Working Paper 261

Trajectories of China's Integration with the World Economy through SEZs: A Study on Shenzhen SEZ

Malini L Tantri

ISBN 978-81-7791-117-6

Institute for Social and Economic Change (ISEC) is engaged in interdisciplinary research in analytical and applied areas of the social sciences, encompassing diverse aspects of development. ISEC works with central, state and local governments as well as international agencies by undertaking systematic studies of resource potential, identifying factors influencing growth and examining measures for reducing poverty. The thrust areas of research include state and local economic policies, issues relating to sociological and demographic transition, environmental issues and fiscal, administrative and political decentralization and governance. It pursues fruitful contacts with other institutions and scholars devoted to social science research through collaborative research programmes, seminars, etc.

The Working Paper Series provides an opportunity for ISEC faculty, visiting fellows and PhD scholars to discuss their ideas and research work before publication and to get feedback from their peer group. Papers selected for publication in the series present empirical analyses and generally deal with wider issues of public policy at a sectoral, regional or national level. These working papers undergo review but typically do not present final research results, and constitute works in progress.

TRAJECTORIES OF CHINA'S INTEGRATION WITH THE WORLD ECONOMY THROUGH SEZs: A STUDY ON SHENZHEN SEZ

Malini L Tantri*

Abstract

By exploring the role of SEZs in China's integration with the world economy, we also investigate the underlining challenges faced by the economy. The analysis brings forth the indisputable fact that SEZs enabled the Chinese economy to trigger its growth standards and achieve its ambition of integrating with the world economy without compromising its political ideology. This transformation, however, has been accompanied by a few challenges of late that have been posing distractions to the broader process of development. We argue that the experience of Chinese SEZs provides a number of policy directions, which may be followed with discrimination.

Introduction

In the quest to improve their position in the global scenario, the emerging giants of Asia, China and India, are rigorously involved in fine-tuning the pace of their economic reforms. Specifically, by learning from each other's policy experiences. One such initiative undertaken recently in India was an attempt to imitate the Chinese policy on Special Economic Zones (SEZs), which is popularly considered as the most effective instrument fueling China's economic transition. The SEZ policy in China was put forward by the Deng Xiaoping Government as an instrument to accelerate the pace of industrialisation through experimenting seeds of liberalisation. It was, therefore, an early attempt to induct the system of capitalism within the socialistic framework. Unfortunately, these enclaves were received with more skepticism than expectation in the India, specifically considering the possible mal-adjustments that could occur in the broader process of development. Perhaps, this could be due to the bias in the existing set of literature that appreciates the positive strides of the Chinese SEZs with a little attempt to record underpinnings of the transition, which might have posed challenges to the institutional and economic set-up. Moreover, except Goswami (2007), hardly any studies are available to analyse Chinese SEZs from the Indian perspective specifically in the light of current ongoing controversy regarding Indian SEZs.

To shed light on these aspects, we have placed this analysis to provide, in retrospect, the trajectories of the SEZ policy in China to redefine critically these policies in India. Against this backdrop, this paper addresses issues such as the effectiveness of SEZs in transforming a traditional economy into a modern one and to quantify the challenges generated in the process. Among the five full-fledged SEZs and 14 ETDZs of China, we chose the Shenzhen SEZ for an in-depth study for two reasons. One, it is the biggest SEZ in China and in the world. Thereby it represents a classic case of an industrial township. Two, is its commanding performance according to the stated objectives of SEZ in comparison to other

* PhD Scholar, Institute for Social and Economic Change (ISEC), Nagarabhavi, Bangalore – 560 072. E-mail: malinilt@gmail.com.

I express my gratitude to the Indian Council of Social Science Research (ICSSR) for providing financial assistance to undertake fieldwork in Beijing and Shenzhen, China, under the 'Data Collection Abroad' programme. I am also grateful to my PhD Supervisor, Prof R S Deshpande, Director, ISEC, Bangalore, for his comments and suggestions.

SEZs and its transformation from a small fishing community to a full-fledged industrial township. This paper is based on secondary data (Chinese Statistical Year Book 2006 and Shenzhen Statistical Year Book 2006) with validation from the author's extended fieldwork in China[i]. The paper comprises four sections. A brief on the evolution and the different components of Chinese SEZs is provided in the second section. Section three analyses the growth trajectories of SEZ expansion in China. The summary and major policy implications to other economies (with special reference to Indian economy), which is trying to imitate a similar line of reforms, is provided in the fourth section.

Evolution of SEZs Policy in China and its Components: A Brief

The Chinese government followed a 'Gradualism Approach' to the process of economic reforms and transition as against the 'Big Bang Approach'[ii], which has significantly influenced the transition process of socialistic countries. The process of economic reforms in China could be categorised into the following four groups based on the time of implementation (Liou, 1999)

1. Rural agricultural reforms (1978-84)
2. Urban industrial reforms (1985-89)
3. Open door policy (since 1978)
4. Macroeconomic structural reforms (in the 1990s)

In the reforms agenda top priority was given to agriculture and allied sectors as compensation for the disincentives imposed on it in the pre-reforms period. The focus during the pre-reforms period in China was on the 'Heavy Industry Oriented Development Strategy' under which a rigid institutional framework was set up for the agricultural sector based on the three basic factors: an inward looking strategy, a unified purchasing and marketing system for agricultural products and collectivisation of agricultural products (Huang, 1998). The crux of this policy was to keep prices of agriculture products low and reduce the cost of production in the industrial sector. This was based on the assumption that it would multiply and spread the benefits generated by the industrial sector. Contrary to expectations, it had an adverse effect on the growth and composition of the agricultural and other sectors of the economy as well. In later days, the reforms in the agricultural sector were gradually accompanied by reforms in other sectors of economy. It included a few adjustments to the fiscal responsibility of the Central and local governments as a part of fiscal reforms, banking sector reforms as a part of financial reforms and reforms in the labour market and wage rates.

All these internal adjustments, however, were made eventually to improve the performance of the external sector. Moreover, the shift in China's approach to the outside world was also guided by the impressive experience of the export-oriented approach of a few countries in East Asia (Wu, 2005). Reforms in this area began with investment of foreign capital in the Shekou Special Industrial Zone, which become a part of the Shenzhen SEZ in 1979, and were followed by other measures. The creation of SEZs is one of the other measures that had special significance because it helped the Chinese Government experiment with a market economy within the socialistic framework. The Regulation of the Peoples Republic of China on Special Economic Zone (1980) provided a legal framework for the operation of SEZs in China. Initially, four SEZs were set up, one each at Shenzhen, Zuhai, Shantou (at

Guangdong Province) and Xiamen (at Fujian Province)[iii]. Subsequently, based on the successful experience of the initial four SEZs, different types of developmental zones were introduced in other coastal regions. These different types of zones represent different generations of reforms in the administration and maintenance of SEZs. Most of these zones were promoted in the coastal regions. It was done specifically to target the Chinese residing in Hong Kong, Macau and Taiwan. Hence, the SEZs policy in China was also used as means to tap the nationalist spirit and combine it with a broader national policy. The system of decentralisation was encouraged for the first time in China in the SEZs as against the system of central planning and administration[iv]. This contributed immensely in improving the pace at which these enclaves operated. With regard to the incentive structure[v], it is noticed that different slabs were implemented not only between SEZs and non-SEZs but also between domestic and foreign investments within the SEZs. At the same time, due attention was paid to develop various infrastructural needs[vi] of the region with the help of central, private and foreign ventures. Moreover, the government ensured supply of labour in the upcoming SEZs by establishing a Labour Service Company[vii]. In a nutshell, the Chinese policymakers gave due attention to various components in the promotion of SEZs.

Table 1: Basic Profile of Chinese SEZs

Sl. No.	SEZs	Province	Geographical Size	Before SEZ	Inherent Advantages	Administration
1.	Shenzhen (1979)	Guangdong	316 sqkm Four district of Shenzhen municipality covered under SEZs (out of six)	Small fishery village	Near Hong Kong city Access to port	It was independent of the province to which it belong
2.	Zuhai (1979)	Guangdong	Initially it covered only 6.7 sqkm. Later it spread to 121 sqkm	Underdeveloped	Near by Macau It had long tradition in international relations	Controlled by provincial Government
3.	Shantou (1979)	Guangdong	234 sqkm	It already had an established industrial centre	It was home of many Chinese emigrants	It was independent of the province to which it belong
4.	Xiamen (1979)	Fujian	130 sqkm	It was a trading point	It had family ties with Taiwan	It was independent of the province to which it belong
5.	Hainan (1984)	Hainan		It was also underdeveloped in term of industrial base and infrastructural facility	It had a good natural resource base that was hardly used.	Controlled by provincial Government

Source: Authors Compilation

Trajectories of SEZs Expansion in China

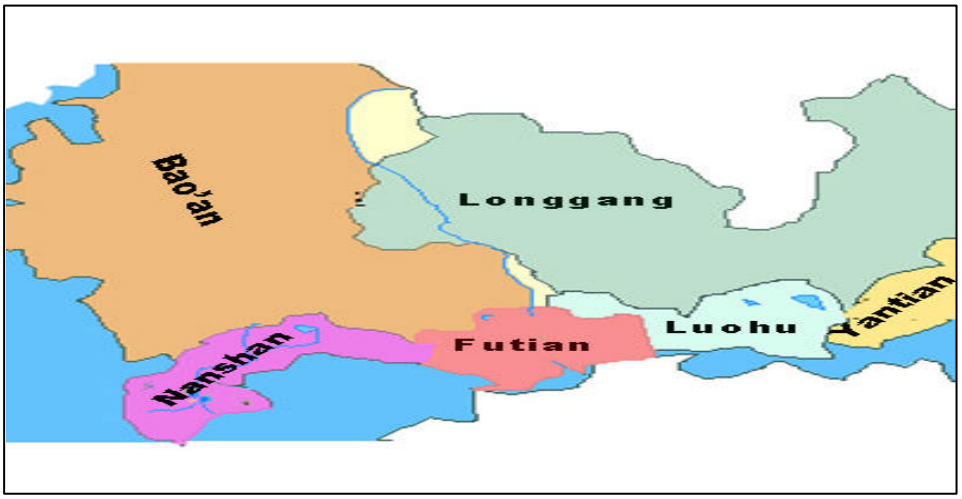
The growth trajectories of the expansion of SEZs in China are elaborated under two major heads. Initially we discuss the opportunities and economic transformation facilitated through SEZs in China.

This is followed by a discussion highlighting the challenges and economic setbacks, which appeared as inevitable side effects of the promotion of SEZs in China. Before that, we provide a brief profile of the Shenzhen SEZ, China.

Shenzhen SEZ

Traditionally, Shenzhen was known as Sham Chun or Shamchun. It is a sub-provincial city of the Guangdong province in Southern China. Of the five SEZs, it represents the success story of SEZs in China and is a model for replication. Set up in 1979, it is one of the largest SEZs in China spreads across 316 sq kms. It shares a common border with Hong Kong and is 36 kms away from the Hong Kong Special Administrative Region. The Shenzhen Municipal comprises six districts namely Luohu, Futian, Nanshan, Yantian, Bao'an, and Longgang. The SEZ is spread across Luohu, Futian, Nanshan, and Yantian (Map 1) but not Bao'an and Longgang districts.

Map 2: Administration Division



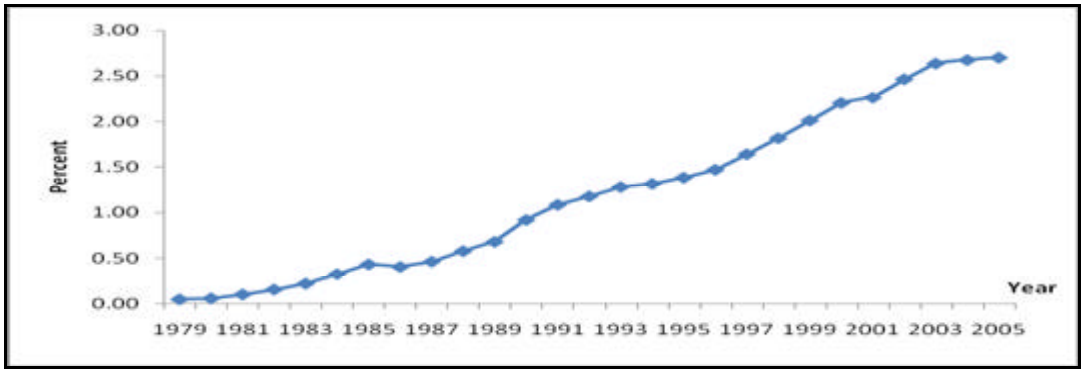
Source: http://www.chinahighlights.com/shenzhen/map/map-of-the-region.htm

Opportunities and Economic Transformation of SEZs

Gross Domestic Product and Economic Transformation

The commanding performance of China has been recognised worldwide in terms of GDP. The GDP of Shenzhen is more significant and surpasses the national average. A similar trend is noticed even in terms of the growth rate of GDP and per-capita income of Shenzhen (see Appendix Table 1). In terms of Shenzhen's share in China's GDP (Figure 1), though it has increased continuously over the years but it is very small - accounting for just 2.7 per cent in the year 2005-06.

Figure 1: Share of Shenzhen in China's GDP



Source: Estimation Based on data collected from CSY, 2006 and SZSY, 2006

On the other hand, an analysis of the sectoral composition Shenzhen's GDP vis-à-vis China since 1979, presents a few interesting facts (Table 2). First, the primary sector's share in GDP has been declining drastically. The decline is more pronounced and faster in the case of Shenzhen. It plunged from 37 per cent in 1979 to 0.2 per cent by 2005. The national average declined from 27.9 per cent to 12.6 per cent during the same period. The decline in the share of the primary sector in GDP was quite rapid after 1980. Second, over the reference period the contribution of the secondary sector remained almost constant in the case of China as a whole but improved significantly in Shenzhen from 20.5 per cent to 53.2 per cent. It increased almost 2.5 times. Within the secondary sector, the share of the industrial sector in Shenzhen improved from 11.8 to 50.2 per cent whereas the contribution of the construction sector dropped from 8.7 to 3 per cent during the same period. Further, within the industrial sector the contribution of the light industry was highly significant. It contributed almost 75 per cent of the total industrial output of Shenzhen SEZ in the early 1980s (Ge, 1999). Third, surprisingly, the service sector in China recorded an impressive growth in its contribution to GDP from 24.2 per cent in 1979 to 39.9 per cent in 2005. On the other hand, the service sector in Shenzhen made impressive contributions to GDP from 1979 and increased very slightly from 42.5 per cent to 46.6 per cent.

Table 2: Composition of GDP in China and Shenzhen City

(in Per cent)

Sectors	1978		1980		1985		1990		1995		2000		2005	
	C	S*	C	S	C	S	C	S	C	S	C	S	C	S
Primary	27.9	37	29.9	28.9	28.2	6.7	26.9	4.1	19.8	1.5	14.8	0.7	12.6	0.2
Secondary	47.9	20.5	48.2	26	42.9	41.9	41.3	44.8	41.2	50.1	45.9	49.7	47.5	53.2
Tertiary	24.2	42.5	21.9	45.1	28.9	51.4	31.8	51.1	33	48.4	39.3	49.6	39.9	46.6

Source: CSY, 2006 and SZSY 2006

Note: C refers China and S refers Shenzhen; * Data for Shenzhen is for the period 1979

The different pattern of growth noticed in the composition of Shenzhen GDP, specifically with respect to the secondary sector could be traced in the approach designed for the promotion of the manufacturing base in Shenzhen. Instead being too much ambitious about the SEZs policy, the process

of industrialisation in Shenzhen was introduced gradually in three stages (Wong and Chu 1985). Initially considering the inherent advantages and difficulties involved in the region, emphasis was placed on small-scale industries, especially labour-intensive but modern industries. In the second stage, there was special emphasis on high technology industries. In the third stage the industrial base of the region was diversified; specifically industries with advanced technology and modern scientific methods of production. The step was also helpful in developing the infrastructure base in the region in a systematic manner without putting too much fiscal burden. This systemic and commanding development of industrial sector is also reflected in terms of Gross Value of Output of industrial sector (GVOI)[viii], which has increased rapidly (Table 3).

Table 3: Gross Output Value of Industry & its Composition of Shenzhen

(in 100 Million Yuan)

YEAR	TOTAL[@]
1979	0.71
1980	1.06
1985	24.67
1990	220.22
1995	1292.21
2000	3071.52
2005	10174.54

Source: SZSY, 2006

This phenomenon of sectoral composition and its transition over the years seem to challenge the traditional 'process of development'. Because it is argued that in the initial stage of economic development, primary sector would have a significant share in the national income. In the subsequent period the manufacturing sector dominate the economic process, followed by service sector, in terms of contribution to national income. This seems to be missing in the case of Shenzhen economy. Altogether, in terms of GDP growth rates and its composition, Shenzhen city presented a different structure and pattern of growth during the post reform period compared to growth of China's economy.

Participation in Foreign Trade and Foreign Investment

Prior to reforms, besides the dominance of the central government in planning and administration, the state enterprises dominated the industrial sector and had complete control over production, import and export of goods. There was hardly any competition from the private or foreign companies. It eventually affected efficiency with which resources were allocated, utilized and henceforth the pace of economic growth and the composition of China's foreign trade. For example, China exported commodities in which the country did not had any comparative advantages; producers hardly had any incentives to expand production owning to the planned economic system; besides, availability of abundant labour - production of capital-intensive products were encouraged (Lardy, 1994 and 2007). Consequently, China's share in world trade went down drastically from 1.5 per cent in 1953 to 0.6 per cent in 1977

(Lardy, 1994 and 2007). Under these circumstances, the SEZ policy was designed to boost the export of labor-intensive products.

Shenzhen, started with a low foreign trade owing to the initial economic conditions of the region. Unlike the national trend at that time, it recorded surplus in its current account, albeit deficit in its current account for the initial few years of reform. However, within a few years the performance of the Shenzhen SEZ showed improvement (Table 4). The value of its exports increased from US$ 900 million in 1978-79 to US$ 101,518 million by 2005. This outstanding performance in trade promotion is reflected not only in the increase in absolute volume of trade but also in its increasing participation in the overall growth of national trade and its composition. By the end of 2005-06, Shenzhen's contribution to national trade was almost 13 per cent (Table 5). It must be noted that in terms of share in China's GDP, Shenzhen has a very small contribution, but in the country's total trade, it has the major share.

Table 4: Trade Performance of China and Shenzhen in the Post 1980s

(100 US million $)

YEAR	EXPORT		IMPORT		TOTAL TRADE		NET TRADE BALANCE	
	China	Shenzhen	China	Shenzhen	China	Shenzhen	China	Shenzhen
1978	97.5	0.09	108.9	0.07	206.4	0.16	-11.4	0.02
1980	181.2	0.11	200.2	0.06	381.4	0.17	-19.0	0.05
1985	273.5	5.63	422.5	7.24	696.0	12.87	-149.0	-1.61
1990	620.9	81.52	533.5	75.5	1154.4	157.02	87.4	6.02
1995	1487.8	205.27	1320.8	182.42	2808.6	387.69	167.0	22.85
2000	2492.0	345.63	2250.9	293.76	4742.9	639.39	241.1	51.87
2005	7619.5	1015.18	6599.5	812.99	14219.1	1828.17	1020.0	202.19

Source: CSY, 2006 and SZSY, 2006

Table 5: Share of Shenzhen in county's total Trade

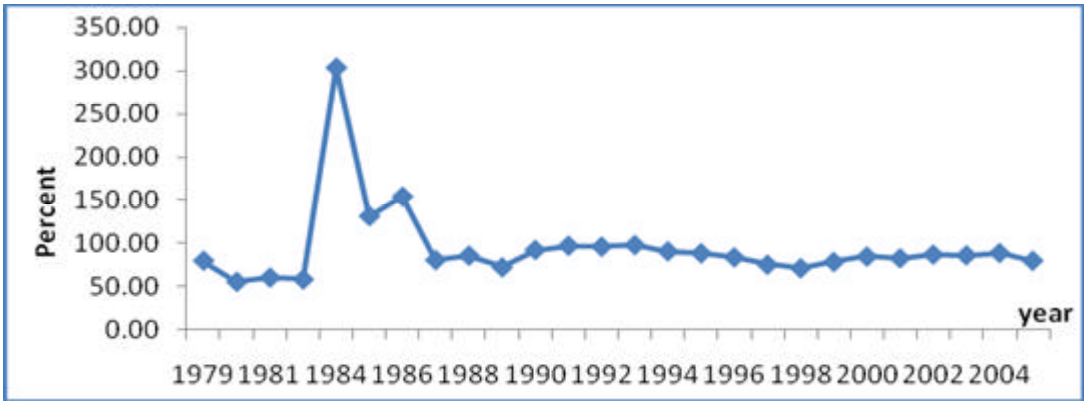
YEAR	% OF CHINA'S EXPORT	% OF CHINA'S IMPORT	% CHINA'S TOTAL TRADE
1980	0.06	0.03	0.04
1985	2.06	1.71	1.85
1990	13.13	14.15	13.60
1995	13.80	13.81	13.80
2000	13.87	13.05	13.48
2005	13.32	12.32	12.86

Source: Calculation based on SZSY, 2006 and CSY, 2006

With regard to import intensity[ix] of Shenzhen's export it is found that though it had increased in the initial few years it declined after reaching the peak. The declining trend was specifically noticed in post 1990s when there was also near stagnation in the SEZs share in the country's exports. The high imports-intensity in the initial few years was influenced by the sectoral composition of the industrial activities in Shenzhen as discussed above. Specifically in the early years attention was placed on the assembly and processing operations. Such economic operations in turn depend on the components and other production materials sent by the parent company abroad (Wu, 1999). This, could be related to the nature of trade policies in most of the industrialised countries of that time, which generally encouraged

the use of their own raw materials and intermediate goods (Wu, 1999). Thus, the volume of imports by SEZs, among others, is correlated to the sectoral composition of a zone. This in turn should depend on the priorities of the development of industrial structure of the region in order to offset imbalances, if any due to high import intensity.

Figure 2: Import Intensity of Export in Shenzhen



Source: Based on Data collected from SZSY, 2006

In addition to facilitating trade expansion and diversification, another prime objective of the SEZ policy in China was to attract foreign investment to supplement domestic investment. Analysing the performance of the Shenzhen SEZ within this framework indicates that Shenzhen, initially started with a very low volume of foreign capital (US$ 30 million). It was only after the mid 1980s that the volume of foreign capital increased very sharply except for some decline between 1995 and 2000, which could be attributed to East Asian Crisis. With regard to its composition, it is noticed that FDI constituted a large part of the total inflow of foreign capital in Shenzhen. Table 6 shows the mode of foreign capital influx in Shenzhen. Initially, foreign companies preferred to enter the Chinese market through co-operative operation. However, it is found that joint ventures gradually replaced solo foreign companies after the late 1980s. This behavioral pattern and approach of foreign investors (MNCs) towards the reform process in China seems to be motivated by the intention to understand the local market and demand and subsequently to take control over the same.

Table 6: Foreign Capital Inflow and its Components in Shenzhen

(100 US Million$)

	1979	1980	1985	1990	1995	2000	2003
Foreign Loan	0 (0)	0 (0)	1.95 (18.82)	0.11 (1.53)	1.33 (3.71)	4.37 16.54)	5.56 (9.53)
FDI	0.18 (59.99)	2.4 (89.36)	7.93 (77.28)	6.79 (97.92)	34.63 (96.29)	17.38 (65.84)	48.47 (83.15)
Other	0.12 (40.01)	0.32 (11.63)	0.4 (3.90)	0.04 (0.55)	0 (00)	4.65 (17.16)	4.38 (7.31)
Total	0.3	2.71	10.26	6.93	35.97	26.4	58.29

Source: SZSY, 2006

Note: Figure in parenthesis are share in total

Table 7: Various Component of FDI Inflow in Shenzhen

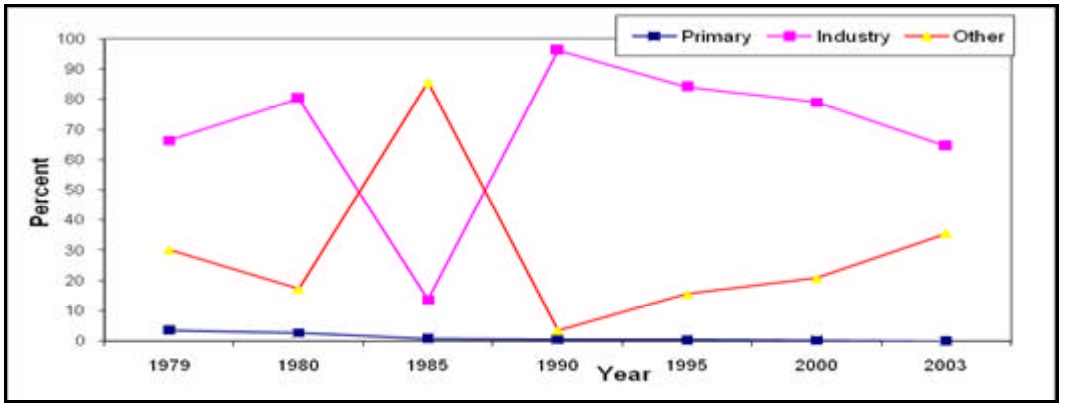
	1979	1980	1985	1990	1995	2000	2003
FDI #	0.18	2.4	7.93	6.79	34.63	17.38	48.47
Joint Venture*	47.54	4.26	23.38	27.79	36.27	16.32	25.75
Cooperative Operation*	52.46	58.27	73.18	23.71	18.35	6.86	2.3
Solo Foreign Companies*	0	37.47	3.45	48.5	45.38	74.07	69.23

Source: SZSY, 2006

Note: * Values are in per cent; # Values are in US$100 million

With regard to the sectoral composition of FDI, it is found that in the early years of reform, the industrial sector in Shenzhen attracted a large share of FDI (Figure 3). Among others, this could be due to competitiveness of SEZs in the international market followed by the incentive structure available for the same (Ge, 1999) and the pattern of growth designed in the promotion of SEZs. Against this, the share of the agricultural sector in the total FDI inflow decreased from 3.6 per cent at the time of reform to almost zero by the end of 2005. Interestingly, two major shifts in the FDI inflow were noticed in the post 1990s. First, the share of 'other' sectors gradually improved from 15.6 in the 1990s to 35.5 per cent in 2005. This was due to the changes in the China's foreign trade policy regarding new technology and research and service oriented foreign investment rather than manufacturing activities. This policy is also found to be in conformity with China's recent environmental policy, which emphasises protection of the environmental. Second, real estate attracted a relatively higher share of foreign investment in the initial period due to the boom in the real estate markets of Hong Kong (Oborne, 1986). This, however, has seen a sharp decline in its share in the post 1990s due to various regulations imposed by the Shenzhen Municipal administration division to avoid undesirable consequences (author's field perception).

Figure 3: Sectoral Distribution of FDI in Shenzhen



Source: Computed from data collected from CSY, 2006 and SZSY, 2006

The direction of FDI inflow, on the other hand, shows that the SEZs policy was quite successful in attracting overseas investors from neighboring Hong Kong, Macau and Taiwan, which indeed was the stated objective of the SEZ in Shenzhen. In fact, in the last 30 years the share of Hong Kong, Macau and Taiwan in FDI has increased from 46.64 to 61.52 per cent. However, this higher investment from Hong Kong is found to have an adverse impact in learning and adopting better access to technology transfer in Shenzhen. In fact, a few Hong Kong firms used less complicated versions of their technology in their joint ventures in Shenzhen (Wu, 1999). Later, though gradually, Singapore, Japan, USA and France emerged as other FDI sourcing countries and the shares of these 'other' countries increased sharply from 17.89 per cent in 1979 to 31.49 per cent in 2005. This indicates that though of late, the dependence of Shenzhen on foreign investment has diversified.

Table 8: Country of FDI Origin in Shenzhen

(In Per cent)

YEAR	HONG KONG & MACAU	TAIWAN	SINGAPORE	USA	JAPAN	FRANCE	OTHERS
1986	46.64	0.00	9.76	2.04	17.11	6.55	17.89
1990	78.92	6.33	4.52	1.81	1.53	0.01	6.88
1995	76.41	2.04	2.21	4.73	5.82	1.08	7.71
2000	53.51	1.51	2.03	4.40	0.64	10.11	27.81
2003	58.38	3.14	1.70	2.93	1.72	0.64	31.49

Source: SZSY, 2006

Employment and Wage Rate

Along with higher GDP growth rate and higher inflow of Foreign Investment, Shenzhen has been quite successful on the employment front as well. Over the years, employment opportunities in SEZs increased substantially. Due to non-availability of data on any employment indicators here, we have considered the trend in the working population to analyse the employment scenario in the region. The figures presented in Table 9 exhibit a declining pattern in the initial years (from 44 per cent in 1979 to 37 per cent in 1985) but improves significantly in later days (70 per cent in 2005), which is quite impressive. The initial decline could have been due to the conversion of agricultural land for non-agricultural purposes and a fall in employment generation that could not compensated by the employment opportunities in the secondary and tertiary sectors. On the other hand, the increase recorded later could be ascribed to the upward swing in the inflow of foreign investments in Shenzhen (Ge, 1999) followed by industrial activities in the region.

Table 9: Share of Working Population in Shenzhen during 1979 to 2005

(In Per cent)

	1979	1980	1985	1990	1995	2000	2005
Working population	44.41	44.73	36.99	65.10	66.46	67.73	69.62

Source: Estimation based on SZSY, 2006

The share of the different sectors in generating employment, on the other hand, indicates that, the workforce in the agricultural sector had reduced drastically from 26 per cent in 1979 to 1 per cent by the end of 1997. At the same time the industrial sector (45 per cent) followed by construction (10 per cent), commerce and restaurants (11 per cent) emerged as promising sectors for generating employment (Park, 1997). The share of urban self-employment in total employment increased from 2.94 per cent in 1979 to 36.59 per cent in 2005 (Table 10). Thereby it depicts a declining tendency of risk aversion among the Chinese because, by definition, this sector does not assure any type of social and working security to its staff that is available to workers in State Owned Enterprises (SOE), foreign and joint ventures. It is also found that the rate of employment generation in the Shenzhen SEZ decline after reaching the peak, particularly in the post Nineties (Appendix 1).

Table 10: Composition of Employment in Shenzhen

YEAR	TOTAL EMPLOYED#	STAFF & WORKERS (%)	URBAN SELF EMPLOYED (%)	LABORERS OF TOWNS & VILLAGES (%)
1979	13.95	28.82	2.94	68.24
1980	14.89	32.64	2.55	64.81
1985	32.61	69.49	1.96	28.55
1990	109.22	50.73	3.08	46.19
1995	298.51	29.73	24.18	46.09
2000	474.97	19.66	29.45	50.89
2005	576.26	28.70	36.59	34.71

Source: SZSY, 2006

Note: values are in 10000 Persons

In the intervening time, wage rates also exhibited an upward swing (Table 11). However, a comparison of wage rates of staff and workers with SOEs indicates that the wage rates of SOEs have increased steadily. This is in contrast with the general impression on SEZs as well as findings of earlier studies that empirically argued that wages in foreign owned enterprises in Shenzhen are, on an average, higher than the wages paid elsewhere in Shenzhen. This was further confirmed during personal interviews carried out in Shenzhen. This discrepancy raises doubts over the accuracy of the statistics as presented by the Chinese Government and is also challenged by other studies like those of the World Bank (1983)[x].

Table 11: Wage Structure in Shenzhen

(In Yuan)

	1979	1980	1985	1990	1995	2000	2005
Average Yearly Wages[@]	770	980	2,400	4300	12,300	23,000	32,000
Wages in State Owned Units	785	990	2,400	4,339	13,700	26,200	47,800

Source: Shenzhen Statistical Year Book 2006

Note: @ wages of staff and workers and figures are rounded off

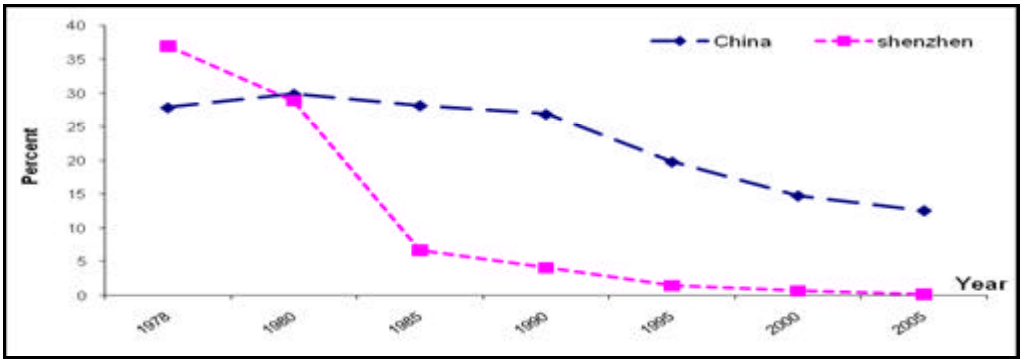
Thus, SEZs seems to be quite successful in meeting the various objectives of its promotion. Thereby it presents a positive picture of its feasibility in achieving the goals of liberalisation. However as argued by Sen and Dreeze, (1999; p-75), *"In learning from China, it is not enough to look only at positive lessons-what can be fruitfully emulated; it is important to examine the 'non lessons' as well-what may be best avoided".* Thus, it is equally important to elaborate on the challenges and economic setbacks of SEZs expansion in China. This is discussed in the next section.

Challenges and Economic Set Backs of SEZ in China

The State of Agricultural Sector: A Post SEZs Perspective

One of the most obvious and inevitable results of SEZs promotion in China is the significant drop in the contribution of the primary sector to Shenzhen GDP. The share of agriculture within the primary sector has also declined drastically, over the years (Figure 5). Comparing the same figures with national trade reveals that the decline is much steeper in the case of Shenzhen than China. At the outset, it seems to be a welcome trend from the perspective of conventional stages of development. However, a closer scrutiny of the same may be useful in understanding the scenario from a different perspective. This necessitates the exploration of the possible factors for the same.

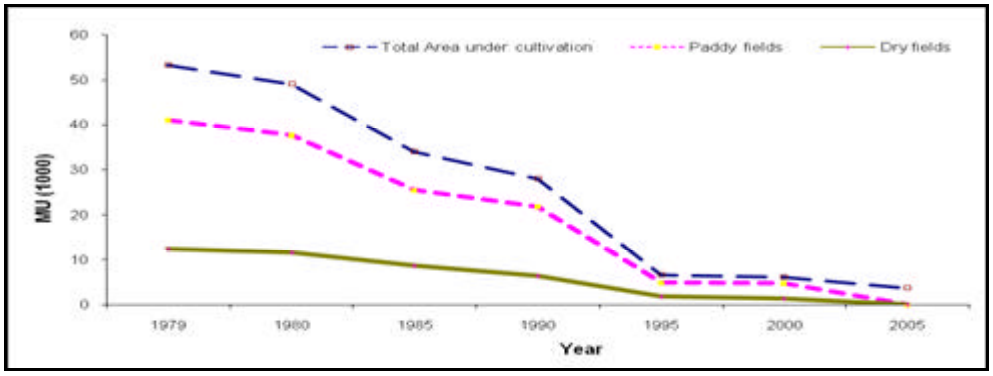
Figure 5: Share of Primary Sector to GDP of China and Shenzhen



Source: computed from data collected from CSY, 2006 and SZSY, 2006

This could be attributed, among others, to the decline in the cultivable area in Shenzhen, after starting the SEZ (Figure 6). At the time of initiating reforms, Shenzhen had 53,000 Mu[xi] for agricultural activities. The area available for agricultural activity reduced drastically to 3,000 Mu by 2005. The decline is observed particularly in area under paddy (Lam and Steve, 1985) and rain fed farming. On an average in the post-reform period, the decline in area available for agriculture was more than 90 per cent and it could be attributed to two major factors. One, the shift in the land use from agricultural to non-agricultural activities (Peimin, 2007) and second, shift of farmers and agricultural labour to non-farming activities because of higher wages and better standard of living (Zheng et. al, 1985).

Figure 6: Area under Cultivation in Shenzhen City: Post SEZs Perspective



Source: computed from data collected from CSY, 2006 and SZSY, 2006

This reduction in cultivable area has had a severe impact in recent years on food self-sufficiency of Shenzhen city. For instance, in 1980-81, Shenzhen was not only self-sufficient in food grain production but also a regular supplier of 40 Million Catties to other parts of China (Zheng *et. al*, 1985). Whereas, now it depends on other provinces for its day-to-day needs of grains and other basic food items (author's perception). However, one may challenge this view by claiming that this may not be a problem as long as people have purchasing power and it is possible to import food items from other parts of the country and other countries. In this context, it is to be noted that the situation mirrors the problem an economy may face if care is not taken and the problem intensified if such projects are allowed nationwide. The decrease in cultivable land was more pronounced in post 1990s, corresponding to the decreased share of the agricultural sector in GDP. Over the same period, a decline in cultivable area per agriculture person and per agricultural labour was also noticed (Table 12) specifically in the post 1990s. This implicitly points to the growing pressure of population on agricultural activity in post 1990s owing to government restriction on movement of laborers from rural to urban areas. Moreover, as we have seen in the last section, in the post 1990s SEZs were near stagnation in employment generation resulting in a burden on the agricultural sector. Further, as elaborated in the previous section, agriculture hardly benefited in attracting foreign investment and the associated spillover effect. Thus, there was a double burden on agriculture because of a substantial drop in land available for agriculture and total failure to attract foreign investments. At the outset, a fall in the share of cultivable area, fall in the share of agriculture in GDP and fall in the share of people depending on agriculture may appear as a part of the development process. This is the case for all countries that have improved their income levels, i.e., today's developed countries.

Table 12: Trend in Area under Cultivation and Area per Agricultural Labour and Per Person in Shenzhen

	1979	1980	1985	1990	1995	2000	2005
Cultivated area per agriculture person (Mu)	N.A.	N.A.	N.A.	1.11	0.27	0.25	N.A.
Cultivated area per agriculture labour (Mu)	N.A.	N.A.	N.A.	5.60	2.44	2.84	N.A.

Source: SZSY, 2006

Further, one may also put forth the argument that land is not the only factor of production in agriculture, and that the decrease in cultivable land can be compensated by increase in other inputs to increase production. The above argument presupposes the availability of irrigation, Research and development, availability of other intermediate inputs, etc., and the absence of supporting inputs automatically negates the contention. Moreover, any such argument will certainly be challenged citing the application of the law of diminishing marginal returns in the agriculture sector, i.e., increase in production by increasing inputs is impossible beyond a certain level[xii].

Nevertheless, in recent years there has been growing concern over the steady decline in land available for cultivation in China. For instance, two important laws - the 'Basic farmland Protection Policy' (1994) and the 'New Land Administration Law' (1999) - enacted by the Chinese government in the recent past reaffirm its commitment to the preservation of farmlands. In 2001, a goal was also set to secure at least 1.28 million ha of cultivable land (author's field perception, 2007) and each province had set different standards to ensure the same. The Chinese government also brought in appropriate legislation to ensure the right to use of land and to settle rural disputes. As a logical follow-up, commencing July 2003, approval for new development zones in China was put on hold (Chen 2007). These steps are expected to reverse the trend of declining acreage of cultivable land, considerably. Moreover, the Chinese government also intervened in terms of provision to sell the right to use land and in settling rural disputes. This call for policy attention needs to be taken in countries like India because unlike China, SEZs in India are not confined to a specific region. Within a few years, SEZs have cropped up all over the country. This highlights the intensity of problems that may crop up in future, if preventive action is not taken now. Moreover, the process of implementation of the SEZ policy in India differs from that followed in China. In India, farmers have not given any stake in the emerging SEZs. Further, the government has not given any assurance about job for locals in the respective SEZs and no effort has been made to train these farmers in industrial activities. Moreover, in India agriculture contributes 18 per cent of India's GDP but 60 per cent of India's workforce depends on agriculture (disguised unemployment). Providing gainful employment to India's surplus labour is the most important challenge for policy makers in India. Thus, the gradual conversion of agriculture land for any such project may pose two set of problems. One, over a period of time it might drastically erode the food self-sufficiency of the country. Two, it may further aggravate the problem of unemployment. Thus, the policymaker should promote SEZs based on the comparative advantage of the region while expanding the low-skill manufacturing base. To achieve this understanding the stages of development of the manufacturing base in China (as elaborated already) through SEZs will be great helpful.

The Regional Dimension of Growth and Demographic Challenges

Steady increase in Shenzhen's GDP, has revealed a sign of an imbalance in the growth across the districts. For instance, it is observed that the contribution of the districts covered by the SEZ scheme is relatively higher than the ones in the non-SEZs districts (Table 13). This raises question of appropriateness of the SEZs scheme and provokes further study on the issue. In fact, Srinivas (2004) argues that the creation of SEZs and development zones has aggravated regional disparities in China.

Table 13: GDP by Districts in Shenzhen (2005)

(In Per cent)

	SEZ DISTRICTS	NON-SEZ DISTRICT
GDP	52.97	47.03

Source: SZSY, 2006

In the last three decades, the Shenzhen SEZ has given room for a few more mal-adjustments. This is visible not only in the economic sphere but is also reflected in the changing demographic pattern. Currently, Shenzhen city has a population of nearly eighty lakh as against three lakh in 1979. On an average, the population of Shenzhen has increased at the rate of 13.4 per cent. The floating population increased phenomenally from 0.5 per cent in 1979 to 78 per cent in 2005 (Table 14). This highlights the huge 'in migration' caused by the creation of SEZ in the city. However, the number of women in the total population has declined slightly from 54 per cent to 47 per cent over the reference period (Table 14).

Table 14: Demographic Characteristics of Shenzhen

	1979	1980	1985	1990	1995	2000	2005
Total Population	314100	332900	881500	1677800	4491500	7012400	8277500
Population with temporary resident card[#]	0.5	3.6	45.7	59.1	77.9	82.2	78
Female composition in total population[#]	54	54	49	49	48	48	47

Source: SZSY, 2006

Note: [#] Values are in per cent

This can be attributed to two factors. One, higher migration of men to Shenzhen city due to huge investment in basic infrastructure coupled with government publicity of Shenzhen as a promising land (Chen 1988). In addition, growing employment opportunities in Shenzhen city could have been the primary factor influencing migration. Two, this could also have been due to the inevitable side effect of the 'one child policy', which resulted in higher fetus deaths in order to have a son instead of a daughter[xiii]. Undoubtedly, this large volume of migrant population in Shenzhen provided the labour force needed for the industrial development of Shenzhen. At the same time, this growing population has also imposed additional costs on society in terms of problems associated in providing basic infrastructure facilities (Chen 1988), social unrest, crime and human trafficking in the region (Goswami, 2007).

The Rising Price Index

The increase in wages and non-availability of basic foodstuff pushed up General Consumer Price Index in the region (Table 15 and Figure 7). Over years, the price indices increased almost six times. In the early period, the price rise was caused by the rise in the prices of food. However, after 2000, this was further aggravated by increase in the price indices of services as well. In addition to this, during the intervening time, the price index of Shenzhen was more than the General Price index of China as a

whole. One estimation noted that within three years of reforms, the cost of living in Shenzhen rose by 66.6 per cent. It thereby affected the standard of living of those who were not employed by foreign companies (Wong and Chu, 1985).

Table 15: General Price Indices of Shenzhen across product

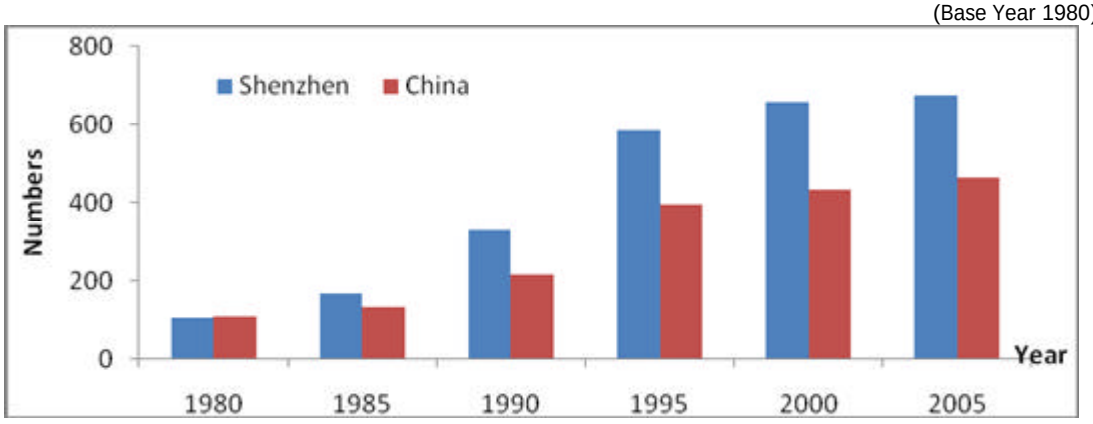
YEAR	FOOD		SERVICE	
	Base year	***Preceding year***	***Base year***	***Preceding year***
1980	108.3	108.3	100.7	100.7
1985	216	128.5	156.9	117.2
1990	447.5	95.4	324.4	127.7
1995	833.7	116.7	690.6	118.1
2000	808.9	100.2	1168.3	114
2005	889.3	104.5	1261.5	100.8

Source: SZSY, 2006

Note: Base year 1979 = 100

Figure 7: General Price Indices in Shenzhen and China

(Base Year 1980)



Source: computed from data collected from CSY, 2006 and SZSY, 2006

Summary

China adopted a trial and error approach in implementing the reforms programme, i.e., Chinese did not have a master plan at the time of initiating the reform process. Neverthless, the policy makers studied the experience of both socialistic as well as other countries. One such learning experience led the promotion of SEZs policy in china through modifying the EPZ concepts prevailed in other economies. Among the several measures taken by the government towards achieving the objectives of reforms, the SEZs assume special significance, probably because it was the first of its kind in Communist China in allowing to experiment different reform measures. In the present paper, an attempt is made to study empirically the trajectories of development facilitated by SEZs in China through a study of Shenzhen and to draw policy lessons and non-lessons for other countries that are trying to tread a similar path of reform - with a special reference to India.

From the empirical evidence, a few important observations can be made. *First,* the role of the SEZs in the overall economic transformation of Shenzhen and in achieving the objectives of economic

reforms is confirmed . The contribution of SEZs can be seen particularly in impressive growth rate of GDP, more employment opportunities with higher wages, transforming a small fishing village into a global economic hub by attracting huge foreign investments and exports promotion. This however does not assure a hassle-free path for achieving the broader objective of economic development and the demand for a few basic conditions for wider success. The major ones include the correct locational choice in its experiment, a well-planned policy with respect to infrastructure, incentives and labour supply and also a well managed process of decentralisation. Thus, the 'mantra' of the Chinese SEZs success story is based on the strong supporting mechanism and a well-defined policy, which cannot be assured for other countries in the absence of such supporting policy measures.

Second, in the process, SEZs has adversely affected the sustainable growth of agriculture in terms of area available for agricultural activities. Thereby, Shenzhen become highly dependent on other provinces for food supply in the last few years. This scenario is contradictory to situation in 1980, when Shenzhen was the main source of food to the other parts of China. This definitely has received policy attention in China, in the recent past. The experience of agriculture with the implementation of the SEZs policy definitely provides room for policy changes and suggestions in other countries. Third, the SEZs have also aggravated regional disparity in China as SEZs received preferential treatment and privileges that are not available to the rest of the economy. Besides, these regions received more than their natural share of government resources at the cost of the development of other regions. As a result, in the long run, it resulted in regional disparity not only between SEZs and non-SEZ areas but also between rural and urban areas. A huge gap was observed in terms of income, social, physical and institutional infrastructure between SEZ and non-SEZ areas. Specifically, coastal areas developed more rapidly than the eastern regions of China. It also resulted in social unrest in the SEZ regions.

Fourth, it also provided scope for a few more maladjustments in the economy like excessive migration, and raising the general price index above the national average. This calls for a more cautious approach in other countries desirous of adopting and popularizing SEZs as an alternative development instrument within the framework of the industrial township. This also convincingly reinforces the contention that Chinese SEZs are not as green as claimed by the Chinese Government, nor as hypothesized by Indian policy makers. The promotion of SEZs has resulted in much maladjustment in the Chinese economy, which is not empirically explained in any of the studies. Importantly, it has special significance to countries like India, where the government is trying to adopt and implement SEZs on an extensive scale[xiv].

The above analysis calls for changes that need to be made before institutionalizing the process on a wider scale because it would be difficult to revert the process even if so desired in future. Most importantly, the analysis emphasises caution in the use of agricultural land, take care in designing SEZs in different locations/regions as well as allow foreign investment in different sectors of the economy. Perhaps, most importantly care should be taken to minimize and/or mitigate adverse consequences. Undoubtedly, analysis acknowledges the role of SEZs in China's integration with the world economy. At the same time, it challenges the well established role of SEZs in the broader development perspective. Thereby it leaves a note of caution to those countries, specifically India, trying to imitate the Chinese model of development and also highlights the corrective measures through different permutations and

combinations of policy strategies at the implementation stage. We sum up with Sen and Dreze (1999) without any further addition "… *In learning from China what is needed is neither piecemeal emulation ……., nor indeed wholesale emulation …… There is much for India to learn from China on a discriminating basis (Sen and Dreze 1999; p-86).*

Notes

[i] Carried out in the year 2007 in the two cities of China Viz., Beijing and Shenzhen

[ii] Theory of 'Shock Therapy' or 'Big Bang Approach' is a theory of economic reform followed by socialistic countries. This argues that reform should be carried out simultaneously in all sectors of the economy rather than pursuing piece meal approach for transition process of socialistic country into the market economy. This theory influenced the transition process of Soviet Union and east European Countries.

[iii] A brief about five SEZs of China is provided in table 1

[iv] See, P M Hameed (1996), Kundra (2000) for detailed understanding on this.

[v] Author's field perception

[vi] For account on planning and infrastructure development in SEZs refer Yeah (1985)

[vii] See, among others Oborne (1986) , Chen (1988) for details

[viii] GVOI is the total volume of industrial production sold or available for sale in value term. This reflects the total achievement and overall scale of indutrsilaindustrial production during a given period (SZSY, 2005)

[ix] This in the present context is measured as simple ratio of net exports to total exports

[x] World Bank conducted an independent study and estimated that real per capita GNP of China was much lesser than that claimed by official Chinese statistics

[xi] Mu is the Chinese method of measuring agriculture area. It is equal to 0.0667 hectares

[xii] See Cannon (1892) for history of its origin

[xiii] For detailed discussion on this please refer Hull (1990), Banister (1992)

[xiv] Attempt toward this has already taken by giving approval to more than 400 SEZ in the country. These in the recent past have received much skepticism than expectations.

References

Cannan, Edwin (1892). The Origin of the Law of Diminishing Returns, 1813-15. *Economic Journal*, 2 (5): 53-69.

Chen Jie (2007). Rapid Urbanization in China: A Real Challenge to Soil Protection and Food Security. *Catena*, 69 (1): 1-15.

Chen, Xiangmang (1988). Magic and Myth of Migration: A Case Study of a SEZs in China. Asia-*Pacific Population Journal*, 2 (3): 57-76.

Ge, Wei (1999). Special Economic Zone and Opening of the Chinese Economy: Some Lesson for Economic Liberalization. *World Development,* 27 (7): 1267-85.

Goswami, Bhaskar (2007). Special Economic Zones Lessons from China. *Motion Magazine*. New York: NPC Production.

Huang, Yiping (1998). *Agricultural Reform in China: Getting Institutional Framework*. Cambridge, UK: Cambridge University Press,.

Hull, Terrence (1990). Recent Trends in Sex Ratio at Birth in China. *Population and Development Review,* 16 (1): 63-83.

Kundra, Ashok (2000). *The Performance of India's Export Zones - A Comparisons with Chinese Approach*. New Delhi: Sage Publication.

L Peimin (2007). A case study on the settlement of rural women affected by land requisitioning in China. *Journal of Contemporary China*, 16 (50): 133-48.

Lam Kin – Che and Steve S I Chu (1985). Environmental Consideration. In Wong Kwan-Yiu and David K Y Chu (ed), *Modernization in China: The case of Shenzhen Special Economic Zone*. Hong Kong: Oxford University Press.

Lardy, Nicholas R (1994). *China in the World Economy*. Washington, DC: Institute for international Economics.

Lardy, Nicholas R (2007). Trade Liberalization and its Role in Chinese Economic Growth. In Tseng Wando and David Cowen (ed), *India's and China's recent Experience with Reform and Growth*. IMF, Great Britain: Palgrave Macmillan.

Lio, Kuotsai Tom (1999). The Economic Reform Of China Strategies and Lesson from Chinas Post Mao Economic Development. *Policy Studies Review Paper*, 16 (1), Spring.

NBS (National Bureau of Statistics) (2006). *China Statistical Yearbook*. Beijing: China Statistical Press.

———— (2006). *Shenzhen Statistical Year Book*. Beijing: China Statistical Press.

Oborne, Michael (1986). *China's Special Economic Zones*. Paris: Development Centre of the Organisation for Economic Co-Operation and Development.

P M Hameed, Shahul (1996). China's Special Economic Zones. In Gupta S P (ed), *China's Economic — Reforms: The Role of Special Economic Zones and Economic and Technological Development Zones*. New Delhi: Allied Publishers Limited.

Park, J (1997). *The Special Economic Zones of China and their Impact on the Economic Development of China*. London: PRAEGER, Westport.

Sen, Amartya and Jean Drèze (1999). *India and China, in Poverty and Famines, Hunger and Public Action, India Economic Development and Social Opportunity*, New Delhi: Oxford University Press. pp 57-86.

Wong, Kwan-Yiu and David K Y Chu (1985). *Modernization in China: The Case of Special Economic Zone*. Hong Kong: Oxford University Press.

Wu, Jingalian (2005). *Understanding and Interpreting Chinese Economic Reform*. Singapore: Thomsan South-Western.

Wu, Weiping (1999). *Pioneering Economic Reforms in China's Special Economic Zones: The Promotion of Foreign Investment and Technology Transfers in Shenzhen*. London: Ashgate Publishing Limited.

Yeh, Anthony G O (1985). Physical Planning. In Wong, Kwan-Yiu and David K Y Chu (eds), *Modernization in China: The case of Shenzhen Special Economic Zone*. Hong Kong: Oxford University Press.

Zheng, Tianxiang, Qingaquan Wei and David K. Y. Chu (1985). Agriculture Land Use Patterns and Export Potential. In Wong Kwan-Yiu and David K Y Chu (ed), *Modernization in China: The case of Shenzhen Special Economic Zone*. Hong Kong: Oxford University Press.

Appendix

Appendix 1: Growth Rate of Basic Economic Indicators of Shenzhen and China in the post SEZ period

Year	Export		Import		GDP		PCI		Population	Employment
	Shenzhen	China	Shenzhen	China	Shenzhen	China	Shenzhen	China	Shenzhen	Shenzhen
1980	20.86	85.85	-15.95	83.84	37.55	11.89	37.79	10.50	5.99	6.74
1985	112.29	50.94	-7.95	111.04	66.65	25.08	37.24	23.39	18.91	19.19
1990	274.91	18.18	378.34	-9.79	48.43	9.86	30.01	8.26	18.49	16.63
1991	20.99	15.82	27.34	19.57	37.86	16.68	37.52	15.10	35.15	36.71
1995	12.11	22.95	9.41	14.25	32.74	26.13	15.31	24.77	8.83	9.34
2000	22.53	27.84	32.21	35.84	21.25	10.64	10.26	9.77	10.86	11.26
2001	8.44	6.78	5.97	8.20	13.49	10.52	6.16	9.72	3.33	3.44
2002	24.22	22.36	30.66	21.19	19.62	9.74	15.93	9.00	3.04	3.75
2003	35.24	34.59	33.84	39.84	20.75	12.87	16.50	12.17	4.24	5.13
2004	23.64	35.39	27.55	35.97	19.42	17.71	15.32	17.01	2.89	4.90
2005	30.41	28.42	17.08	17.59	15.62	14.52	12.10	13.82	3.37	2.51

Source: Estimation based on SZSY 2006 and CSY 2006

Recent Working Papers

201 Urban Poverty and Links with the Environment: An Exploration
K G Gayathri Devi

202 Groundwater Over-exploitation, Costs and Adoption Measures in the Central Dry Zone of Karnataka
Anantha K H and K V Raju

203 Changing Child Population: Growth, Trends and Levels in Karnataka
C M Lakshmana

204 Awareness About HIV/AIDS Among Karnataka Woment: An Analysis of RCH 2002-04 Data
K S Umamani

205 The Microfinance Promise in Financial Inclusion and Welfare of the Poor: Evidence from Karnataka, India
Naveen K Shetty

206 Structure of Central Himalayan Forests Under Different Management Regimes: An Empirical Study
Sunil Nautiyal

207 Poverty and Natural Resources: Measuring the Links (Some Issues in the Context of Karnataka)
K G Gayathri Devi

208 Federalism and Decentralisation in India: Andhra Pradesh and Tamil Nadu
V Anil Kumar

209 Capital, 'Development' and Canal Irrigation in Colonial India
Patric McGinn

210 Gender, Ecology and Development in Karnataka: Situation and Tasks Ahead
K G Gayathri Devi

211 Greenhouse Gases Emission and Potential Corbon Sequestration: A Case Study of Semi-Arid Area in South India
Lenin Babu and K V Raju

212 Emerging Trends in Managing Drinking Water – Case Studies of Coastal Villages in Karnataka
Manasi S, Latha N and K V Raju

213 Spatio-Temporal Analysis of Forests Under Different Management Regimes Using Landsat and IRS Images
Sunil Nautiyal

214 Traditional Knowledge System (Medicine): A Case Study of Arakalgud Taluk, Karnataka, India
B K Harish, K Lenin Babu

215 Tribal Movement in Orissa: A Struggle Against Modernisation?
Patibandla Srikant

216 Technological Progress, Scale Effect and Total Factor Productivity Growth in Indian Cement Industry: Panel Estimation of Stochastic Production Frontier
Sabuj Kumar Mandal and S Madheswaran

217 Fisheries and Livelihoods in Tungabhadra Basin, India: Current Status and Future Possibilities
Manasi S, Latha N and K V Raju

218 Economics of Shrimp Farming: A Comparative Study of Traditional Vs. Scientific Shrimp Farming in West Bengal
Poulomi Bhattacharya

219 Output and Input Efficiency of Manufacturing Firms in India: A Case of the Indian Pharmaceutical Sector
Mainak Mazumdar, Meenakshi Rajeev and Subhash C Ray

220 Panchayats, Hariyali Guidelines and Watershed Development: Lessons from Karnataka
N Sivanna

221 Gender Differential in Disease Burden: It's Role to Explain Gender Differential in Mortality
Biplab Dhak and Mutharayappa R

222 Sanitation Strategies in Karnataka: A Review
Veerashekharappa and Shashanka Bhide

223 A Comparative Analysis of Efficiency and productivity of the Indian Pharmaceutical Firms: A Malmquist-Meta-Frontier Approach
Mainak Mazumdar and Meenakshi Rajeev

224 Local Governance, Patronage and Accountability in Karnataka and Kerala
Anand Inbanathan

225 Downward Dividends of Groundwater Irrigation in Hard Rock Areas of Southern Peninsular India
Anantha K H

226 Trends and Patterns of Private Investment in India
Jagannath Mallick

227 Environmental Efficiency of the Indian Cement Industry: An Interstate Analysis
Sabuj Kumar Mandal and S Madheswaran

228 Determinants of Living Arrangements of Elderly in Orissa: An Analysis
Akshaya Kumar Panigrahi

229 Fiscal Empowerment of Panchayats in India: Real or Rhetoric?
M Devendra Babu

230 Energy Use Efficiency in Indian Cement Industry: Application of Data Envelopment Analysis and Directional Distance Function
Sabuj Kumar Mandaland S Madheswaran

231 Ethnicity, Caste and Community in a Disaster Prone Area of Orissa
Priya Gupta

232 Koodankulam Anti-Nuclear Movement: A Struggle for Alternative Development?
Patibandla Srikant

233 History Revisited: Narratives on Political and Constitutional Changes in Kashmir (1947-1990)
Khalid Wasim Hassan

234 Spatial Heterogeneity and Population Mobility in India
Jajati Keshari Parida and S Madheswaran

235 **Measuring Energy Use Efficiency in Presence of Undesirable Output: An Application of Data Envelopment Analysis (DEA) to Indian Cement Industry**
Sabuj Kumar Mandaland S Madheswaran

236 **Increasing trend in Caesarean Section Delivery in India: Role of Medicalisation of Maternal Health**
Sancheetha Ghosh

237 **Migration of Kashmiri Pandits: Kashmiriyat Challenged?**
Khalid Wasim Hassan

238 **Causality Between Energy Consumption and Output Growth in Indian Cement Industry: An Application of Panel Vector Error Correction Model**
Sabuj Kumar Mandaland S Madheswaran

239 **Conflict Over Worship:A Study of the Sri Guru Dattatreya Swami Bababudhan Dargah in South India**
Sudha Sitharaman

240 **Living Arrangement Preferences of the Elderly in Orissa, India**
Akshaya Kumar Panigrahi

241 **Challenges and Pospects in the Measurement of Trade in Services**
Krushna Mohan Pattanaik

242 **Dalit Movement and Emergence of the Bahujan Samaj Party in Uttar Pradesh: Politics and Priorities**
Shyam Singh

243 **Globalisation, Democratic Decentralisation and Social Secutiry in India**
S N Sangita and T K Jyothi

244 **Health, Labour Supply and Wages: A Critical Review of Literature**
Amrita Ghatak

245 **Is Young Maternal Age A Risk Factor for Sexually Transmitted Diseases and Anemia in India? An Examination in Urban and Rural Areas**
Kavitha N

246 **Patterns and Determinants of Female Migration in India: Insights from Census**
Sandhya Rani Mahapatro

247 **Spillover Effects from Multinational Corporations: Evidence From West Bengal Engineering Industries**
Rajdeep Singha and K Gayithri

248 **Effectiveness of SEZs Over EPZs Structure: The Performance at Aggregate Level**
Malini L Tantri

249 **Income, Income Inequality and Mortality An empirical investigation of the relationship in India, 1971-2003**
K S James and T S Syamala

250 **Institutions and their Interactions: An Economic Analysis of Irrigation Institutions in the Malaprabha Dam Project Area, Karnataka, India**
Durba Biswas and L Venkatachalam

251 **Performance of Indian SEZs: A Disaggregated Level Analysis**
Malini L Tantri

252 **Banking Sector Reforms and NPA: A study of Indian Commercial Banks**
Meenakshi Rajeev and H P Mahesh

253 **Government Policy and Performance: A Study of Indian Engineering Industry**
Rajdeep Singha and K Gayithri

254 **Reproduction of Institutions through People's Practices: Evidences from a Gram Panchayat in Kerala**
Rajesh K

255 **Survival and Resilience of Two Village Communities in Coastal Orissa: A Comparative Study of Coping with Disasters**
Priya Gupta

256 **Engineering Industry, Corporate Ownership and Development: Are Indian Firms Catching up with the Global Standard?**
Rajdeep Singha and K Gayithri

257 **Scheduled Castes, Legitimacy and Local Governance: Continuing Social Exclusion in Panchayats**
Anand Inbanathan and N Sivanna

258 **Plant-Biodiversity Conservation in Academic Institutions: An Efficient Approach for Conserving Biodiversity Across Ecological Regions in India**
Sunil Nautiyal

259 **WTO and Agricultural Policy in Karnataka**
Malini L Tantri and R S Deshpande

260 **Tibetans in Bylakuppe: Political and Legal Status and Settlement Experiences**
Tunga Tarodi

Price: Rs. 30.00

ISBN 978-81-7791-117-6

INSTITUTE FOR SOCIAL AND ECONOMIC CHANGE
Dr V K R V Rao Road, Nagarabhavi P.O., Bangalore - 560 072, India
Phone: 0091-80-23215468, 23215519, 23215592; Fax: 0091-80-23217008
E-mail: lekha@isec.ac.in; Web: www.isec.ac.in