7781.15	79.45	2035	72.45	176	43.74
15	15503.72	66.53	7475.36	80.94	1877.06	75.21	165	45.52
16	14541.15	68.24	7204.01	82.38	1840.44	77.91	164	47.30
17	11927.19	69.64	6515.34	83.68	1827.34	80.60	158	49.01
18	11358.38	70.97	4873.9	84.65	1013.77	82.09	158	**50.72**
19	11196.89	72.29	3586.36	85.37	997.62	83.56	155	52.39
20	11166.63	73.60	2971.69	85.96	819.95	84.76	148	53.99
21	10864.66	74.88	2897.4	86.54	797.04	85.94	139	55.50
22	9110.9	75.95	2865.67	87.11	756.83	87.05	133	56.93
23	7658.13	76.84	2684.32	87.65	746.89	88.15	129	58.33
24	6526.6	77.61	2585.15	88.16	601	89.03	126	59.69
25	6360.7	78.36	2578.94	88.68	532.45	89.81	125	61.04
26	5897.34	79.05	2540.2	89.19	405.86	**90.41**	121	62.35
27	5400.06	79.68	2154.27	89.62	320.55	90.88	119	63.64
28	5297.29	80.31	2073.52	**90.03**	312	91.34	116	64.89
29	5083.54	80.90	1916.83	90.41	279	91.75	115	66.14
30	4643.66	81.45	1858.58	90.78	261.42	92.14	110	67.33
31	4112.28	81.93	1774.44	91.14	242.72	92.49	100	68.41
32	3915.43	82.39	1735.45	91.48	225.44	92.82	100	69.49

Contd..

33	3857.57	82.84	1681.42	91.82	209.38	93.13	97	70.54
34	3795	83.29	1638.34	92.15	208.37	93.44	97	71.59
35	3745.39	83.73	1621.44	92.47	196.32	93.73	95	72.62
36	3705.52	84.16	1534.97	92.78	187.27	94.00	75	73.43
37	3693.93	84.60	1515.36	93.08	170.3	94.25	71	74.20
38	3591.89	85.02	1483.39	93.38	162.99	94.49	65	74.90
39	3472.52	85.43	1440.95	93.66	161.5	94.73	64	75.59
40	3472.46	85.83*	1429.63	93.95	152.22	94.95	64	76.28
41	3255.16	86.22	1370.54	94.22	149.28	95.17	62	76.95
42	3187.19	86.59	1284.27	94.48	141.86	95.38	60	77.60
43	3132.75	86.96	1155.87	94.71	137.39	95.58	60	78.25
44	3122.18	87.33	1078.09	94.93	133.42	95.78	59	78.89
45	3103.02	87.69	1038.04	95.13	131.72	95.97	58	79.52
46	3085.71	88.05	940.58	95.32	129.29	96.16	57	80.13
47	3001.1	88.40	927.12	95.51	114.94	96.33	52	80.70
48	2912.66	88.75	900.46	95.69	111.4	96.50	50	81.24
49	2865.67	89.08	842.45	95.85	110	96.66	50	81.78
50	2779.91	**89.41**	838.11	**96.02**	109.35	**96.82**	49	**82.31**
.....	.....	......	......	......	......	......	......	......
121	332.28	**99.34**	34.12	**99.93**	0.18	**99.99**	6	**98.77**
.....	.....	.....	.....	.....	.....	.....	.....	.....
174		**100**		**100**		**100**		**100**

Source: http://www.kasez.com/RTI/monitering_report.pdf

Summary:

In this paper the effectiveness of SEZ over EPZ has been tested by using a long time series data and sector wise and unit level performance is also focused. It is observed that conversion of the Kandla EPZ in to KASEZ has significant impact on export as well as net foreign exchange earnings. Though this zone is known as a multiproduct zone its sectoral distribution shows dominance of Chemicals and allied sector in export as well as in NFE earning. Garment industry has high employment potential but earns very less NFE. Similarly engineering sector attracted more investment but ranks second in NFE earning and third in generating per unit employment. The chemicals and allied industries are dominant in Gujarat so same dominance is reflected in the KASEZ. The unit level performance shows high concentration towards few units. Rather we say it represents inefficiency of large number of units. The review of past criteria for project approval and monitoring shows that the proposals were evaluated for EPZs on the basis of the economic viability of the project, value-addition content, volume of turnover, marketing tie-up, and financial background and experience of the promoter. The proposals envisaging

lower value addition are liable to be rejected. This method was criticized on the grounds that the 'objective should be to generate largest possible volume of net foreign exchange per unit of exports'. The criterion of export obligation was also criticized as it is an ad hoc criterion. Since then the total net foreign exchange earning criterion was highlighted. Whereas the facts shows greater concentration of NFE earning units such as top twenty eight units are earning ninety percent of NFE in KASEZ. Hence the need for performance monitoring issue is revisited.

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