

## Gross Profit Ratio (A Comparative Study of Selected Public and Private Sector Companies)

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**Abstract:** The Gross Profit Ratio Is Also Known As Gross Margin Ratio, Trading Margin Ratio Etc. It Is Expressed As A 'Per Cent Ratio ".The Difference between Net Sales and Cost of Goods Sold Is Known As Gross Profit .Gross Profit Is Highly Significant. The Earning Capacity Of The Business Can Be AscertainedByTakingTheMarginBetweenCostOfGoodsSoldAndSales.ItIsVeryUsefulAsATestOfProfitabilityAnd Management Of Efficiency. It Is Generally Contended That The Margin Of Gross Profit Should Be Sufficient Enough To Recover All Operating Expenses And Other Expenses And Other Expenses And Also Leave Adequate Amount As Net ProfitInRelationToSalesAndOwner'sEquity.

**Keywords:** Gross Profit Ratio, Business Operations, Fluctuations, Consistency.

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### I. Meaning And Concept Of Gross Profit Ratio

The Gross Profit Ratio Indicates That The Proportion Of Profits Generated By The Sale Of Products Or Services, Before Selling And Administrative Expenses. To Create Saleable Products In A Cost-Effective Manner The Gross Profit Ratio Is Used To Examine The Ability Of A Business.

The Gross Margin Ratio Can Be Measured By Combine The Costs Of Direct Material, Direct Labor, And Overhead, Subtract Them From Sales, And Divide The Result By Sales.

Gross Profit Margin Is A Way To Check A Firm's Financial Health Revealing The Proportion Of Money Left Over From Revenues After Accounting For The Cost Of Goods Sold. Gross ProfitMargin Works As The Source For Paying Administrative Expenses And Future Savings.

In Other Words Gross Profit Margin Is A Profitability Ratio That Measures How Much Of Every Rupees Of Revenues Is Left Over After Paying Cost Of Goods Sold (COGS).

### Hypothesis oftheStudy:

The Present Study Is Based On The Null Hypothesis I.E. There Is No Significant Difference In The Operating Profit Ratio Of The Companies Under Study.

### Methodology oftheStudy:

To Conduct The Present Study Secondary Data Have Been Used. All The Figures Have Been Collected From Published Annual Reports And Accounts. For This Purpose Three Companies of Public Sector And Three Companies Of Private Sector Have Been Taken. The Companies Of Public Sector Are Bharat Heavy Electricals Limited (BHEL), Steel Authority Of India Limited (SAIL), And Shipping Corporation Of India(SCI). The Companies Of Private Sector Are Larsen And Toubro(L&T),Tata Iron And Steel Company Limited(TISCO)And Essar Shipping Ports And Logistics Limited(ESPLL). TheFiguresHaveBeen Redrafted In The Form Of 'Common –Size Income Statement' Which Has Been Used To Analyze The Gross Profit Ratio. Analysis Has Been Made By Using The Technique Of Ratio Analysis And Hypothes is has been Tested By Applying Two Way Analysis Of F Test.

### Analysis ofGross Profit Ratio:

TheGrossProfitRatioInPresentStudyHasBeenCalculatedBy UsingTheFollowingFormula-

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$$

Net Sales Means Gross Sales(Both Cash And Credit)Minus Sales Returns .Normally, The Gross Profit Ratio Should Remain The Same From Year To Year, Because Cost Of Sales Will Normally Vary Directly And In The SameProportionWithSales.HigherRatioIsBetter.The Management Should Try To Detect The Causes Of

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Falling Gross Margin And Initiate Action To Improve The Situation. A Ratio Of 25% To 30% May Be Considered Good.

**Table 1 Gross Profit Ratio Of The Selected Companies Under Study (From 2005-06 To 2009-10) (Ratio In Percentage)**

YEAR	BHEL	SAIL	SCI	L&T	TISCO	ESPLL
2005-06	16.22	22.40	27.58	14.05	34.06	31.51
2006-07	17.09	27.68	18.76	14.81	35.06	31.18
2007-08	15.40	28.28	17.37	16.04	37.52	19.15
2008-09	13.35	22.59	19.72	15.21	33.56	19.78
2009-10	9.88	24.89	3.22	14.90	31.45	27.41
Average	14.39	25.17	17.33	15.00	34.33	25.81
S.D.	2.57	2.46	7.90	0.64	1.98	5.38
C.V.(%)	17.87	9.79	45.59	4.30	5.78	20.84

Source: Annual Reports & Accounts Of The Companies Under Study For The Period From 2005-06 To 2009-10.

From The Table 1 It Can Be Observed That The BHEL, During 2005-06, Gross Profit Ratio Was 16.22 Percent Increased To 17.09 Percent But Then After It Showed A Decreasing Trend And Came Down To 9.88 Percent In 2009-10. It Can Be Noted From The Table 2 That The Gross Profit Ratio In Steel Authority Of India Ltd. Showed A Fluctuating Trend During The Whole Period Of Study. Initially During 2005-06, The Gross Profit Ratio Was 22.04 Percent Increased To 27.68 Percent And Further To 28.28 Percent In 2007-08. This Ratio Decreased To 22.59 Percent During The Year 2008-09 Because Of A Reduction In Gross Profit Though The Sales Had Increased In This Year. During 2009-10 The Gross Profit Ratio Increased To 24.89 Percent. The Table 2 Shows That The Gross Profit Ratio In Shipping Corporation Of India Ltd. Was Not Consistent During The Whole Period Of Study Rather It Showed A Decreasing Trend Except In The Year 2008-09. During 2005-06 The Gross Profit Ratio In SCI Was 27.58 Percent Decreased To 18.76 Percent In 2006-07 And Further Decreased To 17.37 Percent In 2007-08. This Ratio Marginally Increased To 19.27 Percent During 2008-09 But Abnormally Decreased To 3.22 Percent During 2009-10.

It Can Be Noted From The Table 2 That The Gross Profit Ratio In L&T Showed An Increasing Cum Decreasing Trend During The Period Of Study. Initially In 2005-06, The Gross Profit Ratio Was 14.05 Percent Increased To 14.81 Percent In 2006-07 And Further To 16.04 Percent In 2007-08. This Ratio Decreased To 15.21 Percent In 2008-09 And Further To 14.90 Percent In 2009-10. The Gross Profit Ratio In TISCO Showed An Increasing Cum Decreasing Trend During The Period Of Study. During 2005-06, The Gross Profit Ratio Which Was 34.06 Percent Increased To 37.52 Percent In 2007-08. But After This It Kept On Decreasing And Decreased To 31.45 Percent In 2009-10. For Essar Shipping Ports & Logistics Limited, During 2005-06, The Gross Profit Ratio Was 31.51 Percent Decreased To 31.18 Percent In 2006-07. This Ratio Unexpectedly Decreased To 19.15 Percent In 2007-08. The Gross Profit Ratio Increased To 19.78 Percent In 2008-09 And Further To 27.41 Percent In 2009-10.

**Test of Significance (F-Test):** To Test The Significance Of Operating Profit Ratio Of The Companies Under Study F Test Has Been Applied And Following Hypotheses Has Been Tested

- (i) **Null Hypothesis (Ho)** : There Is No Significant Difference In The Operating Profit Ratio Of The Companies Under Study. (Inter Company)
- (ii) **Null Hypothesis (Ho)** : There Is No Significant Difference In The Year-Wise Operating Profit Ratio Of The Companies Under Study. (Intra Company)

**Table 2 Anova Table**

Source	Sum	Degree Of Freedom (D.F.)	Variance (Sum/D.F)	F Ratio
Between Companies (SSC)	1526.37	(C-1)=(6-1)=5	305.27	<b>F=15.09</b>
Within Years (SSR)	137.18	(R-1)=(5-1)=4	34.30	<b>F=1.70 (Within Years)</b>
Error	404.54	(C-1)(R-1)=20	20.23	

**(I) F Test between the Companies**

$$F = \frac{\text{Higher Variance}}{\text{Smaller Variance}}$$

$$F = \frac{305.27}{20.23} = 15.09$$

Critical Value of F At 5 Percent Level Of Significance (V1 = 5 And V2 = 20) Is 2.71

**Decision:** Since The Calculated Value Of F Is More Than The Critical Value Of F At 5 Percent Level Of Significance, Therefore The Null Hypothesis Is Rejected And It Is Concluded That The Difference In The Operating Profit Ratio Of The Companies Under Study Is Significant.

**(ii) F Test within the Companies**

$$F = \frac{\text{Higher Variance}}{\text{Smaller Variance}}$$

$$F = \frac{34.30}{20.23} = 1.70$$

Critical Value of F At 5 Percent Level Of Significance ( $V_1 = 20$  And  $V_2 = 4$ ) Is 5.80

**Decision:**

Since The Calculated Value Of F Is Less Than The Critical Value Of F At 5 Percent Level Of Significance, Therefore The Null Hypothesis Is Accepted And It Is Concluded That The Intra Company Difference In The Operating Profit Ratio Of The Companies Under Study Is Not Significant.

## II. Conclusion

In The Above Table Shows the Inter Firm Comparison Of The Companies For Gross Profit. It Can Be Noted From The Above Table That The Average Gross Profit Ratio In TISCO Was Highest Above All The Companies Under Study Because The Average Rate Of Gross Profit Was 34.33 Percent Followed By ESPLL, SAIL, SCI, L&T And BHEL. The Fluctuations Were Highest In SCI Followed By ESPLL And BHEL. For The Other Companies Namely SAIL, TISCO And L&T The Fluctuations Were Kept Under Control. The Management Of SCI, ESPLL And BHEL Should Try To Control The Fluctuations In Gross Profit Ratio By Bringing Consistency In Gross Profit Ratio.

Among Public Sector Companies The Gross Profit Ratio Of SAIL Was Highest In Comparison To BHEL And SCI. On The Other Hand Among Private Sector Companies TISCO And ESPLL Were Better Placed As For As Gross Profit Ratio Is Concerned.

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