CHAPTER VII

SOCIAL BENEFIT COST ANALYSIS OF CEPZ AND CONCLUSIONS

In the previous chapter the location of EPZs and their contribution to the economy have been highlighted. This chapter is devoted to a social benefit-cost analysis of CEPZ. The chapter also presents the conclusions of the study.

The real advantages accrued to the country through the operations of CEPZ can be estimated only through a large scale social benefit cost analysis. Methodologies for conducting such analysis are developed by agencies like UNCTAD, ESBAP, UNIDO and the World Bank. But scarcity of data did not permit to undertake a full-fledged social benefit-cost analysis using any one of the above methods.

The methodology adopted for social benefit-cost analysis in the present study is as follows: Net benefit of CEPZ in each year is estimated by deducting all costs from the export earnings. The net benefit values are then converted to 1991-92 prices (constant prices). Annual net benefits so determined are discounted at social discount rates of 12 and 18 per cent and the resultant values are added together for
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Introduction

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all the years to estimate the Net Present Value (NPV). The NPV will be capable of showing whether the operations of CEPZ are positive or negative. The positive NPV indicates benefits received.

For estimating the benefits, the life of CEPZ is assumed to be 30 years. It is also assumed that the net benefit in future years will be at the level of the average net benefits of the last five years. This will reveal the contribution of CEPZ in the future years of its working.

The data collected for the social benefit cost analysis are mainly from the official publications, press releases of CEPZ authorities issued from time to time from the CEPZ office and CEPZ Industries Association. The response from the individual units of CEPZ was found to be lukewarm and unreliable to a great extent. Due to shortage of resources and time full-fledged estimation of some variables such as shadow exchange rates, social opportunity cost of labour and social value of rented space was not carried out. The assumptions made for the analysis are based on sound reasoning and empirical verification when they are found to be feasible.
The definition and methodology used for including various variables in the social benefit cost analysis are briefly explained below.

**Methodological Assumptions**

The NFE earnings of the CEPZ units are the direct benefit to the economy. To ascertain the NFE earnings all outflows of foreign exchange at shadow exchange rates are deducted from export earnings which is also calculated at shadow exchange rates.

The official and unofficial or social exchange rates are found to be quite different in India until the opening up of the economy in July 1991. Till then the unofficial, shadow or social exchange rates are found to be 25 per cent higher than that of the official rates. So it is assumed that earnings or spending of US $1 is actually worth of US $1.25. Following estimates by Deepak Lal\(^1\) and the Indian Planning Commission it is assumed that 45 per cent of the value of capital goods supplied by the DTA (local economy) represent dollar import costs to the economy directly or indirectly.

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The value of replenishment licences (REP) issued against deemed exports from DTA is treated as a component of foreign exchange outflow and its social worth is estimated at shadow exchange rate upto 1990-91. Cash Compensatory Support (CCS) and Duty Drawback (DDB) are taken as rupee cost incurred for exports from CEPZ. The cost of advertising and publicity given abroad and the cost of foreign travel incurred by CEPZ are found to be very nominal and hence ignored. In order to evaluate the real value and to make them reasonably comparable, the NFE earnings are converted into shadow exchange rate and they are again converted into constant prices. So GNP deflator at constant prices (at 1991-92 prices) is used for estimating the value of NFE earnings.

Expenditure and Income of CEPZ

Costs and incomes in connection with the running of CEPZ are summarised below.

1. Capital outlay: The GOI, through its budgetary provisions, provide for infrastructure facilities of CEPZ. The view of Rajiv Kumar\(^2\) that 20 per cent of the capital expenditure is to be taken as foreign exchange outflow is not applicable to CEPZ, since its capital outlay did not, in any way, involve any foreign exchange outgo.

\(^2\) Rajiv Kumar, op.cit, p.163.
2. Revenue expenditure: Revenue expenditure of CEPZ, provided through budgetary provisions of the GOI, include salaries to Zone administration personnel, expenditure on office equipments, repairs and maintenance, travel expenses etc. The outlay on account of advertisement and publicity shall also be included here against the opinion expressed by Rajiv Kumar as no foreign exchange outflow is involved.

3. Credit subsidy: The CEPZ units receive term loans on two-thirds of their total fixed investments. The one and half per cent interest subsidy on term loans to CEPZ units is a cost to the economy. As the amount involved is very small it is not considered in the present analysis.

4. CST exemption and CCS: They are given to the suppliers of local inputs from DTA. These items also form part of the rupee cost of CEPZ to generate NFE. These incentives are extended over and above the import REP licenses included in foreign exchange outflow.

Ibid.
5. Transport Subsidy: This facility was given to KFTZ units to offset the additional transport costs incurred by them in routing their consignments through Bombay Port. But this type of subsidy is not applicable to CEPZ as it is not given to any units in this Zone.

6. Investment Subsidy: Investment subsidy ranging from 10 per cent to 15 per cent on total fixed assets is given by the Government of Kerala and hence this cost is to be deducted from the gross benefits of CEPZ.

7. Power Subsidy: Small scale units of CEPZ are given power subsidy by the Government of Kerala and this subsidy is another cost to be reckoned while calculating the net benefit accrued to CEPZ. This cost is also not taken into account in the analysis as it is found to be nominal.

8. Rental Income: The main income of the CEPZ administration is the rent received from the industrial units which have hired the plots, sheds or space in standard design factories. The opportunity cost of these rented areas will be highly relevant in the social benefit-cost analysis. The unofficial or social worth of rented areas is likely to be higher than the rent actually levied and collected. Moreover, the rent is
charged at subsidised rate and it shall be a component of rupee costs of CEPZ.

Net Benefit or Cost of Employment Generation

If the economy is under full employment new job opportunities provide for only transfer of labour and skill from one production unit to another output-generating activity. In the above environment the net social benefit will be the wages received in the new jobs minus the output loss (approximately by the previous wages received) in the economy, which is often found to be nominal. On the other hand, in a labour surplus economy the social opportunity cost of fresh job is found to be zero as unemployed and unskilled labour contribute nothing to the national economy. However, in a labour-surplus situation the economy is to bear some extra costs like higher consumption of new recruits and their families, migration costs and the nominal output contributed by them, while they were not employed. The social opportunity cost of employment of unskilled workers has been estimated for different regions in the country and it ranges from 0.4 to 0.7 of the wage received depending upon cost of migration and cost of living. The annual estimates of net benefits are then converted to constant prices (1991-92 level) by using the GNP.

Above 70 per cent of the total labour force employed in CEPZ are females. Majority of the labourers are fresh entrants to the field. However, a limited social opportunity cost is involved which may be lower than that estimated by Deepak Lal for unskilled workers. So it may reasonably be assumed that one half of the wage bill on account of additional employment to unskilled and semiskilled labour in CEPZ will be beneficial to the economy and the other half will be the social cost to the economy. For skilled workers it may be assumed that 30 per cent of the wage bill in CEPZ will be beneficial to the economy and the remaining 70 per cent, social cost. As the social worth or opportunity cost of the skilled labour to the economy is the same as the wages earned by them in CEPZ, no net benefit is found to be accrued to the economy by them. However, in the present analysis half of the total labour cost per annum in general is assumed to be social cost.

The social benefits earned by CEPZ in each year is estimated from the gross earnings from which all costs like foreign exchange outflows, Government expenditure and subsidies, social cost of employment and local supplies are deducted. The annual estimates of net benefits are then converted to constant prices (1991-92 level) by using the GNP...
deflator. These are then discounted using rates of 12 and 18 per cent for assessing the benefit. The sum total of annual discounted net benefit flows at constant prices provides the estimates of NPV generated by CEPZ since its inception in 1986-87 to 1994-95.

Role of External Factors

External influences on account of the operations of CEPZ are not taken into account in this analysis. Additional employment generated outside the Zone, development of backward region, import of new technology, and in-depth knowledge in international marketing techniques are certainly important external factors contributing towards the gain of CEPZ. Pollution of the environment, congestion of infrastructure, rise in the general price level in the local market and the imbalance created in the social system are some of the negative external factors influencing the functioning of CEPZ. Notional adjustments to the estimated NPV can be made on the basis of net impact of the positive and negative externalities. Due to paucity of data, such an analysis is not done in this study and that is considered to be a major limitation of this study.

The estimate of NPV can also be made in another way. Here, the NPV is estimated as the NFE earnings which are
necessarily retained in the economy. In other words, NFE earnings are estimated by aggregating the wage bill \((W)\), DTA purchases \((\text{DTA})\), factory rent \((\text{RR})\), charges for various utilities \((\text{U})\), and interest costs \((\text{IC})\) of the various CEPZ units.

**Government's Costs and Benefits from CEPZ**

An important objective of this analysis is to estimate the costs including financial incentives given by Government and the benefits earned by it by establishing and running CEPZ. The benefits accrued to Government can be quantified in terms of foreign exchange earnings of the Zone. However, the NFE is paid at official rate of exchange to the various industrial units of the Zone and no net benefit is earned by Government as a separate entity. But the net benefit to Government is earned on foreign exchange from the premium prevailing over the official rate of exchange and this is estimated at 25 per cent of the NFE before the liberalisation of the economic policies in July 1991. Rentals collected, service and miscellaneous charges levied and taxes on corporate profits of the units and on personal incomes generated will be net benefits to Government. As the CEPZ units are not able to compete in the international market after paying import duty and customs duty and all the CEPZ units are enjoying tax holidays for a specific period, there
is no rationale for computing the volumes of duty foregone as notional cost to Government. [However, the progressive reduction in import duties since 1991 may be noted.]

Estimation of Tax revenue foregone by Government is found to be difficult on account of the following problems:

1. Financial information of almost all CEPZ units except those set up as public limited company is very closely guarded.

2. The CEPZ units which are found to be subsidiaries do not keep independent books of accounts and so their financial results are consolidated with those of their parent companies located in DTA or abroad.

3. The financial statements published by the limited number of units do not reveal the true and correct picture of the financial situations as many details are found to be suppressed.

4. The volume of exports of the units which have operations in the DTA cannot be ascertained precisely on account of inter-transfer of products or components from one unit to another.
As pointed out by Rajiv Kumar the only possible method to estimate revenue forgone is to assume a profit rate as a fixed percentage of the value of annual exports. Due to the arbitrary nature of this estimate, tax revenue forgone is not included as a component in Government's benefit-cost analysis. As long as a unit of NFE is below the shadow exchange rate, the Government stands to gain from CEPZ's operations. It may also be noted that the importance of shadow exchange rate has been considerably reduced consequent on the liberalised economic policy of the GOI effected in July 1991.

Result of the Analysis

The benefit-cost analysis of CEPZ presented in tables 7.1 to 7.5 is broadly based on the methodology adopted by Rajiv Kumar. However, certain changes in the assumptions and calculations have been independently made by taking into account the characteristic features of CEPZ. For example, cost on account of REP has been ignored completely as the amounts involved are found to be very nominal.

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6 Rajiv Kumar, op.cit. p.172.
7 Ibid p.166
Table 7.1

Social cost incurred by CEPZ During
1986-87 to 1995-96

(Rs. in lakhs)

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of workers employed</th>
<th>Social oppor-</th>
<th>Labour (50% of labour cost)</th>
<th>C3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986-87</td>
<td>7</td>
<td>0.751</td>
<td>0.95</td>
<td>36.75</td>
<td></td>
</tr>
<tr>
<td>1987-88</td>
<td>39</td>
<td>4.836</td>
<td>2.418</td>
<td>36.75</td>
<td></td>
</tr>
<tr>
<td>1989-90</td>
<td>503</td>
<td>69.228</td>
<td>34.614</td>
<td>688.59</td>
<td></td>
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<tr>
<td>1990-91</td>
<td>994</td>
<td>144.526</td>
<td>72.108</td>
<td>270.09</td>
<td></td>
</tr>
<tr>
<td>1991-92</td>
<td>2450</td>
<td>382.526</td>
<td>191.263</td>
<td>255.19</td>
<td></td>
</tr>
<tr>
<td>1992-93</td>
<td>3063</td>
<td>465.206</td>
<td>232.603</td>
<td>1053.48</td>
<td></td>
</tr>
<tr>
<td>1993-94</td>
<td>4300</td>
<td>632.856</td>
<td>316.428</td>
<td>1740.37</td>
<td></td>
</tr>
<tr>
<td>1994-95</td>
<td>4800</td>
<td>802.748</td>
<td>401.374</td>
<td>5908.17</td>
<td></td>
</tr>
<tr>
<td>1995-96</td>
<td>5750</td>
<td>946.975</td>
<td>473.487</td>
<td>5908.68</td>
<td></td>
</tr>
</tbody>
</table>

Source: From the records of CEPZ Industries Association.
<table>
<thead>
<tr>
<th>Year</th>
<th>Import of materials</th>
<th>Import of capital goods</th>
<th>Total imports</th>
<th>Dom. capital goods</th>
<th>DTA cap. goods outflow</th>
<th>Total outflow due to C1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>1986-87</td>
<td>36.75</td>
<td>36.75</td>
<td>2.11</td>
<td>0.95</td>
<td>37.70</td>
<td></td>
</tr>
<tr>
<td>1987-88</td>
<td>157.53</td>
<td>157.53</td>
<td>1.34</td>
<td>0.60</td>
<td>158.37</td>
<td></td>
</tr>
<tr>
<td>1988-89</td>
<td>249.53</td>
<td>374.54</td>
<td>624.08</td>
<td>1.33</td>
<td>0.59</td>
<td>1359.77</td>
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<tr>
<td>1989-90</td>
<td>688.59</td>
<td>670.59</td>
<td>1359.18</td>
<td>1.34</td>
<td>0.60</td>
<td>1359.77</td>
</tr>
<tr>
<td>1990-91</td>
<td>270.09</td>
<td>255.19</td>
<td>525.28</td>
<td>10.39</td>
<td>4.67</td>
<td>529.95</td>
</tr>
<tr>
<td>1991-92</td>
<td>1394.5</td>
<td>1053.48</td>
<td>2447.98</td>
<td>3.97</td>
<td>1.78</td>
<td>2449.76</td>
</tr>
<tr>
<td>1992-93</td>
<td>2752.08</td>
<td>1740.37</td>
<td>4492.45</td>
<td>5.11</td>
<td>2.30</td>
<td>4494.75</td>
</tr>
<tr>
<td>1993-94</td>
<td>2792.89</td>
<td>3115.28</td>
<td>5908.17</td>
<td>1.15</td>
<td>0.51</td>
<td>5908.68</td>
</tr>
<tr>
<td>1994-95</td>
<td>4384.06</td>
<td>609.21</td>
<td>4993.27</td>
<td>*170.87</td>
<td>76.89</td>
<td>5070.16</td>
</tr>
<tr>
<td>1995-96</td>
<td>6429.18</td>
<td>844.37</td>
<td>7273.55</td>
<td>*119.04</td>
<td>53.57</td>
<td>7327.12</td>
</tr>
</tbody>
</table>

**Note**: Capital goods supplied from DTA to CEPZ is assumed to have an import content of 45 percent of such goods.

* Provisional

Source: Office records of CEPZ
Table 7.3
Costs Incurred for CEPZ’s Operations (Costs to Government)
During 1986-87 to 1995-96
(Rs. in crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>Govt. of Kerala of India</th>
<th>Govt. of India</th>
<th>Total cap. exp.</th>
<th>20% of total exp. towards other expenses</th>
<th>Revenue sales</th>
<th>sub-tax</th>
<th>Government investment subsidy</th>
<th>Total investment cost to Govt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986-87</td>
<td>2.55</td>
<td>10.73</td>
<td>13.28</td>
<td>2.66</td>
<td>0.11</td>
<td>-</td>
<td>0.0053</td>
<td>0.0042</td>
</tr>
<tr>
<td>1987-88</td>
<td>1.00</td>
<td>1.40</td>
<td>2.40</td>
<td>0.48</td>
<td>0.21</td>
<td>-</td>
<td>0.0353</td>
<td>0.0037</td>
</tr>
<tr>
<td>1988-89</td>
<td>0.70</td>
<td>2.40</td>
<td>3.10</td>
<td>0.14</td>
<td>0.19</td>
<td>0.027</td>
<td>0.0992</td>
<td>0.0027</td>
</tr>
<tr>
<td>1989-90</td>
<td>0.50</td>
<td>0.50</td>
<td>0.10</td>
<td>0.31</td>
<td>0.0073</td>
<td>0.0992</td>
<td>0.0026</td>
<td>0.0026</td>
</tr>
<tr>
<td>1990-91</td>
<td>0.84</td>
<td>0.84</td>
<td>1.68</td>
<td>0.17</td>
<td>0.39</td>
<td>0.0039</td>
<td>0.1333</td>
<td>0.0078</td>
</tr>
<tr>
<td>1991-92</td>
<td>2.32</td>
<td>2.32</td>
<td>4.64</td>
<td>0.46</td>
<td>0.39</td>
<td>0.0039</td>
<td>0.1333</td>
<td>0.0078</td>
</tr>
<tr>
<td>1992-93</td>
<td>2.08</td>
<td>2.08</td>
<td>4.16</td>
<td>0.42</td>
<td>0.42</td>
<td>0.0123</td>
<td>0.1791</td>
<td>0.0102</td>
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<tr>
<td>1993-94</td>
<td>7.00</td>
<td>7.00</td>
<td>1.40</td>
<td>0.59</td>
<td>0.0362</td>
<td>0.3468</td>
<td>0.0022</td>
<td>0.0022</td>
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<tr>
<td>1994-95</td>
<td>2.35</td>
<td>2.35</td>
<td>4.70</td>
<td>0.47</td>
<td>0.60</td>
<td>2.5626</td>
<td>0.6487</td>
<td>0.2704</td>
</tr>
<tr>
<td>1995-96</td>
<td>3.00</td>
<td>3.00</td>
<td>6.00</td>
<td>0.60</td>
<td>0.83</td>
<td>5.3033</td>
<td>0.9234</td>
<td>0.2985</td>
</tr>
<tr>
<td>Total</td>
<td>3.55</td>
<td>30.92</td>
<td>34.47</td>
<td>6.90</td>
<td>4.04</td>
<td>7.9395</td>
<td>2.5857</td>
<td>0.6239</td>
</tr>
</tbody>
</table>

Note: 1. 20% of the total capital expenditure is assumed to be the quantum of other expenses.
2. Central sales tax includes duty drawback and terminal excise duty.
3. Investment subsidy is given by Government of Kerala.

Source: Office records of CEPZ
Table 7.1 reveals that the number of workers and aggregate labour cost of the CEPZ units and CEPZ office increased from 7 and Rs.0.75 lakhs respectively to 5750 and Rs.946.97 lakhs during 1986-87 to 1995-96. It also reveals the social cost incurred by CEPZ during the period 1986-87 to 1995-96. The social opportunity cost is assumed to be one half of the total labour cost for each year. In other words, out of the total income received by the employees of CEPZ half of that amount is lost to the economy consequent on the shift in jobs from elsewhere to CEPZ. This amount is found to be Rs.473.49 lakhs in 1995-96 as revealed by table 7.1.

Table 7.2 shows the foreign exchange outflow of CEPZ during the period 1986-87 to 1995-96. The foreign exchange outflow here consists of imports of raw materials, capital goods and the import content of the capital goods supplied to CEPZ from the DTA. Imports of raw materials has increased from Rs.36.75 lakhs to Rs.6429.18 lakhs during the period. The import of capital goods increased from Rs.374.54 lakhs in 1988-89 to Rs.3115.28 lakhs in 1993-94 but decreased to 844.37 lakhs in 1995-96. However, a steep rise in total imports from Rs.36.75 lakhs to Rs.7273.55 lakhs was recorded during the period 1986-87 to 1995-96. The consumption of domestic capital goods widely varied between Rs.1.15 lakhs in 1993-94 and Rs.170.87 lakhs in 1995-96. It is estimated and assumed that 45 per cent of the DTA supplies of capital goods to CEPZ...
possess import content. In other words, these supplies are made of goods imported to DTA earlier. Table 7.2 also reveals that total outflow of foreign exchange remarkably varied between Rs.37.70 lakhs in 1986-87 to Rs.7327.12 lakhs in 1995-96.

Table 7.3 shows the total costs incurred for CEPZ's operations or costs incurred by the Government for the period 1986-87 to 1995-96. Here it is assumed that 20 per cent of the total capital expenditure incurred by the Government will be the volume of other expenses.

The total capital expenditure of Rs.34.47 crores incurred during the period 1986-87 to 1995-96 consisted of Rs.3.55 crores from the Government of Kerala and the balance of Rs.30.92 crores from the GOI. The aggregate revenue expenditure during the period amounted to Rs.4.04 crores and it varied between Rs.0.11 crore and Rs.0.83 crore during 1986-87 to 1995-96. The total central sales tax claims including DDB and terminal excise duty during the period under review was only Rs.7.94 crores. The cumulative investment subsidy was only Rs.0.62 crore during the same period. The aggregate rental subsidy amounted to Rs.2.59 crores showing wide variations at Rs.53,000 in 1986-87 and Rs.0.92 crore in 1995-96. The cumulative cost to Government was Rs.22.04 crores which varied between Rs.0.42 crore in 1988-89 and Rs.7.96 crores in 1995-96.
Government's Benefit Cost Analysis for the years 1966-87 to 1994-95

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>300% 7.23</th>
<th>300% 3.66</th>
<th>Total</th>
<th>300% 7.23</th>
<th>300% 3.66</th>
<th>Total</th>
<th>300% 7.23</th>
<th>300% 3.66</th>
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<tbody>
<tr>
<td>1994-95</td>
<td>112.09</td>
<td>21.97</td>
<td>41.97</td>
<td>103.06</td>
<td>34.28</td>
<td>49.99</td>
<td>53.93</td>
<td>4.25</td>
<td>19.73</td>
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<tr>
<td>1993-94</td>
<td>111.32</td>
<td>21.54</td>
<td>41.97</td>
<td>103.06</td>
<td>34.28</td>
<td>49.99</td>
<td>53.93</td>
<td>4.25</td>
<td>19.73</td>
</tr>
<tr>
<td>1992-93</td>
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<td>41.97</td>
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<td>4.25</td>
<td>19.73</td>
</tr>
<tr>
<td>1991-92</td>
<td>109.84</td>
<td>20.69</td>
<td>41.97</td>
<td>103.06</td>
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<td>49.99</td>
<td>53.93</td>
<td>4.25</td>
<td>19.73</td>
</tr>
<tr>
<td>1990-91</td>
<td>109.11</td>
<td>20.26</td>
<td>41.97</td>
<td>103.06</td>
<td>34.28</td>
<td>49.99</td>
<td>53.93</td>
<td>4.25</td>
<td>19.73</td>
</tr>
<tr>
<td>1989-90</td>
<td>108.38</td>
<td>19.84</td>
<td>41.97</td>
<td>103.06</td>
<td>34.28</td>
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</table>

Table 7.4: Office Records of ERP.

248
As GNP deflator for 1995-96 is not available, analysis in tables 7.4 and 7.5 are done only upto 1994-95.

Table 7.4 shows Government's benefit for the period 1986-87 to 1994-95. It shows the net benefits accrued to the Government at current and constant prices (1991-92). Discounted benefits at 12 per cent and 18 per cent are also shown. Instead of imports alone, total outflow of foreign exchange is also taken into account, so that there will be slight reduction in the net benefits accrued to the Government both according to current prices and according to constant prices.

Table 7.4 also reveals that the net benefit received by the Government at current prices varied between (-)Rs.2.97 crores in 1989-90 and Rs.49.38 crores in 1994-95. During the post liberalisation period it has moved from Rs.3.33 crores in 1991-92 to Rs.49.38 crores in 1994-95. The aggregate net benefit accrued to Government at current prices during 1986-87 to 1994-95 was found to be Rs.89.89 crores and hence the average benefit per year during the same period was found to be around Rs.9.98 crores.

Table 7.4 brings out that the net benefits are received by Government at constant price level (1991-92)
oscillated between (−)Rs.3.77 crores and Rs.37.32 crores during the nine year period 1986-87 to 1994-95. The average benefit accrued in a year during the same period is found to be Rs.7.92 crores.

Table 7.4 also reveals that the net benefits are received by Government at constant prices even after discounted at social discount rates of 12 and 18 per cent respectively during the period 1986-87 to 1994-95. The average benefit accrued in a year during the same period is found to be Rs.18.65 crores even after setting off the negative benefits during 1990-91. Even if the average benefit accrued to Government is calculated at constant prices (1991-92) it is found to be at Rs.7.92 crores during the same period. In the above circumstances, it can be said that the operations of CEPZ in future years will also be beneficial to the economy and Government. So the existence of CEPZ is found to be fully justified.

The result of the discounted rates are highly positive. The negative benefits received in 1986-87, 1989-90 and 1990-91 are completely wiped out by the increase in positive benefits accrued in the remaining years of the period of the study. The average benefits accrued to Government from CEPZ at constant prices discounted at 12 and 18 per cent respectively during the period are found to be 3.32 and 2.19 respectively. After liberalisation of the economic policies of the country the net benefit of CEPZ at constant prices and at 12 per cent social discount rate has moved up from 1.89 in 1991-92 to 15.07 in 1994-95. The net benefit at 18 per cent discount rate has also increased from 1.46 to 9.93 during the same period.

As pointed out earlier in this chapter, the life of CEPZ is assumed to be 30 years. The average net benefit accrued to Government at current prices during the last five
years of the study from 1990-91 to 1994-95 is taken as an indicator for the benefits which are likely to accrue in future years. As revealed by table 7.4 the average benefit is calculated at Rs.18.65 crores even after setting off the negative benefits during 1990-91. Even if the average benefit accrued to Government is calculated at constant prices(1991-92) it is found to be at Rs.15.19 crores during the same period. In the above circumstances, it can be concluded that the operations of CEPZ in future years will also be beneficial to the economy and Government. So the existence of CEPZ is found to be fully justified.

Table 7.5 reveals the results of benefit-cost analysis of CEPZ for the period 1986-87 to 1994-95. The inflow and outflow of foreign exchange are calculated both at current exchange rate and at shadow exchange rate. Shadow exchange rate is the unofficial exchange rate or the market rate. The market rates and unofficial exchange rates were found to be generally 25 per cent more than that of the official rate of exchange. The net benefits are calculated both at current and at constant prices (1991-92). The net benefits at constant prices are then discounted at 12 per cent and 18 per cent. If the NPV is found to be positive, it is sure that the operations of CEPZ will be beneficial to the economy.
<table>
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<th>Year</th>
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<th>4 (427)</th>
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</table>
The NPV calculated as net benefits at constant prices (1991-92) and adjusted at social discount rates at 12% and 18% shows positive results for eight years out of the nine year period of the study. Negative result is received only in 1989-90. The average NPVs at social discount rates of 12% and 18% during the period of study from 1986-87 to 1994-95 are found to be 5.25 and 3.99 respectively. During the post-liberalisation period (1991-92 to 1994-95) NPVs at the same social discount rates, on an average, are found to be 8.43 and 5.82 respectively. So on the basis of the above analysis, it can be concluded that the working of the CEPZ is beneficial to Government and the Indian economy.

The annual net benefit flows for the future years can be assumed to be the same value which is earned on an average for the last five years of CEPZ's operations. The sharp fluctuations can be set off if the average figures of the last five years are taken. The annual net benefit flows of the CEPZ during the five year period, 1990-91 to 1994-95, on an average, both at current and constant prices (1991-92) are found to be Rs.19.06 crores and Rs.15.64 crores respectively as shown by table 7.5. The upward trend of the benefits accrued also indicates that these rates are likely to go up reasonably further. In the above circumstances it can be concluded that the existance of CEPZ is fully justified.
The working of Indian EPZs can be evaluated in terms of the achievements they have attained in fulfilling the objectives for which they are established in the country. An attempt in this direction is made in the following paragraphs.

**Foreign Exchange Earnings**

The expansion of the NFE earnings of the country is one of the major objectives of Indian EPZs. During the ten-year period 1985-86 to 1994-95, the yearly exports of Indian EPZs have increased from Rs.324 crores to Rs.2737 crores. The aggregate exports of Indian EPZs from 1980-81 to 1994-95 amounted to Rs. 10,253.00 crores (see table 6.13). The aggregate NFE earnings of Indian EPZs increased from Rs.137 crores in 1985-86 to Rs.3857 crores in 1994-95 (see table 6.14). If the EPZs were not established an aggregate NFE earnings of Rs. 3857 crores and an aggregate exports of Rs 10,253 crores would have been lost to the country during the period 1985-86 to 1994-95.

The percentage of Indian EPZs' exports to the total exports of the country has moved from 0.66 in 1980-81 to 3.32 in 1994-95 (see table 6.13). As against the envisaged level of 8 to 10 per cent of the total exports of the country, the Indian EPZs were able to achieve only just below half of the
level expected to be achieved. So, on the basis of the degree of achievements made on account of exports the India EPZs are found to be poor performers.

Foreign Private Investments

The aggregate foreign investment inflows into the country between the years 1991 and 1995 amounted to Rs.12175.50 crores. The aggregate foreign investments gone into the Indian EPZs, from their inception to 1994-95 was only Rs.88 crores (see table 6.18). From this it is roughly estimated that Indian EPZs were able to attract only 0.73 per cent of the total foreign investments made in the country. The relationship between aggregate foreign investment inflows to the country and foreign investments made in Indian EPZs is found to be insignificant. So, in fulfilling the objective of attracting foreign investments the performances of Indian EPZs are not at all satisfactory.

General Conclusions

The aggregate job opportunities created by Indian EPZs increased from 16180 in 1985-86 to 53820 in 1994-95. The job opportunities generated in the industrial units of DTA supplying raw materials, semi-finished goods and components and other service sectors are not taken into consideration.
while calculating the employment generated. So if the EPZs were not there so much of skilled, semi-skilled and unskilled persons would not have received proper employment opportunities. The percentages of Indian EPZ employees to that of organised sector and public sector are found to be only 0.20 and 0.28 respectively during 1995 (see table 6.19). Even though these are 45 per cent and 75 per cent respectively higher than what they were in 1990, the contribution of EPZs in creating employment opportunities is not that significant.

3. They were instrumental for foreign and MFI capital investment and processing of the products through technical collaborations.

The development of backward region, infusion of new technology in production units, in-depth knowledge of international marketing techniques and linking of global market with domestic economy were some of the other objectives to be achieved by Indian EPZs. The study shows that the Indian EPZs have attained only limited success in achieving these objectives.

General Conclusions

The setting up of EPZs may be justified on account of the following factors:

1. They have contributed an additional aggregate export earnings of Rs. 10253 crores during the period 1987-88 to
1994-95. As observed by R.B. Ramaiah\textsuperscript{8}, president of the Confederation of Export Units, there is tremendous potential for development of EOU/EPZ sector which at present contributes nearly 18 per cent of the exports (of the country per year) estimated at Rs.10,000 crores.

2. They are providing additional job opportunities to 53,820 persons as on 31.3.95.

3. They were instrumental for foreign and NRI capital investments to the tune of Rs.183 crores in seven public sector Zones put together as on 31.3.95.

Besides the above they were instrumental for:

1. the transplantation of the state of the art of technology in the production and processing of the products through technical collaborations.

2. linking of the production units with international market through buy-back arrangements and other marketing tie-ups with their foreign collaborators.

\textsuperscript{8} The Hindu dated 8.8.1996.
3. for infusing confidence amongst the Indian entrepreneurs for entering in the highly risky, competitive and unpredictable international markets.

4. for assuring quality goods and after sales service for Indian products in world markets and

5. for creating an environment of better understanding through exchange of trade missions.

Evaluation of CEPZ and Conclusions

The aggregate contribution of CEPZ to the total exports of the country from its inception in 1986-87 to 1995-96 was found to be Rs.425 crores. As the exports had steadily grown from Rs.0.94 crores in 1986-87 to Rs.120.31 crores in 1995-96, the Zone is found to be moving on healthy grounds. The net foreign exchange earning of CEPZ has increased considerably from Rs.0.57 crores in 1986-87 to Rs.47.58 in 1994-95. The aggregate foreign exchange earnings of CEPZ were Rs.247 crores between the period 1986-87 to 1995-96 (also see table 4.1). If CEPZ was not there the country would have missed the opportunity for exports and for earning valuable foreign exchange to the tune of Rs.425 crores. Even though the amount is very small compared with
the total foreign exchange earnings of the country from trade, taking into account the size of the Zone, it cannot be considered as a mean achievement.

From 1986-87 to 1995-96 CEPZ was able to attract foreign investments to the tune of Rs.19 crores and NRI investments of another Rs. 19 crores. This amount is too small when compared with the total foreign investment that has flowed to the country during the period.

The various production units housed in CEPZ had generated additional direct employment opportunities to 5750 persons till March 1996. The indirect job opportunities created in the auxiliary units of DTA is estimated to be 3000. In attaining the objective of generation of additional employment opportunities the working of CEPZ is found to be reasonably successful.

The high degree of infusion of latest technology in the production processes with foreign collaboration particularly from the U.S.A., the U.K. and Hong Kong was considered as commendable achievements in respect of CEPZ. CEPZ was also found to be successful, to a great extent, in linking the DTA with international markets by drawing a sizable portion of raw materials and components from the local economy for production and processing in its units.
The social benefit cost analysis has also revealed that the operations of CEPZ is beneficial to the economy and the Government of India. The aggregate net benefit accrued to Government at current prices from 1986-87 to 1994-95 was found to be Rs 89.89 crores and hence the average benefit per year during the same period works out to Rs.9.98 crores. The average benefits accrued to Government from CEPZ at constant prices, discounted at 12% and 18% respectively during the above period are found to be 3.32 and 2.19 respectively (see table 7.4). The average net benefit flow of the CEPZ during the five-year period between 1990-91 to 1994-95, on an average, both at current and at constant prices are found to be Rs.19.06 crores and Rs.15.65 crores (see table 7.5). The study also brings out that the positive benefits are likely to arise from the operations of CEPZ to the economy and Government in future also. So the general performances of CEPZ is found to be encouraging as it has opened a new channel for earning valuable foreign exchange for the country.

**Recommendations**

1. The weaknesses of Indian EPZs in international marketing shall be eliminated at any cost. For augmenting the international marketing relations a revised market strategy is to be evolved and implemented. While the "hardware" on Indian exports are internationally...
acceptable the "software" are not so. India's attributes in marketing, packaging, finishing, shipping and customer services are found to be far from the satisfactory level.  

2. The diplomatic missions and Embassies of our country operating in foreign countries are to be given a foreign trade orientation, in addition to their conventional functions. The services of a number of talented top officials of these missions are to be made use of as "Indian Special Ambassadors" for the promotion of our trade with other countries.

3. In order to attract foreign investments on a large scale the foreign investors may be given access to domestic market on a limited scale, but in a phased manner. A large volume of foreign capital, otherwise going to China, Taiwan, Vietnam, Indonesia, Philippines and South Korea can be attracted to India if such a liberal policy is evolved besides making the Indian industry competitive.

4. The value addition criteria, while processing the application of a unit for starting the business, are to be liberalised further. Any large scale unit providing

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9 C. Sarat Chandran, "India's Global Marketing Profile - A View from Outside", The Hindu, dt.27-3-1996.
for net foreign exchange earnings of a reasonable volume per year may be permitted.

5. Bulk-breaking, repacking and labelling activities may also be permitted in Indian EPZs provided these processes are providing for reasonable value addition. A number of MNCs can be attracted if these facilities are granted. This will provide for substantial inflow of foreign capital and creation of job opportunities.

6. An independent body called Export Processing Zone Authority (EPZA)\textsuperscript{10} may be created for supervising and coordinating the establishment, management and other allied policies of EPZs in India. It shall be a statutory body under the chairmanship of the Minister of Commerce, GOI and it shall consist of the top brass of the Ministries concerned, RBI, CBDT and DCs. It shall have a separate research and monitoring wing which shall study the problems of the units and shall issue directions for corrective measures. The officials of this wing is to be stationed in important international marketing centres for collecting, analysing and reporting the latest trends in international trade through commercial intelligence. It is high time that a

\textsuperscript{10} Rajiv Kumar: op.cit., p.186.
"Corporate Image" is built up for Indian EPZs and better each EPZ be named as an EPZ Corporation and let these be attached to one National EPZ Corporation of India, at the top of this corporate organisation structure. The authority must also ensure transparency in the working of the units in EPZs.

7. New EPZs under public/private/joint sector may be established near good port towns of the country. For example, Surat in Gujarat, Paradweep in Orissa, Mangalore in Karnataka, Tuticorin in Tamil Nadu, Vizhinjam and Calicut in Kerala can be identified as potential regions for setting up new EPZs.

8. Infrastructure facilities like developed plots, standard design factories and sheds, roads, drainage, water supply, electricity, pollution control arrangements, warehouses, banks, post offices, telephone exchanges, fully staffed offices, medical, educational, recreational facilities etc. shall be made available before the approval for setting up the industrial unit is granted. Otherwise, it will create a bad and wrong impression amongst the potential foreign entrepreneurs.

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11 Bombay Chamber of Commerce and Industry, How India can get more out of EPZs. 1990, p.10.
9. The concept of 'Single-window' clearance is to be strengthened further. A situation is to be created under which the entrepreneurs of the unit need approach only the DC for all purposes including imports, tax concessions, customs clearance and other facilities.

10. The production units of EPZs may be permitted to take their machineries/parts/components for repair/service outside the Zone by relaxing the existing stringent customs formalities.

11. All DTA purchases by EPZ units may be exempted from central excise duty in order to make the product highly competitive in the international market.

12. The DCs may convene periodical meetings with the EPZ units for chalking out necessary steps to cope with the international marketing problems. The production units may be asked to maintain proper and classified records of all transactions in a scientific and systematic manner.

An improved international marketing strategy will enable Indian EPZs to achieve better performance in the economy and global markets. This study, to a large extent, has made it clear that the Indian EPZs are technical feasible, financially viable and socially beneficial. As pointed out by
the Federation of Indian Chamber of Commerce and Industry\textsuperscript{12} the
country can earn one per cent share in the global trade and
achieve trade surplus by 2002, if the Ninth Plan (1997-2002)
aims at an export growth of 25 per cent per annum and contains
import growth to 20 per cent. So it is upto the GOI to take
further liberal steps for infusing the Indian EPZs new
confidence for enabling them to compete in the highly volatile
international market.

\textsuperscript{12} The Hindu, op.cit.