

1 Labour Productivity Analysis of Private Sector Enterprises in 2 Udaipur

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6

7 **Abstract**

8 Theory of ?"Productivity of Labour?" expounded labour productivity as one of the basic
9 indicators of economic development, the major detriment of national income and important
10 tool for analysis of economic and social problems. Labour productivity is the capital
11 utilization of human resources of a concern. Labour productivity measures efficiency of labour
12 force, which is directly related to savings in this item and since there has always been
13 widespread interest in labour saving, labour productivity has become more popular as well as
14 its importance and utility in the concern. This research paper is based on Labour Productivity
15 Analysis of private sector enterprises. The present study concludes that value generated in the
16 form of output (Productivity) of different private sector enterprises differs from each other.

17

18 **Index terms**— labour productivity.

19 **1 Introduction**

20 labour is the most important element, which contributes relevantly to production as well as productivity. The
21 reason to support this statement is that for procuring, producing as well as handling raw material, manpower
22 (labour) is required. Therefore, labour occupies a key role among all elements of costs. "Labour is the one key
23 factor, which can give unlimited productivity". 1 Therefore labour productivity can be defined as the contribution
24 made per labour to the operational activities of the business.

25 The economic advantage of increased production at lower unit costs, along with rising wage rates and increasing
26 fringe benefits, have accelerated the trend towards greater use of automatic equipment to produce more goods
27 in fewer labour hours. Changes in utilization of labour force require changes in methods of compensating
28 labour, followed by changes in accounting for labour costs. Labour costs are all labour expended in altering
29 the construction, composition, conformation or condition of the product. The wages paid to skilled and unskilled
30 labour can be allocated specifically to the particular cost accounts concerned, hence the term 'Direct Wages',
31 which may be defined as the measure of Direct Labour in terms of money. 2 "Reduction in costs is one of the chief
32 objectives of the production manager, and much guidance to this end may be secured from a suitably organized
33 costing system." 3 Sir Ewart Smith and R. Beeching have defined labour productivity as the volume of output
34 achieved in a given period in relation to the sum of the direct and indirect efforts involved in the production of
35 the given output.

36 **2 L**

37 Following measures are suggested for analyzing labour productivity:

38 1.

39 With the help of this formula, production made per unit of labour is ascertained. Using this ratio, we can
40 calculate the quantity of production contributed by one labour.

41 3 2.

42 (Here, Output = Sales + Closing Stock -Opening Stock) This ratio finds out the value of production per employee.
43 Higher the ratio, better it is for the concern.

44 4 3.

45 This formula finds out worth of a Rupee spent on employees. It calculates value of production in (Rs.) contributed
46 by the employees, i.e. Value generated by Re. 1 spent towards employees. It calculates the value of output (Rs.)
47 generated by spending Re. 1 as wages. This ratio shows the percentage of wages to the value of production.
48 Lower the percentage, better it is, for the concern.

49 5 4.

50 This ratio of profit to total employees calculates the earning per employee.

51 6 II.

52 7 Review of Literature

53 Research work has been done on Productivity but not much research is available on Labour Productivity. Thus
54 an attempt has been made to analyse the Labour Productivity of Private Enterprise.

55 8 III.

56 9 Objective

57 To analyse the labour productivity of selected private sector enterprises.

58 NULL HYPOTHESIS (H 0): There is no significant difference in the labour productivity of different private
59 sector enterprises.

60 10 VII.

61 11 Analysis and Discussion

62 12 Authors own source

63 Table 1 shows the value of output to total employees in Units i.e. Metric Tonne. HZL shows a mixed trend; its
64 value of output to total employees decreased in two consecutive years and then it increased in 2015-16 and in
65 2016-17, with the average mean of 32.754 Metric Tonne. RZ also showed the decreasing trend in the beginning
66 of the study period and then showed a vast increase of 23.06% in 2014-15 and 9.23% in 2016-17. Binani Cement
67 showed the increasing trend except for the year 2016-17 where Labour Productivity Analysis of Private Sector
68 Enterprises in Udaipur Review 1: Productivity Measurement Evaluation and Improvement (Verter, V & Mebmet,
69 A.E.). The authors case study based on production system gave promising results in terms of effectiveness of the
70 measurement models. Review 2: "Measurers of Productivity" (Mundel, ME). In this paper author emphasized
71 that profitability increase based on productivity improvements are much reliable in the long run than the ones
72 motivated by just increasing the output prices.

73 13 ALTERNATIVE HYPOTHESIS (H 1):

74 There is a significant difference in the labour productivity of different private sector enterprises.

75 14 IV.

76 15 Sample Collection

77 A sample of four companies' viz. Hindustan Zinc Limited (HZL), Rose Zinc Limited (RZ), Binani Cement
78 Limited and Pyrotech Private Limited (PEPL) are chosen for the present study. The study sample was collected
79 on convenience basis. The required data for sample units have been collected from the published financial reports
80 and the company websites.

81 V.

82 16 Period

83 A period of 5 years from 2012-13 to 2016-17 was considered for the purpose of analyzing the labour productivity
84 of the companies. output to total employees decreased by 5.31%. PEPL showed the continuous increasing trend
85 throughout the study period with the minimum coefficient of variation, which shows consistent value of output
86 to total employees. Further the trend was analyzed through t-Test in later part of the paper. Table 2 depicts the
87 value of output to total employees in money value (Rupees). Binani Cement showed a continuous increase in the
88 output value generated by employees with the average mean of Rs. 3,94,036.60. HZL also showed a continuous

89 increase in money generating efforts by increasing output except for the year 2013-14 where it's value of output
90 to total employees reduced by Rs. 42,314 (5.89%). In the case of RZ a substantial increase in the year 2014-15 by
91 7.82% was consistently followed by increase during the study period. PEPL showed slow growth in the first three
92 years followed by an increase of 6.24% in value of output to total employees in the fourth year, but decreased in
93 the fifth year by 11.76%. Later, the trends were put through the t-Test.

94 **17 VI.**

95 **18 Research and Methodology**

96 **19 Authors own source**

97 The ratio of value of output to total wages and salaries paid to employees in Rupees is illustrated in Table 3.
98 HZL showed almost steady trend but in 2015-16 its value jumped up with an increase of 20.26%. RZ had a
99 decreasing trend in the initial three year sample years, increased for the subsequent year then again decreased.
100 Binani Cement also showed a fluctuating trend, with a mean of Rs. 9.432. PEPL however, showed an increasing
101 trend, though the value of output reduced to Rs. 19.71 in the year 2015-16 but in the year 2016-17 it went up
102 by 42.05%. PEPL showed the highest average of Rs. 22.132. The mix trend of value generated by employees
103 in terms of wages and salaries paid was analyzed by t-Test. Table 4 shows the value added to total employees
104 in Rupees. Binani Cement showed increasing values for continuous five years which is a good sign of labour
105 productivity of the company. HZL had a mix trend with the highest value generated in the year 2015-16 (Rs.
106 5,22,663). RZ value declined in the year 2013-14 but then it showed a growth for two years then further declined
107 slightly in the year 2016-17. RZ showed the highest mean value of Rs. 8,08,539.60. PEPL had a major decline of
108 value in the year 2014-15 by 44.99% and in the year 2016-17 by 52.02%, which shows the poor labour productivity
109 of the company. Trends were analyzed by t-Test.

110 **20 Conclusion**

111 The overall analysis of Labour Productivity on the basis of different variables conclude that value generated in
112 the form of output is not significant in the different private sector enterprises in terms of units and value added
113 by the employees but labour productivity in terms of wages and salaries significantly differs in private sector
enterprises.

1

| Years | Hindustan Zinc Ltd | Rose Zinc | Binani Cement | PEPL(in units) |
|---------|--------------------|-----------|---------------|----------------|
| 2012-13 | 32.33 | 64.66 | 851.31 | 98 |
| 2013-14 | 30.16 | 60.32 | 1267 | 108 |
| 2014-15 | 28.32 | 56.67 | 1413.98 | 115 |
| 2015-16 | 34.87 | 69.74 | 1338.84 | 117 |
| 2016-17 | 38.09 | 76.18 | 1695.73 | 126 |
| Mean | 32.754 | 65.514 | 1313.372 | 112.8 |
| SD | 3.45 | 6.893 | 272.991 | 9.368 |
| CV | 10.53% | 10.52% | 20.79% | 8.31% |

Figure 1: Table 1 :

20 CONCLUSION

2

| Years | Hindustan Zinc Ltd | Rose Zinc | Binani Cement | PEPL |
|---------|--------------------|------------|---------------|--------------------|
| 2012-13 | 717557 | 1435114 | 721112 | 381575 |
| 2013-14 | 675243 | 1350486 | 881971 | 396410 |
| 2014-15 | 732554 | 1465108 | 891364 | 397399 |
| 2015-16 | 1057984 | 2115974 | 1022627 | 422236 |
| 2016-17 | 1098658 | 2197316 | 1281682 | 372563 |
| Mean | 856399.2 | 1712799.6 | 959751.2 | 394036.6 |
| SD | 182624.268 | 365249.861 | 187226.089 | 16902.97 |
| CV | 21.33% | 21.33% | 19.51% | 4.29% |
| | | | | Authors own source |

Figure 2: Table 2 :

3

| Years | Hindustan Zinc Ltd | Rose Zinc | Binani Cement | PEPL |
|---------|--------------------|-----------|---------------|--------|
| 2012-13 | 7.31 | 14.62 | 9.58 | 19 |
| 2013-14 | 6.53 | 13.06 | 10.76 | 20.1 |
| 2014-15 | 6.07 | 12.14 | 8.89 | 23.85 |
| 2015-16 | 7.3 | 14.6 | 8.7 | 19.71 |
| 2016-17 | 6.43 | 12.86 | 9.23 | 28 |
| Mean | 6.728 | 13.456 | 9.432 | 22.132 |
| SD | 0.495 | 0.991 | 0.729 | 3.382 |
| CV | 7.36% | 7.36% | 7.73% | 15.28% |

Figure 3: Table 3 :

4

| Years | Hindustan Zinc Ltd | Rose Zinc | Binani Cement | PEPL |
|---------|--------------------|-----------|---------------|-------|
| 2012-13 | 353666 | 707332 | 175000 | 38121 |
| 2013-14 | 304185 | 608370 | 223000 | 39110 |
| 2014-15 | 323065 | 646130 | 234963 | 21511 |
| 2015-16 | 522663 | 1045326 | 243978 | 39112 |

Figure 4: Table 4 :

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Figure 5: Table 5 :

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