

PROFITABILITY ANALYSIS OF STATE LEVEL PUBLIC ENTERPRISES IN KERALA

Dr. Gimson D. Parambil and Dr. Baiju K.K
Associate Professor, Research Scholar,
St.Xavier's College Vaikom, Kerala - 686607

Abstract

Maximization of profit is one of the important objectives of a firm. Financing sources of has an important role in the financial performance of a firm. Unbalanced equity and debt in the capital structure adversely affect the financial results of the State Level Public Enterprises / Modern Manufacturing Public Enterprises (MMPEs). The changes in the financing policies of the Government due to the advent of the new economic policy also affect the working of the state level public enterprises. So the present study, impact of new economic policy in the financial performance of the Modern Manufacturing Public Enterprises (MMPEs) of Kerala. Profitability of the Modern Manufacturing Public Enterprises (MMPEs) are analyzed with the help of various profitability indicators such as net profit ratio, return on net worth, return on capital employed, return on equity, and interest coverage ratio. It can be concluded from the study that that the implementation of new economic policy has helped the MMPEs in Kerala to improve the overall profitability significantly.

Keywords – Profitability, net profit ratio, return on networth ratio, return on capital employed, return on equity, interest coverage ratio.

Introduction

Active involvement of the State in the processes of development became an economic necessity for the developing countries. In India during the period of post independence State's intervention in all the sectors of the economy was inevitable since private sector neither had necessary resources, the managerial and scientific skill, nor the will to undertake risks associated with long-gestation investments. Among the imperatives before the government were the removal of poverty, equitable distribution of income, generation of employment opportunities, removal of regional imbalances, accelerated growth of agricultural and industrial production, better utilization of natural resources and to prevent concentration in a few hands, it became a pragmatic compulsion to use the public sector as an instrument for self-reliant economic growth. Public sector is initiated in the country either by way of nationalization or by starting new production units with fresh investments. The state intervention was considered necessary also to regulate the use of scarce resources depleted by war efforts and undo or prevent the distortions arising from undiluted profit motive of private entrepreneurs. So the public sector is essential for the planned economic development of the nation. (Mohnot S.R. (2003).

The term public sector (Sampat, 2002) includes all economic activities under taken by the government. It has been used in different contexts by people of different backgrounds. It has come to mean different things in different countries. In its widest connotation, the public sector encompasses all economic activities of a government. It has been used to mean Public Enterprise (PE), Government Controlled Enterprise (GCE) (Mazzolini 1979), State-Owned Enterprise (SOE) (World Bank 1983), Public Undertaking (PU) or Public Sector Undertaking (PSU) or simply State Enterprise or Undertaking (SE or SU). In Indian context public sector includes, all activities financed through the government budget. It includes not only various central government companies or departments but also state level government enterprises and other departmental undertakings. It may be either Central Public Enterprises (CPEs) or State Level Public Enterprises (SLPEs).

State government, committed as it is to plan economic development, has assigned a key role to the public sector owing to its importance in creating more employment opportunities for the literate and skilled labour force, removing the income disparities of the people belonging to different regions of the state and generating surpluses for the government

for financing economic development activities. So the present study impact of new economic policy in the financial performance of the Modern Manufacturing Public Enterprises (MMPEs) of Kerala. Profitability of the Modern Manufacturing Public Enterprises (MMPEs) are analyzed with the help of various profitability indicators such as net profit ratio, return on net worth, return on capital employed, return on equity, and interest coverage ratio. It can be concluded from the study that the implementation of new economic policy has helped the MMPEs in Kerala to improve the overall profitability significantly.

The investment in Central Public Enterprises has increased from Rs 19,201 crores in 1980-81 to Rs 4,52,319 crores in 2007-08 indicating an average percentage increase of 10.48% (Public Enterprises Survey 2008-09). The total investment comprises of equity share capital of Rs.1, 31,232 crores and debt capital of Rs.3, 21,087 crores during 2007-08 % (Public Enterprises Survey 2008-09). Kerala is one of the states which received very little attention in the heavy industrialization strategy pursued, its share in central public sector investment remained low and infact declined over time. The Central Public Sector Investment in Kerala has decreased from 2.44% in 2007 to 2.41% in 2008 placing in the 19th position among the States (Economic Review 2009).

The State Level Public Enterprises had a total investment of Rs. 3,33,441 crores in 2006-07 indicating an annual growth of 5.81% .(National Survey on State Level Public Enterprises (2006-07)). The total investment comprises of equity for Rs1,15,658 crores and debt for Rs.2,17,783 crores as on 31.3.2007.(National Survey on State Level Public Enterprises (2006-07)). The dismal feature is that the volume of accumulated losses is increasing i.e. from Rs10,999 crores in 1991-92 to Rs 60,517 crores in 2004-05(Mishra & Kiranmai, (2007)). The grants and subsidies given to SLPEs to tide over the financial difficulties during 2006-07 was Rs. 31458 crores (Department of Public Enterprises (2009)). The average rate of return on the public sector investments for the states taken together is only 1.64% as against interest rates on their past debt ranging on average between 11-13% (National Institute of Public Finance and Policy 2003).

Kerala state stands in the forefront in the number of the state level public enterprises in the country. The total capital invested in 105 state level public enterprises as on 31st March 2009 was Rs. 18,179 crores(BPE Review 2010). The public enterprises owned by the Government of Kerala suffer from various limitations like optimum utilization of resources, poor financial management and marketing management, poor industrial relations, etc. (Gangadharan Pillai (1980) , Nayar (1980), Wilson (1981), Mary Joseph (1984), Subramoniyam and Mohanan Pillai (1986), Nataraja Iyer (1988), Narayan (1989), Nair (1990), Beena (1991) Prakash (1994), Ravi Varma Raja (1994), Varghese Mathew (1997) Anil Prasad (2001) Geevargheese (2002), Deva Kumar (2008)). As on 31st March, 2009, out of 105 units only 51 units have reported profits and the remaining enterprises have incurred losses (BPE Review 2010).

Classification of State Level Public Enterprises (SLPES) in Kerala

SLPEs have provided a strong foundation for the development of small, medium and large scale industries. The network of SLPEs has played a crucial role in the manufacturing and service sector of the State. The state level public enterprises are grouped into 14 sectors on the basis of the type of activity. SLPEs consist of 18 units of development and infrastructural sector, 3 units of ceramics and refractories, 11 units of chemical industries, 5 units of electrical equipment, 9 units of electronics, 11 units of engineering, 14 units of plantation and agro-based units, 4 units of textiles, 3 units of wood-based, 7 units of traditional industries, 3 units of trading, 9 units of welfare agencies, 6 units of public utilities and 2 units of others.

The Bureau of Public Enterprises has classified state level public enterprises into 14 sectors. Out of these, seven sectors viz., ceramics and refractories, chemical industry, electrical equipments industry, electronics industry, engineering industry, textile industry and wood based industry are referred to as Modern Manufacturing Public Enterprises (MMPEs). The classification of MMPEs in Kerala is given below:

Table 1.1
Classifications of MMPEs in Kerala

Sl. No.	Sector	Total No. of Units	No. of Working Units	No. of Sample Units	Percentage
1	Ceramics and Refractories	3	2	2	100
2	Chemical Industries	11	8	3	37.5
3	Electrical Equipment	5	4	3	60.75
4	Electronics	9	6	3	50
5	Engineering	11	8	3	37.5
6	Textiles	4	3	2	66.67
7	Wood-Based Industries	3	1	1	100
	Total Units	46	32	17	53.13

Source:-A Review of Bureau of Public Enterprises 2007-08

The changes in the funding policy of the major stakeholder as part of new economic policy affect the net working result of the MMPEs of Kerala. So profitability of MMPEs is carried down with the help of the profitability ratios such as: net profit ratio, interest coverage ratio, interest to sales ratio, return on networth and return on equity is carried down with the help of the financial data. The period of study is classified into two i.e. Pre Reform (1984-85 to 1994-95) and Post Reform (1995-96 to 2008-09) Period. Among the 46 MMPEs, 17 units were selected as sample units.

The New Economic Policy and Public Enterprises (PEs)

The role of PEs has been discussed in the Parliament six times through the Industrial Policy Resolution (IPR) of 1948, 1956, 1977, 1980, 1990, & 1991 (Prakash et al 2002). There is rapid change in the plan priorities of PEs in India. Earlier PE's were not forced to generate surplus funds for their future expansion programme. Now public sector has to undergo rapid changes to conform to the plan priorities (Government of India 1985) of efficiency and productivity. The Ninth Finance Commission has reported concern about the poor return of public enterprises in India. The commission has suggested that, "possibilities should be explored for restructuring and phasing out loss making enterprises in the non-core sector by appropriate package of measures". (Tharamangalam 1988).

The government of India has initiated economic reforms to boost Indian Economy for higher level of investment, national Income and employment. As part of economic reforms public sector reforms are also going on in the country to improve their efficiency and productivity. The restructuring and disinvestment of the public sector became a significant component of new economic policy initiated by the Central Government in 1991. The strategy of Public sector reforms of the New Industrial Policy of July 1991 were made with the aim of raising revenue to meet the fiscal deficit, of keeping the government at an arm's length from the operation of enterprises, of promoting a business type culture in the management of enterprises, and of encouraging public participation in the ownership of enterprises. New Industrial Policy aimed at restructuring of PEs and there by increasing the efficiency and thus reducing the losses.

Public enterprises are facing serious problems in various functional areas like financial, personnel, marketing etc. Researchers (Sharma R.P, 1987, Uma Devi, 1992, Shastri Mehta, 1987, Gangadharan Pillai, 1980, Sahoo P.K, Ed, 2000, Krishnamachary, 1990, Rajaiiah. B, 1989) was have pointed out various problems of public enterprises. like under utilisation of plant capacity, lack of professionalism, political interference, lack of commercial focus, absence of planning, lack of accountability, and high operating cost. In the present age of globalization, their survival is in question. Besides, the changes in the financing policies of the Government due to the advent of the new economic policy also affect the working of the state level public enterprises. Since the financial health of the state level public enterprises is very weak and decrease in capital support by State Government, adversely affect its survival and growth. Thus, the present study "Impact of New Economic Policy on the Profitability of the MMPEs" is found necessary to throw more light on the crucial sector of Kerala.

Profitability Analysis of MMPEs of Kerala

Profitability of MMPEs is carried down with the help of the profitability ratios such as: net profit ratio, interest coverage ratio, interest to sales ratio, return on net worth and return on equity.

Net Profit Ratio

Net profit is the amount of profit available after meeting all the expenses connected with the business. It is this amount, after the payment of income tax, which is available to the share holders of a company. This is the most important indicator of business profitability. Net profit ratio is worked out by comparing the amounts of net profit and net sales. Higher the ratio better it is, on the part of the firm. (Agrawal (1982).

Table 1.2
Net Profit Ratio of MMPEs in Kerala

(in percentage)

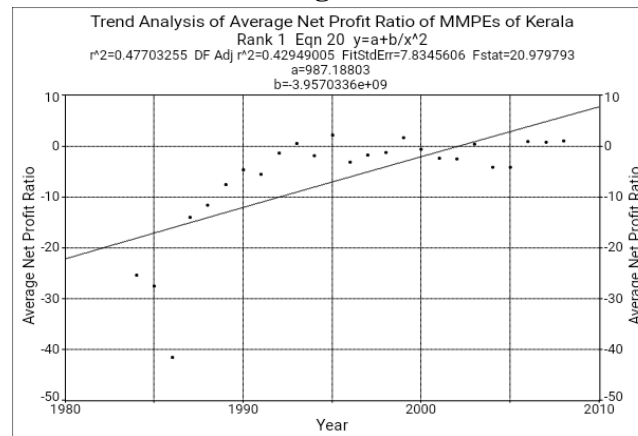
Year	Industrial Sectors						
	Ceramics	Chemical	Electrical Equipment	Electronics	Engineering	Textiles	Wood Based
1984-85	-39.70	-49.86	-23.74	2.47	-5.29	-24.57	-36.69
1985-86	-60.81	-30.86	-23.04	6.77	-24.85	-21.68	-37.35
1986-87	-139.53	-38.62	-28.13	-0.58	-28.54	-42.49	-12.32
1987-88	-86.51	-14.60	-12.43	-0.34	79.42	-56.90	-6.55
1988-89	-45.18	3.07	-5.01	5.77	-13.41	-27.48	1.18
1989-90	-10.95	-11.27	0.03	2.69	-27.74	-6.29	1.47
1990-91	-11.12	-2.69	-6.62	2.84	-21.70	-2.88	9.84
1991-92	-4.20	-0.33	-5.00	1.91	-26.84	-6.00	2.38
1992-93	9.68	6.02	-0.06	1.87	-26.26	-2.86	2.16
1993-94	3.51	13.32	-1.87	1.31	-15.23	2.36	0.75
1994-95	-11.72	18.69	-1.10	-0.90	-13.84	-4.56	0.92
Average	-36.05	-9.74	-9.72	2.16	-11.30	-17.58	-6.75
1995-96	-15.38	29.60	-0.87	-0.23	8.78	-6.71	0.22
1996-97	-12.46	7.24	0.67	-2.14	-7.12	-8.21	0.14
1997-98	-0.58	8.77	-15.28	-3.71	-0.35	-0.81	0.51
1998-99	-2.00	19.25	-11.84	-3.77	2.01	-12.21	0.52
1999-00	0.17	22.92	-7.82	-3.19	5.83	-6.34	0.53
2000-01	-1.78	23.70	-13.45	-12.66	3.20	-3.55	0.51
2001-02	-4.22	18.95	0.10	-15.27	3.00	-16.04	-2.88
2002-03	1.69	15.57	-6.00	-14.97	1.48	-16.85	1.64
2003-04	2.13	8.63	-4.68	13.79	4.27	-24.46	3.62
2004-05	-4.21	4.66	-1.72	-22.74	3.28	-13.03	5.23
2005-06	-4.60	4.26	-1.72	-21.48	-0.30	-8.74	4.11
2006-07	1.76	5.78	4.27	-9.80	3.06	-0.20	1.50
2007-08	5.81	5.23	8.23	-1.90	-1.50	-13.30	3.59
2008-09	8.12	6.03	10.48	-0.43	-1.27	-16.02	0.94
Average	-1.82	12.90	-2.83	-7.03	1.74	-10.46	1.44

Source: Compiled from data collected

The net profit ratios calculated from the data collected are exhibited in Table 1.2. The analysis of net profit ratio brings out the fact that the profitability position of the MMPEs in Kerala has improved as a result of the implementation of new economic policy. This is due to the reduced volume of interest on loan and increased volume of sales.

Trend analysis of Net Profit Ratio

Fig 1.1



Trend analysis of average net profit ratio of modern manufacturing public enterprises of Kerala exhibits an increasing trend (Fig 1.1). The net profit ratio is increasing at an increasing rate after the implementation of new economic policy. Thus the average trend of net profit ratio explains the fact there is improvement in overall financial performance of modern manufacturing public enterprises (MMPEs) of Kerala after the implementation of new economic policy.

Table 1.3

Results of 'Chow test' of Net Profit Ratio of MMPEs in Kerala

Sectors	F-statistic (2, 21)	P Value
Ceramics and Refractories	5.34	0.0133
Chemical	37.21	0.0000
Electrical Equipment	6.57	0.0061
Electronics	0.28	0.7556
Engineering	1.18	0.3281
Textiles	7.00	0.0047
Wood based	10.22	0.0008

Source: Compiled from collected data.

The statistical analysis reveals that there is significant change in the net profit ratio of ceramics and refractories, chemical, electrical equipment, textiles and wood based sectors after the implementation of new economic policy.

Interest Coverage Ratio

Interest coverage ratio indicates the number of times the amount of interest can be paid out of net profits earned by the firm. As far the coverage is more, the capacity of the firm to meets this liability is also high. Interest coverage ratio of modern manufacturing public enterprises reveals the capacity of the enterprises to pay the interest charges out of the profits earned by them. All the sectors, except electronics, in the modern manufacturing public enterprises were having a negative average interest coverage ratio before the implementation of new economic policy. Interest coverage ratio indicates the poor profitability position existed in the MMPEs before the implementation of the new economic policy. (Agrawal (2003).

Table 1.4

Interest Coverage Ratio of MMPEs in Kerala

Year	Industrial Sectors						
	Ceramics	Chemical	Electrical Equipment	Electronics	Engineering	Textiles	Wood Based
1984-85	-1.42	-7.63	-10.15	0.21	-1.00	-3.47	-58.92

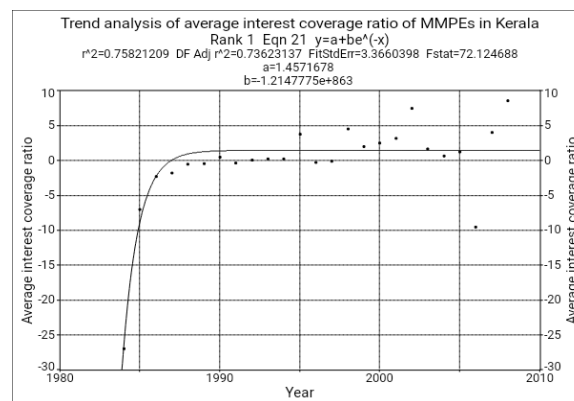
1985-86	-2.05	-1.83	-2.43	0.53	-2.13	-2.38	-18.01
1986-87	-2.19	-1.79	-2.50	-0.04	-2.40	-3.33	-4.47
1987-88	-3.29	-1.10	-1.15	-0.03	4.84	-2.92	-3.81
1988-89	-2.99	0.27	-0.55	0.92	-0.89	-2.22	0.44
1989-90	-0.85	-0.67	0.01	0.40	-1.75	-0.98	0.66
1990-91	-0.93	-0.16	-0.64	0.44	-1.36	-0.36	6.46
1991-92	-0.57	-0.03	-0.71	0.28	-1.54	-1.04	0.92
1992-93	1.98	0.53	-0.01	0.20	-1.81	-0.56	0.92
1993-94	0.70	1.79	-0.25	0.16	-1.15	0.60	0.28
1994-95	-2.23	4.15	-0.19	-0.12	-1.31	-1.10	0.65
Average	-1.26	-0.59	-1.69	0.27	-0.95	-1.61	-6.81
1995-96	-3.41	31.01	-0.17	-0.03	0.96	-2.11	0.09
1996-97	-4.06	2.48	0.13	-0.19	-0.83	-2.02	0.05
1997-98	-0.19	3.62	-1.44	-0.49	-0.07	-0.23	0.16
1998-99	-0.77	36.99	-1.57	-0.46	0.46	-2.97	0.09
1999-00	0.09	25.05	-2.40	-0.39	1.25	-1.60	0.14
2000-01	-0.93	23.68	-2.81	-1.15	0.67	-0.99	0.14
2001-02	-2.18	16.21	0.02	-1.14	0.71	-2.43	-0.54
2002-03	0.82	12.63	-1.20	-1.06	0.37	-2.61	0.35
2003-04	0.81	8.35	-0.98	1.76	1.01	-3.06	1.18
2004-05	-2.14	3.50	-0.37	-1.90	0.90	-1.64	1.77
2005-06	-1.95	3.16	-0.37	-2.43	-0.08	-1.10	1.62
2006-07	1.50	3.90	2.35	-10.56	1.35	-0.04	0.48
2007-08	6.63	10.79	4.97	-0.39	-0.59	-3.37	1.26
2008-09	11.21	6.60	6.40	-0.09	-0.53	-2.78	0.35
Average	0.39	13.43	0.18	-1.32	0.40	-1.93	0.51

Source: Compiled from data collected

The table 1.4 clearly explains that the profitability position of the industrial units in different sectors has changed considerably. The interest coverage ratios of ceramics and refractories, electrical equipment, engineering, textiles and wood based sector have improved after the implementation of new economic policy. The decrease in the volume of debt capital and simultaneous increase in the volume of sales help to improve the interest coverage ratio of MMPEs of Kerala.

Trend Analysis of Interest Coverage Ratio

Fig 1.2



The trend analysis of average interest coverage ratio of modern manufacturing public enterprises exhibits a stagnant trend after 1990 (Fig. 1.2). The trend line shows an upward trend during 1985's but from 1990 it maintains stagnant position. The positive trend line means the fact the modern manufacturing public enterprises of Kerala can maintain an average earning capacity in the new economic scenario.

Table No 1.5
Results of 'Chow test' of Interest Coverage Ratio of MMPEs in Kerala

Sectors	F-statistic (2, 21)	P Value
Ceramics and Refractories	4.73	0.0202
Chemical	9.09	0.0014
Electrical Equipment	3.39	0.0529
Electronics	0.42	0.6637
Engineering	1.36	0.2793
Textiles	7.77	0.0030
Wood based	5.85	0.0096

Source: Compiled from collected data

The statistical analysis reveals the fact that there is significant change in the interest coverage ratio of ceramics and refractories, chemical, electrical equipment, textiles and wood based sector of modern manufacturing public enterprises of Kerala after the implementation of new economic policy. This fact is also supported by interest coverage ratio results of the MMPEs.

Interest to Sales Ratio

This ratio compares the amount of interest on borrowed funds with the volume of sales. It is calculated as a percentage of sales. A lower ratio indicates high profitability and vice versa. As far as the MMPEs are concerned, interest burden is the most important hurdle to earn profit. Interest to sales ratio has been considered with a view to assess describes the justification of using borrowed funds by the MMPEs (Gupta (1990)).

Table 1.6
Interest to Sales Ratio of MMPEs in Kerala

(in percentage)

Year	Industrial Sectors						
	Ceramics	Chemical	Electrical Equipment	Electronics	Engineering	Textiles	Wood Based
1984-85	27.87	6.53	2.34	11.73	5.29	7.09	0.62
1985-86	29.68	16.84	9.47	12.82	11.65	9.12	2.07
1986-87	63.80	21.53	11.23	15.96	11.91	12.75	2.76
1987-88	26.26	13.26	10.76	12.10	16.42	19.47	1.72
1988-89	15.13	11.56	9.10	6.28	15.12	12.36	2.69
1989-90	12.87	16.85	6.61	6.78	15.84	6.44	2.22
1990-91	11.97	16.38	10.27	6.46	15.96	7.96	1.52
1991-92	7.30	12.68	7.02	6.92	17.45	5.80	2.59
1992-93	4.88	11.28	7.18	9.27	14.54	5.11	2.35
1993-94	5.02	7.46	7.56	8.29	13.23	3.90	2.67
1994-95	5.26	4.51	5.71	7.27	10.58	4.14	1.42
Average	19.10	12.63	7.93	9.44	13.45	8.56	2.06
1995-96	4.51	0.95	5.24	6.48	9.15	3.18	2.52
1996-97	3.07	2.91	5.39	11.53	8.60	4.07	2.82
1997-98	3.11	2.42	10.60	7.61	5.08	3.48	3.18
1998-99	2.62	0.52	7.54	8.11	4.37	4.12	5.58
1999-00	1.84	0.92	3.26	8.09	4.65	3.96	3.83
2000-01	1.93	1.00	4.78	10.98	4.77	3.57	3.57
2001-02	1.94	1.17	4.96	13.35	4.25	6.59	5.34
2002-03	2.06	1.23	4.99	14.09	3.98	6.46	4.68
2003-04	2.65	1.03	4.75	7.85	4.25	7.99	3.08

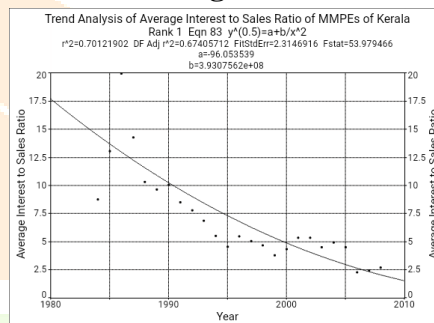
2004-05	1.96	1.33	4.69	11.99	3.63	7.93	2.96
2005-06	2.36	1.35	4.67	8.85	3.87	7.92	2.54
2006-07	1.17	1.48	1.82	0.93	2.26	5.31	3.12
2007-08	0.88	0.48	1.65	4.85	2.53	3.95	2.85
2008-09	0.72	0.91	1.64	4.77	2.39	5.77	2.71
Average	2.20	1.27	4.71	8.53	4.56	5.31	3.48

Source: Compiled from data collected

The ratio of interest to sales relating to the MMPEs covered under the study is exhibited in table 1.6. The table clearly describes that there is a strong fall in this ratio during the post reform period when compared to pre reform period in all the sectors covered under the study. Analysis interest to sales ratio reveals that interest on borrowed funds adversely affects the net profit of the MMPEs. This is due to the fact that borrowed funds play an important role in the capital structure of MMPEs. However, the interest to sales ratio of all the seven sectors except wood based sector in the MMPEs of Kerala has reduced during the post reform period. The decrease in the volume of debt in the post reform period leads to reduction in interest burden and there by increase in profitability.

Trend Analysis of Interest to Sales Ratio

Fig 1.3



Trend analysis of average interest to sales ratio of MMPEs shows a declining trend throughout the period of study (Fig 1.3). The downward trend brings out the fact that the volume of debt fund is decreasing in the capital structure of MMPEs of Kerala during the post reform period.

Table No 1.7

Results of 'Chow test' of Interest to Sales Ratio of MMPEs in Kerala

Sectors	F-statistic (2, 21)	P Value
Ceramics and Refractories	7.64	0.0032
Chemical	6.45	0.0066
Electrical Equipment	0.76	0.4804
Electronics	1.89	0.1758
Engineering	11.33	0.0005
Textiles	5.38	0.0130
Wood based	3.38	0.0535

Source: Compiled from collected data

Statistical analysis of the interest to sales ratio reveals that electrical equipment and electronics sectors and rejected in other sectors. The chow test supports the fact that there is a significant change in the net profit ratio of ceramics and refractories, chemical, engineering, textile sectors and wood based after the implementation of new economic policy.

Return on Net Worth Ratio

Return on net worth shows the return on the total funds contributed by the equity share holders. Funds contributed by the equity share holders include paid up share capital plus all reserves and surpluses available with the company as reduced by the amount of accumulated losses. (Hingorani and Ramanathan (1973)).

Table 1.8
Return on Net Worth Ratio of MMPEs in Kerala

(in percentage)

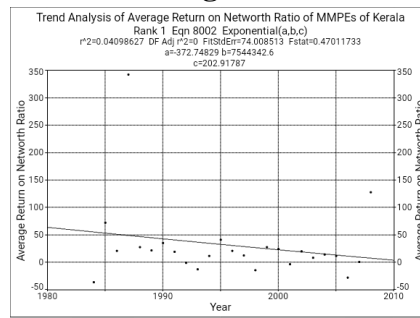
Year	Ceramics	Chemical	Electrical Equipment	Electronics	Engineering	Textiles	Wood Based
1984-85	13.97	-72.59	73.66	11.73	-29.63	-124.54	-122.68
1985-86	19.96	-194.33	47.67	28.49	-52.76	281.60	376.52
1986-87	19.45	197.05	39.36	-2.53	-237.52	81.60	53.06
1987-88	47.16	57.24	19.62	-1.40	2209.30	43.19	23.13
1988-89	34.27	-20.40	10.95	21.83	104.69	46.76	-5.30
1989-90	10.19	54.84	-0.18	11.50	73.80	16.77	-15.19
1990-91	12.37	11.39	30.43	14.14	40.87	9.54	126.69
1991-92	9.24	1.66	29.64	14.36	36.63	31.34	14.57
1992-93	-30.28	-44.12	0.74	13.93	28.12	17.82	10.78
1993-94	-24.79	-133.99	90.01	7.80	15.24	-42.50	3.19
1994-95	45.95	113.35	76.60	-6.56	14.22	-164.41	6.13
Average	14.32	-2.72	38.04	10.30	200.27	17.93	42.81
1995-96	25.92	82.52	70.53	-1.90	-14.82	125.51	1.63
1996-97	17.83	11.12	67.77	-17.27	11.40	57.03	0.85
1997-98	1.03	16.63	126.90	-66.62	0.70	3.97	4.84
1998-99	3.26	39.75	74.42	-252.80	-4.40	36.85	4.64
1999-00	-0.35	41.26	54.89	95.78	-17.97	18.01	5.46
2000-01	3.20	38.27	48.50	77.36	-8.86	9.90	5.00
2001-02	-84.82	24.27	-0.38	45.95	-9.66	26.48	-24.89
2002-03	-2.50	15.92	66.70	33.22	-4.71	20.59	15.74
2003-04	-2.53	9.77	49.00	-42.91	-12.94	20.32	39.75
2004-05	5.00	5.38	17.57	35.86	-12.12	9.79	42.42
2005-06	3.76	5.46	14.75	26.46	1.03	5.95	28.62
2006-07	-2.96	7.52	-342.41	12.11	120.54	0.16	8.36
2007-08	-12.05	6.39	101.97	1.62	-128.40	17.53	17.94
2008-09	-21.08	8.82	60.71	0.62	823.36	19.28	4.69
Average	-4.73	22.36	29.35	-3.75	53.08	26.53	11.07

Source: Compiled from data collected

MMPEs show a positive rate of return on net worth in all sectors except chemical sector before the implementation of new economic policy. The average rate of return on net worth of MMPEs has decreased as shown in table 1.8 after the introduction of new economic policy. The chemical, electrical equipment, engineering, textiles and wood based sectors have maintained a positive rate of return after the implementation of the new economic policy. The average rate of return on net worth in all the sectors except chemical and textiles have decreased after the implementation of new economic policy. However, the return on net worth shows an increase in the case of industrial units in the chemical and textile sector during the post reform period.

Trend Analysis of Return on Networth Ratio

Fig.1.4



Trend analysis of average return on networth ratio of modern manufacturing public enterprises exhibits a downward trend (Fig. 1.4). This describes the fact that the poor performance of the modern manufacturing public enterprises of Kerala during the post reform period.

Table 1.9

Results of 'Chow test' of Return on Networth Ratio of MMPEs in Kerala

Sectors	F-statistic (2, 21)	P Value
Ceramics and Refractories	0.08	0.9250
Chemical	0.53	0.5969
Electrical Equipment	1.18	0.3283
Electronics	0.82	0.4525
Engineering	0.59	0.5655
Textiles	2.74	0.0879
Wood based	0.48	0.6260

Source: Compiled from collected data

The statistical analysis points out the fact that there is significant change in the return on net worth ratio of textiles sector of modern manufacturing public enterprises of Kerala after the implementation of new economic policy. This fact is also supported by return on net worth ratio results of the modern manufacturing public enterprises of Kerala.

Return on Equity

Return of equity is a strict measure of profitability which is done by comparing the amount of net profit available to equity share holders and the amount of paid up equity capital. Market Value of the shares will be higher in the case of a firm having higher rate of return on equity (Kuchal, S. C (1981)).

Table 1.10

Return on Equity in the MMPEs in Kerala

(in percentage)

Year	Ceramics	Chemical	Electrical Equipment	Electronics	Engineering	Textiles	Wood Based
1984-85	-38.87	-41.43	-66.40	4.53	-10.53	-26.36	-126.43
1985-86	-61.52	-43.76	-70.16	14.77	-25.58	-19.96	-140.32
1986-87	-74.65	-54.10	-79.75	-1.23	-35.50	-28.59	-42.12
1987-88	-13.58	-28.74	-28.76	-0.76	105.21	-42.14	-23.88
1988-89	-13.40	7.97	-12.06	15.51	-21.89	-33.92	7.28
1989-90	-4.41	-20.64	0.09	8.01	-52.36	-10.09	12.82
1990-91	-5.22	-5.53	-16.78	10.02	-42.31	-5.72	84.63
1991-92	-2.15	-0.99	-18.20	9.15	-52.01	-12.83	12.26
1992-93	6.15	22.27	-0.24	9.47	-54.41	-6.78	10.42

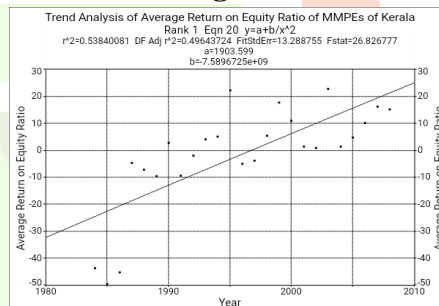
1993-94	2.11	55.59	-6.58	5.95	-37.25	6.34	3.18
1994-95	-6.41	86.59	-4.22	-4.44	-31.22	-10.51	6.68
Average	-19.27	-2.07	-27.55	6.45	-23.44	-17.32	-17.77
1995-96	-9.74	161.98	-3.47	-1.28	23.68	-16.70	1.80
1996-97	-8.54	22.75	2.62	-9.98	-21.67	-21.21	0.95
1997-98	-0.35	35.04	-42.73	-20.89	-1.24	-2.08	5.67
1998-99	-1.25	108.11	-34.63	-20.24	8.92	-28.53	5.70
1999-00	0.14	145.02	-24.15	-17.59	28.66	-15.19	7.11
2000-01	-1.44	171.42	-42.10	-62.86	14.27	-8.83	6.84
2001-02	-3.25	127.92	0.15	-68.95	12.66	-32.80	-26.07
2002-03	1.30	97.58	-7.76	-74.94	6.38	-32.29	16.87
2003-04	1.51	62.94	-5.95	69.87	17.58	-42.47	56.70
2004-05	-3.14	35.03	-2.45	-96.69	15.01	-22.79	85.31
2005-06	-2.46	36.87	-2.59	-61.66	-1.23	-14.87	79.16
2006-07	1.89	52.51	9.41	-29.13	13.82	-0.30	23.55
2007-08	6.88	47.10	21.26	-5.91	-6.54	-10.73	61.58
2008-09	9.98	67.65	30.02	-1.59	-5.96	-9.79	16.89
Average	-0.60	83.71	-7.31	-28.70	7.45	-18.47	24.43

Source: Compiled from data collected

The analysis of the return on equity ratio points out the fact that all the sectors except electronics were having a negative rate of return in the pre reform period. But after the implementation of the new economic policy the position has changed as shown in table 1. 10. The table shows that the chemical sector, engineering sector and wood based sector could achieve a positive rate of return on equity during the post reform period. Thus, the above analysis reveals that, the profitability position of the industrial units in the MMPEs has improved after the implementation of the new economic policy.

Trend Analysis of Return on Equity

Fig 1.5



Trend analysis of average return on equity ratio of modern manufacturing public enterprises of Kerala shows an increasing trend (Fig 1.5). The trend line describes the fact that the return on equity ratio of modern manufacturing public enterprises of Kerala has improved from negative figure to positive figure during the post reform period.

Table 1.11

Results of 'Chow test' of Return on Equity Ratio of MMPEs of Kerala

Sectors	F-statistic (2, 21)	P Value
Ceramics and Refractories	8.34	0.0022
Chemical	10.03	0.0009
Electrical Equipment	5.89	0.0093
Electronics	0.56	0.5761
Engineering	3.35	0.0544
Textiles	3.54	0.0471
Wood based	3.99	0.0341

Source: Compiled from collected data

The result of the statistical analysis points out that there is significant change in the return on equity ratio of modern manufacturing public enterprises of Kerala except in electronics sector after the implementation of new economic policy. This fact is also supported by return on equity ratio results of the modern manufacturing public enterprises of Kerala.

Return on Capital Employed Ratio

Return on capital employed establishes the relationship between profits and the capital employed. The overall profitability of a business is reflected by the return on capital employed. For the purpose of the present study, capital employed is calculated by adding the amounts of net fixed assets and net working capital. In some cases, the net working capital was found to be a negative figure and to that extent the total amount of capital employed is affected. (Kulkarni (1983).

Table 1.12
Return on Capital Employed Ratio of MMPEs in Kerala

(in percentage)

Year	Ceramics	Chemical	Electrical Equipment	Electronics	Engineering	Textiles	Wood Based
1984-85	-39.52	-16.79	-129.71	1.70	-2.31	-28.31	-118.34
1985-86	-91.91	-14.80	-55.05	5.42	-9.23	-22.79	-351.98
1986-87	-157.89	-20.53	-103.15	-0.50	-8.34	-29.91	81.09
1987-88	-79.62	-11.28	-63.99	-0.38	30.74	-56.28	-24.82
1988-89	-127.20	3.12	-19.49	8.59	-5.55	-48.16	-11.05
1989-90	-27.65	-10.45	0.04	4.18	-12.70	-11.07	24.73
1990-91	-24.09	-2.63	-8.13	3.39	-10.72	-5.40	66.51
1991-92	-13.14	-0.47	-9.32	2.80	-14.37	-13.96	8.32
1992-93	32.05	10.01	-0.12	2.15	-16.26	-7.86	7.17
1993-94	7.08	32.44	-3.03	1.58	-10.44	5.49	1.92
1994-95	-23.17	50.19	-3.21	-1.26	-9.77	-11.78	4.10
Average	-49.55	1.71	-35.92	2.52	-6.27	-20.91	-28.40
1995-96	-144.15	90.95	-2.79	-0.41	8.38	-21.75	0.65
1996-97	-178.41	12.03	1.35	-2.94	-6.63	-25.78	0.22
1997-98	-5.87	13.21	-27.31	-11.33	-0.37	-3.57	1.21
1998-99	-12.32	31.89	-30.71	-6.57	2.33	-4.32	1.06
1999-00	2.91	35.62	-26.26	-6.19	6.85	-35.11	1.12
2000-01	25.32	34.59	-66.42	-23.71	3.18	-17.80	1.06
2001-02	30.20	23.04	0.69	-28.15	2.87	-116.07	-3.93
2002-03	-10.18	15.69	-23.83	-28.93	1.32	-146.96	2.36
2003-04	-8.00	9.38	-18.03	30.65	3.51	-148.90	7.10
2004-05	14.07	5.13	-6.10	-60.95	2.95	-58.37	9.43
2005-06	11.78	5.25	-5.77	-90.09	-0.24	-55.82	7.69
2006-07	-13.28	7.66	33.93	-81.00	3.96	0.70	2.17
2007-08	-61.56	6.77	43.17	5.65	-2.01	55.54	5.16
2008-09	111.93	8.56	36.13	1.93	-1.73	52.47	1.34
Average	-16.97	21.41	-6.57	-21.57	1.74	-37.55	2.62

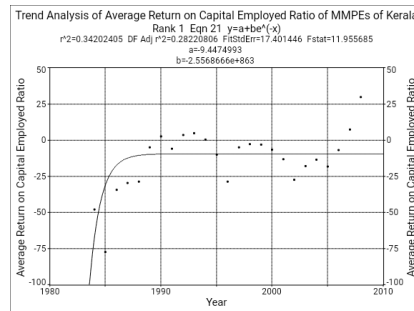
Source: Compiled from data collected

The analysis of return on capital employed shown in the table 1.12 describes the fact that the state level manufacturing public enterprises were not able to earn a fair a rate of return on capital employed before the implementation of new economic policy. The analysis of the return on capital employed ratio reveals the fact that the new economic policy has a significant influence on the rate of return on capital employed of MMPEs. The ratio shows a positive trend in ceramics and refractories, chemical, electrical equipment, engineering and wood based industrial sectors after the implementation of new economic policy. Significant improvement is observed in the rate of return on capital employed

of the industrial units falling under the electronics and textile sectors during the latest three years after the implementation of the new economic policy. Thus, it can be concluded that the implementation of new economic policy has helped the MMPEs in Kerala to improve the overall profitability significantly.

Trend Analysis of Return on Capital Employed Ratio

Fig 1.6



Trend analysis of average return on capital employed ratio of modern manufacturing public enterprises of Kerala shows a negative and stagnant position (Fig.1.6). The trend line shows an upward trend before 1985 and then maintains a stagnant negative position. The ratio of return on capital employed shows that the overall performance of industrial units in the MMPEs could not improve after the implementation of new economic policy. The main reason of poor performance is inefficiency in using the borrowed funds.

Table 1.13

Results of 'Chow test' of Return on Capital Employed Ratio of MMPEs of Kerala

Sectors	F-statistic (2, 21)	P Value
Ceramics and Refractories	2.76	0.0862
Chemical	15.22	0.0001
Electrical Equipment	6.50	0.0063
Electronics	0.34	0.7163
Engineering	3.32	0.0559
Textiles	0.79	0.4647
Wood based	2.49	0.1067

Source: Compiled from collected data

The statistical analysis pointed out the fact there is a significant change in the return on capital employed ratio of chemical, electrical equipment and engineering sectors after the implementation of new economic policy. This fact is also described by the return on capital employed ratio results of the chemical, electrical equipment and engineering sectors.

Conclusion

The role to the public sector in Kerala economy is very significant in removing the income disparities of the people belonging to different regions of the state and generating surpluses for the government for financing economic development activities. The introduction of new economic policy affected its financial performance. The impact of the new economic policy in the profitability of MMPEs is studied with the help of ratios like net profit ratio, interest coverage ratio, interest to sales ratio, return on networth and return on equity. The net profit ratio brings out the fact that the industrial units in all sectors, except electronics sector, could reduce the volume of loss during the post reform period. Interest coverage ratio turned to be a positive figure in the case of ceramics and refractories, chemical, electrical equipment and wood based sectors after the implementation of the new economic policy. It is found that, the interest to sales ratio of all the seven sectors except wood based sector in the MMPEs has reduced during the post reform period. The analysis of the ratio of return on net worth shows that the average rate of return on net worth in all the

sectors except chemical and textiles have decreased after the implementation of new economic policy. The return on capital employed ratios indicate that the new economic policy has a positive influence in ceramics and refractories, chemical, electrical equipment, engineering and wood based industrial sectors after the implementation of new economic policy. Thus the analysis of the profitability ratios leads to the conclusion that the new economic policy help to improve the profitability of MMPEs of Kerala.

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