

FIXED MANAGEMENT IN POWER DISTRIBUTION COMPANIES OF ANDHRA PRADESH

G. Damodhar¹, Dr. B. Ramachandra Reddy²

1. Ph.D Research Scholar, Department of commerce, Sri Venkateswara University, Tirupathi -517502, Andhra Pradesh, India.,

2. Professor, Department of commerce, Sri Venkateswara University, Tirupathi, -517502, Andhra Pradesh, India.,

ABSTRACT

In this paper, the size and structure of fixed assets, relation between fixed assets and total assets, fixed assets and long term funds, fixed assets and funded debts, ratio of sales to fixed assets, adequacy of depreciation etc., in Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL) and Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL) are discussed. The analysis has led to the following observations. The fixed assets and current assets are closely related as the earning power of the enterprise mainly depends on their proportion in the assets structure. Therefore, determining an optimum mixture of current and fixed assets into a profitable combination is a challenging problem to the management.

Keyword: Distribution, Southern, Eastern, enterprise, profitable.

1. INTRODUCTION

The power distribution companies viz. APSPDCL, APEPDCL serving the millions of consumers of different categories of the state of Andhra Pradesh in all the 13 districts since its inception from 1st April, 2000. In this paper an attempt has been made to explain the fixed assets management covering the nature of fixed assets, ratio of total assets, ratio of long term funds, Lines & Cable net work and plant and machinery of two power distributions companies functioning in Andhra Pradesh. The period of study is 2007-08 to 2016-17.

Fixed assets are classified into two categories such as Tangible and Intangible. The assets which have physical existence or structure and used for manufacturing of goods and services are known as Tangible fixed assets. This category includes land, buildings, plant, machinery, furniture and so on. Intangible assets do not have any physical existence. At the same time they do not produce any goods and services directly. This category of fixed assets comprises patents, copy rights, trademarks, goodwill, deferred revenue expenditure and debit balance of profit and loss account. The value of such intangible assets is not in physical properties but in the rights which its possession confers on its owner.

2. NATURE OF FIXED ASSETS

Fixed assets are playing crucial role in each and every organization. Its significance is linked with future earnings or revenues or profits of the firm. Some fixed assets are inevitable in the course of production such as land, buildings, plant and machinery. The use of these assets extends over a considerable period of time. Therefore, they become absolute after completion of that period. They are not meant for re-sale¹. The usage of fixed assets is not short term in nature². In this paper an attempt has been made to analyze whether fixed assets are properly blended with current assets and fixed assets are efficiently used to earn revenues in the power distribution companies. In this connection analysis of management of fixed assets has been made in three approaches. Firstly, the investment of fixed assets has been compared with investment in total assets. Secondly, the sources of funds for acquisition of fixed assets have been identified. Finally, the efficiency of the selected units in utilizing fixed assets has been analyzed with the help of turn over ratios.

3. RATIO OF FIXED ASSETS TO TOTAL ASSETS

The approach is used to analyze the fixed assets management in selected units as comparison of investment in fixed assets with investments in total assets. This will be helpful to us to know whether the power distribution companies have been maintaining proper balance between revenue generating assets (fixed assets) and serving assets or circulating assets (current assets). To assess this, ratio of fixed assets to total assets has been analyzed. Higher proportion of fixed assets to total assets is desirable from the organization's point of view because those assets generate revenue to the organization.

TABLE .1

Ratio of Fixed Assets to Total Assets in
Southern Power Distribution Company of Andhra Pradesh Limited

Year	Fixed Assets (Rs. in Crores)	Total Assets (Rs. in Crores)	Ratio (%)
2007-2008	2711.29	4174.47	64.95
2008-2009	3001.63	6136.68	48.91
2009-2010	3407.58	7543.75	45.17
2010-2011	3531.58	8806.72	40.10
2011-2012	3712.43	10424.43	35.61
2012-2013	4191.85	7725.25	54.26
2013-2014	4945.74	8002.87	61.79
2014-2015	7644.66	11927.97	64.09
2015-2016	9345.94	13677.84	68.33
2016-2017	9242.39	18320.46	50.45
Average	5173.51	9674.05	53.48
CGR (%)	15.77	13.32	2.17
2019-2020 (Trend Value)	11041.57	18624.61	61.72
Correlation	0.89		

On an average the proportion of fixed assets to total assets was more than 50 per cent (53.48 per cent). The ratio varies between 35.61 per cent during 2011-12 and 68.33 per cent during 2015-16. Compound growth rate for fixed assets and total assets and the respective values are 15.77 per cent and 13.32 per cent. The trend value for the year 2019-20 is estimated with the help of least squares method. The values for fixed assets and total assets are Rs.11041.57 Crores and Rs.18624.61 Crores. There is a moderate positive correlation between fixed assets and total assets and the correlation co-efficient is 0.89.

TABLE 2
Ratio of Fixed Assets to Total Assets in
Eastern Power Distribution Company of Andhra Pradesh Limited

Year	Fixed Assets (Rs. in Crores)	Total Assets (Rs. in Crores)	Ratio (%)
2007-2008	1438.23	2379.14	60.45
2008-2009	1626.29	3722.95	43.68
2009-2010	1726.07	4364.74	39.55
2010-2011	1791.17	5813.57	30.81
2011-2012	1926.22	6474.62	29.75
2012-2013	2230.20	6340.44	35.17
2013-2014	2568.93	6247.44	41.12
2014-2015	3138.73	6789.93	46.23
2015-2016	3944.99	9119.27	43.26
2016-2017	3482.39	9366.59	37.18
Average	2387.32	6061.87	39.38
CGR (%)	11.78	13.58	-1.58
2019-2020 (Trend Value)	4402.27	11241.63	34.24
Correlation	0.90		

The ratio of fixed assets to total assets showing fluctuating trend throughout the study period. This ratio varies between 29.75 per cent and 60.45 per cent. On an average, the share of fixed assets in the total assets stood at 39.38 per cent. This ratio is less than 50 per cent for the study period of expects 2007-08. The compound growth rates for fixed assets, total assets and the ratio of fixed assets to total assets is 11.78 per cent, 13.58 per cent and -1.58 per cent respectively. The trend values for the variables are Rs. 4402.27 Crores, Rs.1124.63 Crores. Positive relationship observed between fixed assets to total assets.

4. STRUCTURE OF FIXED ASSETS

Among the various components of fixed assets, linen & cable net work, plant & machinery, and civil works occupies prominent place. Therefore, it is a major component of gross block. Land, company buildings and other assets proportion is very little. There is capital work-in-progress and investment throughout the study period. The fixed assets are recorded at their historical cost and depreciation is charged on reducing balance method for all the assets. The trend ratio of fixed assets is increasing from 100 per cent to 340.88 per cent for the study period.

The proportion of net fixed assets to the total assets varies between 29.75 per cent to 60.45per cent. The trend ratio of fixed assets is increase for the study period. The company invested huge amount the various component of the fixed assets block lines & cable network, plant and machinery and civil work occupies an important position as principle assets. Company buildings, land, other asset and capital work-in-progress are contributing their share towards creation of the total fixed assets. The capital work-in-progress has been taken as another major component in the fixed assets structure. The depreciation is provided on gross block of fixed assets on written down value method.

5. RATIO OF FIXED ASSETS TO LONG TERM FUNDS

This ratio explains the functional relationship of fixed assets and long term funds. Here, the term, fixed assets, is used in their net sense. Long term funds imply share capital, reserves and long term loans. The long term funds and their disposal of an undertaking can be used either for acquiring the fixed assets or current assets (net working capital). The fixed assets are long term in nature, hence, they should be financed by long term funds only. Otherwise, it would result in financial embarrassment.

TABLE 3
Ratio of Fixed Assets to Long-term Funds in
Southern Power Distribution Company of Andhra Pradesh Limited

Year	Fixed Assets (Rs. in Crores)	Long-term funds (Rs. in Crores)	Fixed Assets Ratio (%) (FA/LTF)
2007-2008	2711.29	2921.06	92.82
2008-2009	3001.63	4456.14	67.36
2009-2010	3407.58	5578.24	61.08
2010-2011	3531.58	6177.54	57.16
2011-2012	3712.43	4737.13	78.36
2012-2013	4191.85	394.40	1062.84
2013-2014	4945.74	4265.18	115.96
2014-2015	7644.66	5867.86	130.28
2015-2016	9345.94	1312.16	7.12
2016-2017	9242.39	6576.59	140.50
Average	5173.51	4228.63	122.35

The ratio varies between the lowest of 7.12 times in 2015-16 and the highest of 1062.84 times in 2012-13. The average of ratio of fixed assets to the long term funds for the entire study period stood at 122.35 per cent. This indicates the entire investment in fixed asset has come from long term funds. Hence, the investment policy of the firm in fixed assets is considered to be sound. However, high average of fixed assets to long term funds implies that a large proportion of long term funds have been diverted and used for working capital purposes

TABLE 4.6
Ratio of Fixed Assets to Long term Funds in
Eastern Power Distribution Company of Andhra Pradesh Limited

Year	Fixed Assets (Rs. in Crores)	Long-term funds (Rs. in Crores)	Fixed Assets Ratio (%) (FA/LTF)
2007-2008	1438.23	1427.85	100.73
2008-2009	1626.29	2545.09	63.89
2009-2010	1726.07	2852.83	60.50
2010-2011	1791.17	4173.89	42.91
2011-2012	1926.22	4296.32	44.83
2012-2013	2230.20	807.93	276.04
2013-2014	2568.93	4131.83	62.17
2014-2015	3138.73	3940.98	79.64
2015-2016	3944.99	4490.82	87.85
2016-2017	3482.39	5890.78	59.12

Average	2387.32	3455.83	69.08
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The ratio varies between 42 per cent and 276.04 per cent during the study period and the average of fixed assets to long term funds ratio stood at 69.08 per cent. The ratio is at more than 50 per cent for the all years except 2010-11 and 2011-12. The investment policy of the company in fixed assets is consider to be sound.

6. UTILIZATION OF FIXED ASSETS

The third approach made to assess the efficiency of the management in terms of fixed assets management in the power distribution companies is the analysis of the efficiency in utilizing the fixed assets. This attempt is made to measure the efficiency with the help of some turn over ratios. These ratios express the relationship between sales and fixed assets and indicates the amount of sales generated per rupee of investment in fixed assets. Fixed assets turnover ratio lines and cable net work ratio and plant and machinery turnover ratio are used for this analysis.

6.1 Fixed Assets Turn Over Ratio

This ratio tells about the relationship between sales and fixed assets and it tells about how efficiently the fixed assets are used for generating sales or turnover. In other words, this ratio analyzes whether the fixed assets are efficiently used or not. On the other hand, it also studies whether the investment in fixed asset is made for the ultimate purpose of generating sales or not.

TABLE 4.7
Fixed Assets Turnover Ratio of
Southern Power Distribution Company of Andhra Pradesh Limited

Year	Sales (Rs. in Crores)	Fixed Assets (Rs. in Crores)	Ratio (times)
2007-2008	2999.87	2711.29	1.11
2008-2009	3170.87	3001.63	1.06
2009-2010	3759.12	3407.58	1.10
2010-2011	4888.18	3531.58	1.38
2011-2012	5972.36	3712.43	1.61
2012-2013	6535.12	4191.85	1.56
2013-2014	7327.45	4945.74	1.48
2014-2015	10923.89	7644.66	1.43
2015-2016	11910.75	9345.94	1.27
2016-2017	12731.28	9242.39	1.38
Average	7021.89	5173.51	1.36
CGR (%)	19.15	15.77	2.89
2019-2020 (Trend Value)	15770.36	11041.57	1.60

The ratio varies between the lowest of 1.06 times in 2008-09 and the highest of 1.61 times in 2011-12. The average of fixed assets turnover ratio stood at 1.36 times. It indicates that the fixed assets are not used satisfactorily. The compound growth rate for sales, fixed assets and fixed asset turnover are 19.15%, 15.77% and 2.89% respectively. The trend values for the period 2019-20 for worked at for the variables sales and fixed assets, which are Rs 15770.36 Crores and Rs 11.041.57 Crores respectively.

TABLE 4.8
Fixed Assets Turnover Ratio of
Eastern Power Distribution Company of Andhra Pradesh Limited

Year	Sales (Rs. in Cores)	Fixed Assets (Rs. in Cores)	Ratio (times)
2007-2008	2609.02	1438.23	1.81
2008-2009	2735.75	1626.29	1.68
2009-2010	2982.75	1726.07	1.73
2010-2011	3472.09	1791.17	1.94
2011-2012	3982.81	1926.22	2.07
2012-2013	4871.13	2230.20	2.18
2013-2014	6033.81	2568.93	2.35
2014-2015	7617.87	3138.73	2.43
2015-2016	8433.21	3944.99	2.14
2016-2017	8193.18	3482.39	2.35
Average	5093.17	2387.32	2.13
CGR (%)	16.17	11.78	3.94
2019-2020(Trend Value)	10633.56	4402.27	2.66

This ratio fluctuating trend during the study period. The ratio increased from 1.81 times in 2007-08 to 2.35 times in 2016-17. The average fixed asset turnover ratio for the study period stood at 2.13 per cent. The compound growth rate for fixed assets turnover ratio is 3.94 per cent.

6.2. Ratio of Sales to Lines & Cable Net Work

Among all the components of fixed assets Lines & Cable net work is the most important element. Being processing units both the companies are investing huge amount in Lines & Cable net work for distribution power and supply for quality power. In other words, it is a major component needing heavy investment of funds. The importance from analytical point of view is further increased as it is the technology that determines investment of funds there in distribution companies. In addition to this, investment depends upon the time of acquisition of assets. The assets acquired during inflation and monopolistic conditions need more investments whereas assets acquired during deflation and uncompetitive conditions generally cost less.

The Lines & Cable net work ratio increased from 133.52 times in 2007-18 to 243.61 time in 2016-17. The average sales and Lines & Cable net work stood at Rs 7021.89 Crores and Rs 3341.24 Crores during the study period. Compound growth rates for sales and Lines & Cable net work are 19.15 per cent and 10.11 per cent for the study period.

The sales to Lines & Cable net work of Eastern Distribution Company of Andhra Pradesh Limited for the study period from 2007-08 to 2016-17 is presented in Table 4.10. Increasing trend observed for study period. The average of sales and Lines & Cable net work stood at Rs 5093.17 Crores and Rs 1713.74 Crores during the study period. Couponed growth rates for sales and Lines & Cable net work are 16.17 per cent and 9.12 per cent for the study period. The trend values are Rs 2831.79 Crores and Rs 10633.56 Crores for lines and cable net work and sales for the period 2019-20.

6.3. Ratio of Sales to Plant and Machinery

The second most important components of fixed assets is plant and machinery. If it could be possible to find out how much investment was made in the different plants in the same industry in a particular period it would give a reasonable idea regarding modernity or otherwise of the machinery and techniques of power distribution.

The gross block of plant and machinery and sales increased year to year for the study period. Fluctuating trend was observed in the case of ratio of sales to plant and machinery during the study period. The average sales and gross block of plant and machinery stood at Rs 7021.89 Crores and Rs 3026.82 Crores during the study period. Couponed growth rates for sales and plant and machinery are 20.53 per cent and 19.15 per cent for the study period.

That the value of plant and machinery shows an increasing trend throughout the study period. It stood at Rs. 774.12 Crores during 2007-08 and it increased to Rs 2139.36 Crores during 2016-17. The company had invested heavy funds in plant and machinery every year. The sales are showing increasing trend throughout the study period. Similarly, ratio of sales to plant and machinery is also showing increasing trend throughout the study period. The average ratio of sales to plant and machinery for the entire study period stood at 370.85 per cent.

7. ADEQUACY OF DEPRECIATION

To measure the efficiency of the management in terms of utilization of fixed assets another approach which gives better idea is measuring the adequacy of the provision of depreciation. Depreciation means gradual reduction in the value of fixed assets due to their usage for a period of time. Generally, all the companies are making provision towards depreciation for replacement of an asset after completion of its life period. If any company fails to make an arrangement for replacement of an asset, it may become difficult to replace the fixed asset. Therefore, depreciation is provided on fixed assets either under fixed installment method or reducing balance method.

Table
Adequacy of Depreciation in two Power Distribution companies

Year	APSPDCL		APEPDCL	
	Gross block of fixed assets	Depreciation	Gross block of fixed assets	Depreciation
2007-2008	3586.51	1321.28	2059.44	819.23
2008-2009	3801.88	1549.22	2394.89	973.20
2009-2010	4538.73	1820.69	2648.11	1141.59
2010-2011	5329.99	2159.57	2854.53	1317.61
2011-2012	5659.97	2528.62	3126.72	1507.68
2012-2013	6064.69	2924.43	3760.81	2097.58
2013-2014	6561.41	3360.15	4022.37	1928.03
2014-2015	9578.78	4866.68	4351.55	2173.17
2015-2016	11450.83	5573.70	4852.77	2435.36
2016-2017	12659.53	6355.30	5476.34	3057.79

It can be noticed that the gross block of fixed assets and depreciation moved in the same direction and observed increasing trend. It can be inferred that the company is providing sufficient depreciation provision during the study period. Throughout the study period the trend of gross block of fixed asset and trend of depreciation provision are showing increasing trend.



8. CONCLUSION

Fixed assets are long term assets and assets of relatively permanent nature used in the operation of power distribution. They are obviously of crucial significance as the earnings of the firm are basically determined by them. The fixed assets and current assets are closely related as the earning power of the enterprise mainly depends on their proportion in the assets structure. Therefore, determining an optimum mixture of current and fixed assets into a profitable combination is a challenging problem to the management.

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BIOGRAPHIES

<p>Author Photo-1</p> 	<p>G. DAMODHAR, Ph.D Research Scholar, Gmail: damuvenu0@gmail.com Phone no:+91 9642454548, Department of commerce, Sri Venkateswara University, Tirupathi -517502, Andhra Pradesh, India.,</p>
<p>Author Photo-2</p> 	<p><i>Prof. B. Ramachandra Reddy,</i> Gmail: brreddysvu@gmail.com, <i>Department of commerce, Sri Venkateswara</i> <i>University, Tirupathi, -517502,</i> <i>Andhra Pradesh, India.,</i></p>