# AN ANALYSIS OF EXPENSES PERFORMANCE OF THE POWER CORPORATIONS OF HARYANA: 2001-2010

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**Abstract** *Haryana State Electricity Board's (HSEB) total expenses were rising year after year. Till 1998, after reforms, total expense-performance ratio of four corporations is not good. It required lot of improvement because rising and higher total expense performance ratio led to a situation of loss and new structure is immideately required for the power sector of Haryana.*

**Keywords:** *corporations, expenses, high, improvement, reforms, rising*

## INTRODUCTION

Haryana state electricity board was constituted on 3 May 1967 under Section 5(1) of the Electricity Supply Act, 1948[1]. The Board was responsible for generation, transmission and distribution of power in the State. Haryana State Electricity Board (HSEB) had the overall responsibility for the power sector in Haryana. In 1998, Haryana State Electricity Board (HSEB) was unbundled into four separate corporations, Haryana Power Generation Corporation Limited (HPGCL) for generation of power and Haryana Vidut Prasaran Nigam Limited (HVPNL) for conduct of transmission and supply of electricity business in the State. Uttri Haryana Bijli Vitran Nigam Limited (UHBVNL) and Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) for statewise distribution. Before reforma, expenditure is shown with the help of table 1 and graph-1 given below. This shows that expenditure was rising year after year. This rising trend shows that revenues were required for smooth running of the corporations. But annual reports of Haryana State Electricity Board (HSEB) states that revenue were not rising by this speed. In 1994-95 total revenue was 14597.00 rupees million. In 1998-99 total revenue was increased upto 24397.02 rupees million[2].

**Table 1:**

| HSEB/HVPNL | Total expenditure |
|---|---|
| 1994-95 | 14979.6 |
| 1995-96 | 19234.21 |
| 1996-97 | 22104.5 |
| 1997-98 | 26357.38 |
| 1998-1999 | 28142.28 |
| 1999-2000 | 32976.32 |

**Source:** Annual reports of Haryana state electricity boards,1994 -2000

So ultimately there was a situation of loss and new structure was required for power sector Haryana.

**Table 2:**

| HSEB/HVPNL | commercial gain / loss |
|---|---|
| 1994-95 | 161.5 |
| 1995-96 | 782.08 |
| 1996-97 | 477.55 |
| 1997-98 | 196.68 |
| 1998-1999 | -2930.07 |
| 1999-2000 | -6220.78 |

**Source:** Annual reports of Haryana state electricity boards,1994 -2000

The present study analysis the situation of power sector after dividing into four entities. And also tries to solve the problem of rising expenses can be solved.

## Research Methodology

## Hypotheses of the Empirical Research

**$H_{01}$** The expenses performance of the power corporation does do not change for the period under consideration.

## FINANCIAL RATIO :

$$\text{Total Expenses} = \frac{\text{Total Expenses of the power unit}}{\text{Total Income of the unit}}$$

To analysis the total Expenses Performance (ETR) of the four corporations of power sector

1 *www.cercind.gov.in/ElectSupplyAct1948**.pdf***

2 Annual reports of Haryana state electricity boards,1994-95 & 1998-99

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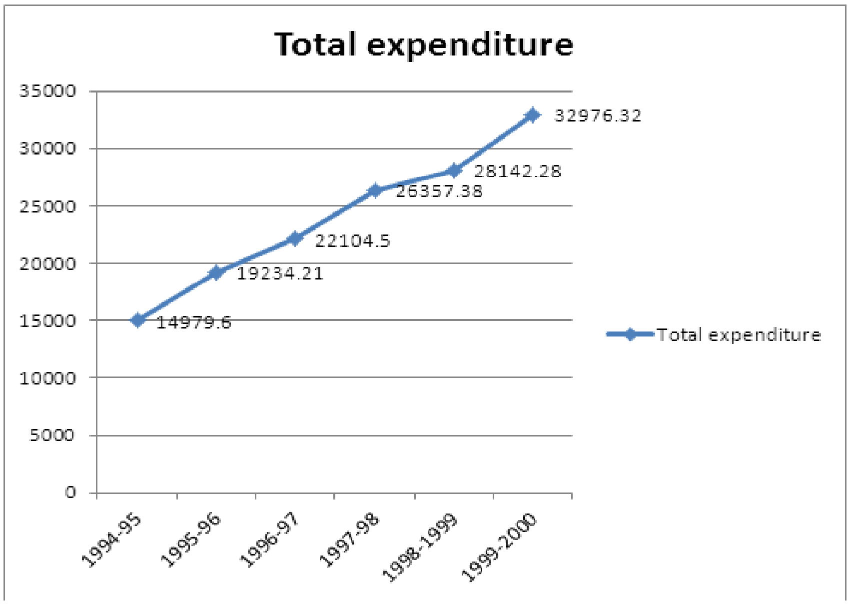
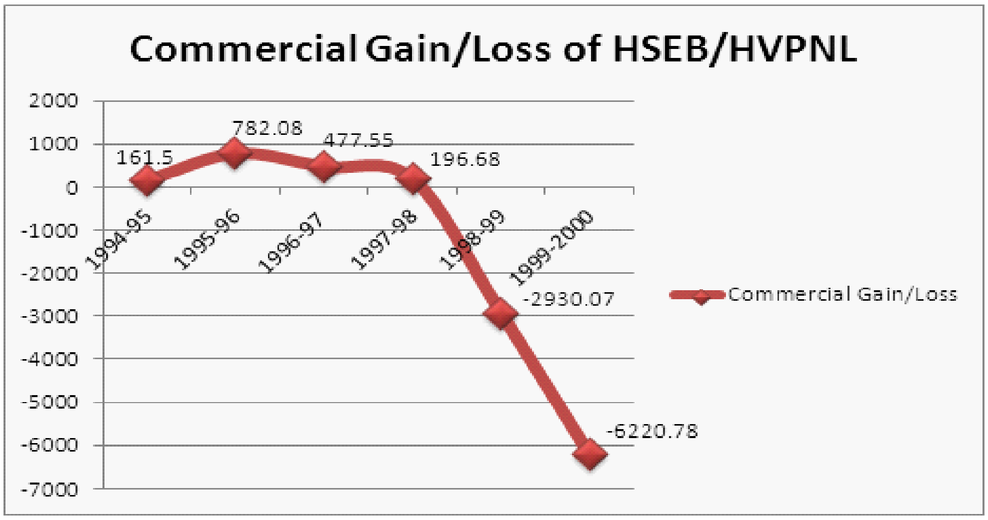
**Graph-1**




**Source:** Annual reports of Haryana state electricity boards, 1994 -2000

**Graph-2**




**Source:** Annual reports of Haryana state electricity boards, 1994 -2000

| Sr. No. | Name of Haryana Power Unit | Period for study |
|---|---|---|
| 1 | Dakshin Haryana Bijli Vitram Nigam Limited | 2001 to 2010 |
| 2 | Uttar Haryana Bijli Vitran Nigam Limited | 2001 to 2010 |
| 3 | Haryana Power Generation Corporation Limited | 2001 to 2010 |
| 4 | Haryana Vidyut Prasaran Nigam Limited | 2001 to 2010 |

The present study used one sample t test as the statistical tools for getting the empirical results.

The ratios under consideration are compared to power sector average ratio to find the significant value by employed t-test at 5 % level of significance. The power sector average is calculated as follow:

$$\text{Sector Average} = \frac{X_1 + X_2 + \ldots\ldots\ldots\ldots + X_n}{\text{No. of Power Units}}$$

## Total Expenses Performance (ETR)

Total expense ratio is the ratio between total fund costs and total fund assets. The Total Expense Ratio helps in measuring the fund's assets which are sold or used to manage the expenses relating to the fund.

A high Total Expense Ratio does not mean that the investment made in the company is a bad one. It should be taken as a negative only if the funds have higher expense incurred. A high Total Expense ratio is not always a good performance in the market either. It allows the investors to compare the cost to the companies.

**Table 3:** Total Expenses Performance (ETR) of Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) from 2001 to 2010

**(In ₹ crore)**

| Year | Total Expenses | Net Income | ETR |
|---|---|---|---|
| 2001 | 1767.57 | 1575.87 | 1.12 |
| 2002 | 1823.47 | 1771.35 | 1.03 |
| 2003 | 1895.00 | 1948.09 | 0.97 |
| 2004 | 2081.99 | 2125.13 | 0.98 |
| 2005 | 2488.52 | 2288.07 | 1.09 |
| 2006 | 2560.61 | 2588.78 | 0.99 |
| 2007 | 3181.76 | 3082.32 | 1.03 |
| 2008 | 4153.38 | 3869.00 | 1.07 |
| 2009 | 4899.54 | 4634.29 | 1.06 |
| 2010 | 5979.26 | 5263.94 | 1.14 |
| Average | 3083.11 | 2914.68 | 1.05 |

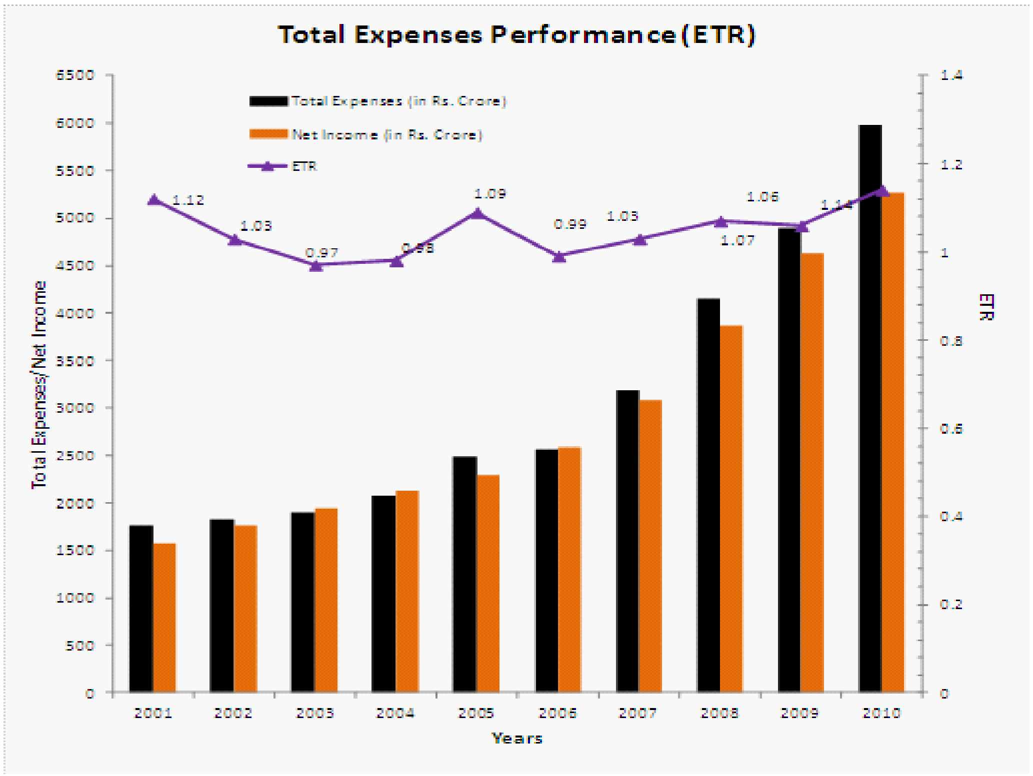
The total expense ratio differs from one fund to another. The total expense ratio (ETR) is a measure of the total cost of a fund to the investor. Total costs may include various fees (purchase, redemption, auditing) and other expenses. The total expense ratio (ETR) of a corporation is calculated by dividing the total expenses by net income.

## One-Sample Test

| | Test Value = 0.96 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| ETR | 4.760 | 9 | .001 | .08800 | .0462 | .1298 |

The total expenses performance of the power corporation is shown by table 3. The increasing trend is recorded in total expenses from 2001 to 2010. The highest total expenses of the corporation is ₹ 5979.26 crore in 2010 whereas the lowest total expenses of the corporation is ₹ 1767.57 crore for 2001. The average amount for total expenses of the Nigam is ₹3083.11 crore for the period under reference for the study. The highest net income of the corporation is

**Graph : 3**



₹ 5263.94 crore whereas the lowest income of the Nigam is ₹ 1575.87 crore. The fluctuating trend is observed in net income of the Nigam from 2001 to 2010. The average income of the Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) is ₹ 2914.68 crore which is more as compared to the net income of 2001 to 2010. (The industry ETR is 0.96) The expenses turnover ratio (ETR) of the Nigam for 2001 is 1.12 whereas 1.03 is for 2002. The ETR for 2003, 2004 and 2006 is 0.97, 0.98 and 0.99 respectively which is less than one but near to one. During other years, the ETR is more than one which means that the expenses are more than its income which is not a good indication of the performance. Therefore the corporation earned loss in maximum year under consideration. The t value at two-tailed test is t = 4.76 at df = 9 which is significant at 5 percent and even 1 % level of risk as calculated through SPSS.

**Table: 4** Total Expenses Performance (ETR) of Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) from 2001 to 2010

**(In ₹ crore)**

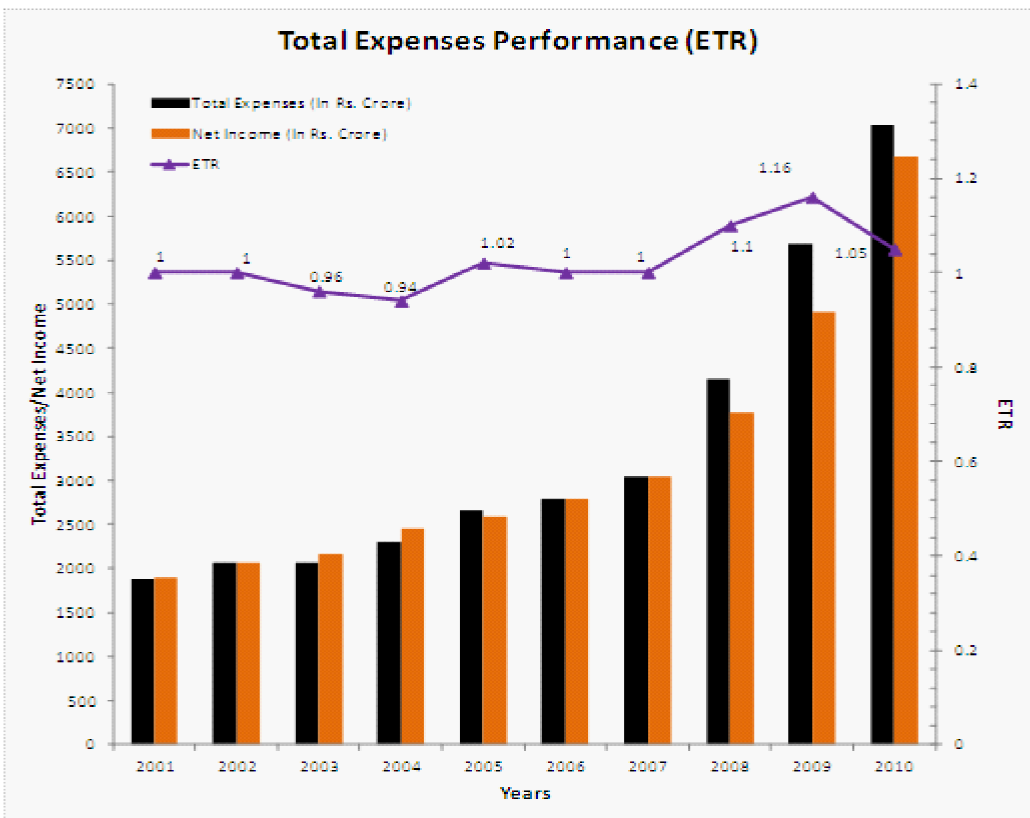
| Year | Total Expenses | Net Income | ETR |
|---|---|---|---|
| 2001 | 1890.20 | 1898.85 | 1.00 |
| 2002 | 2074.89 | 2070.13 | 1.00 |
| 2003 | 2074.10 | 2166.42 | 0.96 |
| 2004 | 2306.88 | 2455.08 | 0.94 |
| 2005 | 2658.94 | 2597.40 | 1.02 |
| 2006 | 2789.59 | 2789.59 | 1.00 |
| 2007 | 3051.44 | 3051.44 | 1.00 |
| 2008 | 4152.14 | 3762.24 | 1.10 |
| 2009 | 5678.07 | 4913.56 | 1.16 |
| 2010 | 7037.94 | 6678.22 | 1.05 |
| **Average** | **3371.42** | **3238.29** | **1.02** |

**One-Sample Test**

| | Test Value = 0.96 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference Lower | Upper |
| ETR | 3.050 | 9 | .014 | .06300 | .0163 | .1097 |

The total expenses performance of the power corporation is shown by table : 16. The fluctuating trend is recorded in total expenses from 2001 to 2010. The highest total expenses of the corporation is ₹ 7037.94 crore whereas the lowest total

**Graph : 4**



expenses of the corporation is ₹ 1890.20 crore for 2001. The average amount for total expenses of the Nigam is ₹ 3371.42 crore for the period under reference for the study. The highest net income of the corporation is ₹ 6678.22 crore whereas the lowest income of the Nigam is ₹ 1898.85 crore. The increasing trend is observed in net income of the Nigam from 2001 to 2010. The average income of the Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) is ₹ 3238.29 crore which is more as compared to the net income of 2008, 2009 and 2010. The ETR for 2003 and 2004 is 0.96 and 0.94 respectively which are less than one but near to one. All the other years the ETR is more than one which means that the expenses are more than its income which is not a good indication of the performance. Therefore the corporation earned loss in maximum year under study. The t value at two-tailed test is t = 3.050 at df = 9 which is also significant at 1 % level of risk as calculated through SPSS. The nigam should initiate such steps as to cut its expenses to a noble extent to improve its financial position.

**Table : 5** Total Expenses Performance (ETR) of Haryana Power Generation Corporation Limited (HPGCL) from 2001 to 2010

**(In ₹ crore)**

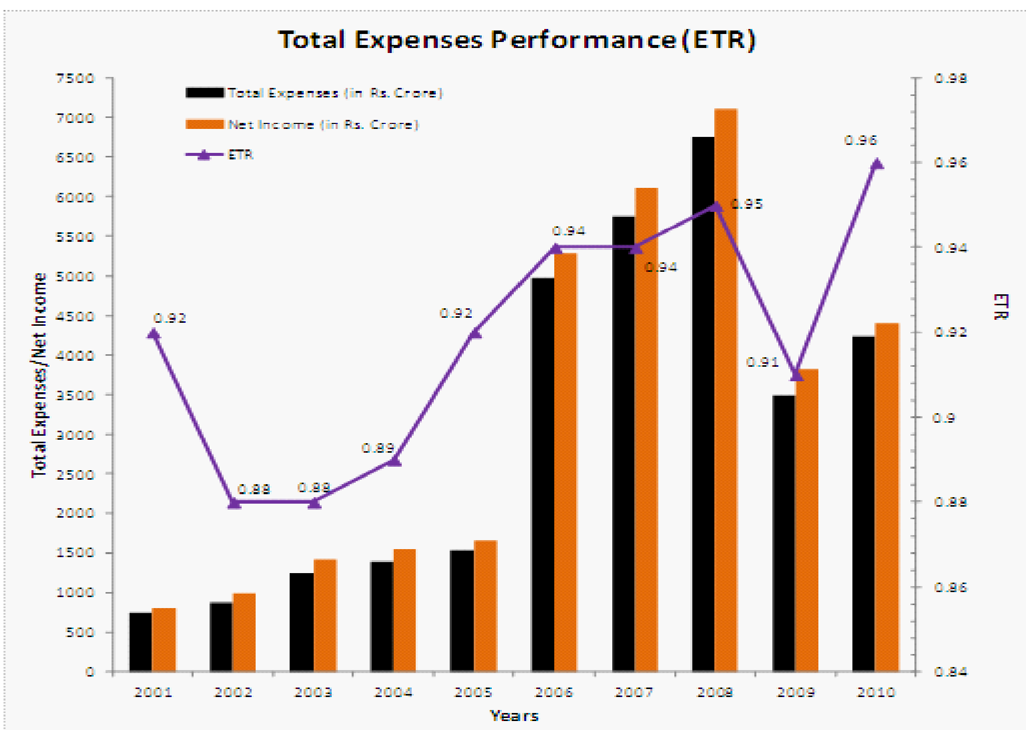
| Year | Total Expenses | Net Income | ETR |
|---|---|---|---|
| 2001 | 742.04 | 808.30 | 0.92 |
| 2002 | 868.93 | 986.64 | 0.88 |
| 2003 | 1241.27 | 1411.20 | 0.88 |
| 2004 | 1383.44 | 1548.60 | 0.89 |
| 2005 | 1523.24 | 1654.41 | 0.92 |
| 2006 | 4977.66 | 5286.60 | 0.94 |
| 2007 | 5756.49 | 6108.08 | 0.94 |
| 2008 | 6750.62 | 7110.22 | 0.95 |
| 2009 | 3492.13 | 3821.73 | 0.91 |
| 2010 | 4230.82 | 4404.10 | 0.96 |
| **Average** | **3096.66** | **3313.99** | **0.92** |

### One-Sample Test

| | Test Value = 0.96 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| ETR | -4.494 | 9 | .002 | -.04100 | -.0616 | -.0204 |

The total expenses performance (ETR) of Haryana Power Generation Corporation Limited (HPGCL) is shown by table 5 from 2001 to 2010. The fluctuating trend is observed in total expenses of the power corporation. The highest amount of total expenses is ₹ 6750.62 crore for 2008 whereas the lowest amount of total expenses is ₹ 742.04 crore for 2001.

**Graph :5**



The average amount of total expenses is ₹ 3096.66 crore which is less as compared to the amount of 2010 (₹ 4230.82 crore). The increasing trend is observed in net income of the corporation from 2001 to 2008. The net income of the unit for 2009 and 2010 is ₹ 3821.73 crore and ₹ 4404.10 crore respectively. The average net income of the power corporation is ₹ 3313.99 crore which is less as compared to the net income of 2010 (₹ 4404.10 crore). The fluctuating trend is observed in ETR of the unit from 2001 to 2010. The highest ETR is 0.96 for 2010 whereas the lowest ETR is 0.88 for 2003. The average ETR of the corporation is 0.92 which is less as compared to the ETR of 2010 (0.96). The t value of the ETR is t = -4.494 at df = 9 and significant at 1% level of risk. Thus, it can be said that there is significant change recorded in ETR of the corporation from 2001 to 2010.

**Table 6:** Total Expenses Performance (ETR) of Haryana Vidut Prasaran Nigam Limited (HVPNL) from 2001 to 2010

**(In ₹ crore)**

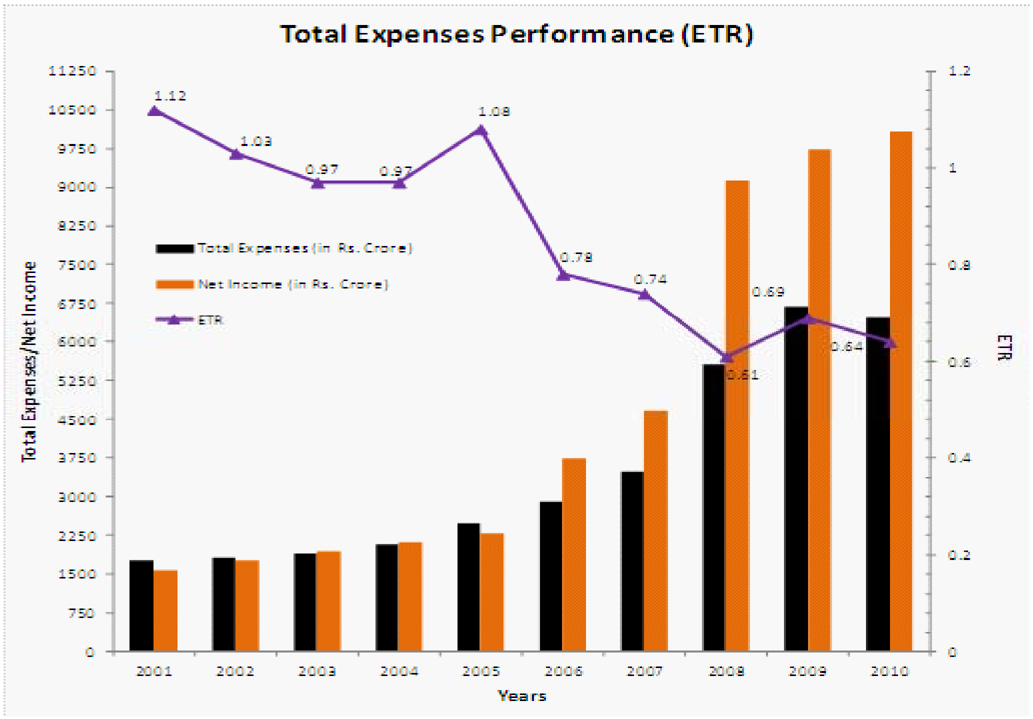
| Year | Total Expenses | Net Income | ETR |
|---|---|---|---|
| 2001 | 1765.33 | 1575.87 | 1.12 |
| 2002 | 1823.47 | 1771.35 | 1.03 |
| 2003 | 1895.00 | 1948.09 | 0.97 |
| 2004 | 2069.16 | 2125.13 | 0.97 |
| 2005 | 2474.79 | 2288.07 | 1.08 |
| 2006 | 2913.14 | 3756.12 | 0.78 |
| 2007 | 3479.61 | 4678.67 | 0.74 |
| 2008 | 5564.33 | 9121.87 | 0.61 |
| 2009 | 6676.30 | 9728.90 | 0.69 |
| 2010 | 6466.56 | 10069.30 | 0.64 |
| **Average** | **3512.77** | **4706.34** | **0.86** |

**One-Sample Test**

| | Test Value = 0.96 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference Lower | Upper |
| ETR | -1.603 | 9 | .143 | -.09700 | -.2339 | .0399 |

The total expenses performance (ETR) of HPVNL is shown by table 6 from 2001 to 2010. The fluctuating trend is observed in total expenses of the power corporation. The highest amount of total expenses is ₹ 6676.30 crore for 2009 whereas the lowest amount of total expenses is ₹ 1765.33 crore for 2001. The average amount of total expenses is ₹ 3512.77 crore which is less as compared to the amount of 2010 (₹ 6466.56 crore). The increasing trend is observed in net income of the power corporation. The highest amount of net income is ₹ 10069.30 crore for 2010 whereas the lowest net income of the corporation is ₹ 1575.87 crore for 2001. The average net income of the power corporation is ` 4706.34 crore which is less as compared to the net income of 2010

**Graph : 6**



(₹ 10069.30 crore). The fluctuating trend is observed in ETR of the unit from 2001 to 2010. The highest ETR is 1.12 for 2001 whereas the lowest ETR is 0.61 for 2008. The average ETR of the corporation is 0.86 which is more as compared to the ETR of 2010 (0.64). The t value of the ETR is (t = - 1.603) at df = 9 and not significant at any level of risk. Thus, it can be said that there is no significant change recorded in ETR of the Corporation from 2001 to 2010.

**Table 7:** Total Expenses Performance of Haryana Power Corporations

| Year | Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) | Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) | Haryana Power Generation Corporation Limited (HPGCL) | Haryana Vidut Prasaran Nigam Limited (HVPNL) |
|---|---|---|---|---|
| 2001 | 1.12 | 1.00 | 0.92 | 1.12 |
| 2002 | 1.03 | 1.00 | 0.88 | 1.03 |
| 2003 | 0.97 | 0.96 | 0.88 | 0.97 |
| 2004 | 0.98 | 0.94 | 0.89 | 0.97 |
| 2005 | 1.09 | 1.02 | 0.92 | 1.08 |
| 2006 | 0.99 | 1.00 | 0.94 | 0.78 |
| 2007 | 1.03 | 1.00 | 0.94 | 0.74 |
| 2008 | 1.07 | 1.10 | 0.95 | 0.61 |
| 2009 | 1.06 | 1.16 | 0.91 | 0.69 |
| 2010 | 1.14 | 1.05 | 0.96 | 0.64 |
| **Average** | **1.05** | **1.02** | **0.92** | **0.86** |
| **T – Test** | **T–value= .76 Sig. at=.001** | **T – value= 3.05 Sig. at=.014** | **T–value=- 4.49 Sig. at = .002** | **T–value = -1.60 Sig. at = .14** |

In table -7, The average total expenses of Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL), Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) and Haryana Power Generation Corporation Limited (HPGCL) is 1.05**,** 1.02 and 0.92 respectively. The total expenses performance of Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL), Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) and Haryana Power Generation Corporation Limited (HPGCL) is significantly changed for the period under consideration for the study. Thus, the alternate hypothesis is accepted for total expenses of Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL), Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) and Haryana Power Generation Corporation Limited (HPGCL).

## CONCLUSION

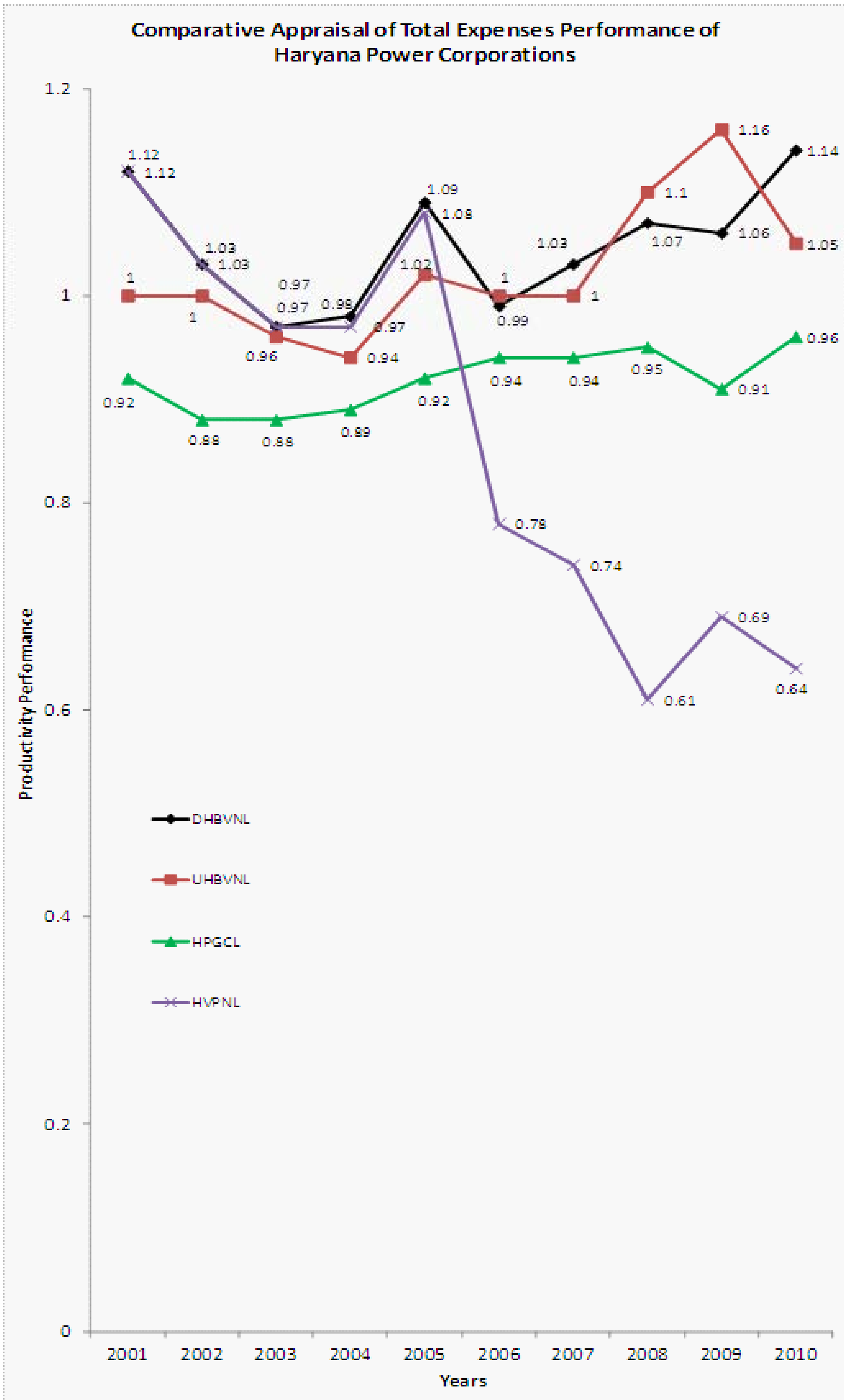
In analyzing the four corporations the ratio of Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) and Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) is not moving up and going down year after year.Haryana Power Generation Corporation Limited (HPGCL) ratio is low rather than Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) and Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL). Haryana Power Generation Corporation Limited (HPGCL) ratio is downward sloping and reducing among the four corporations.

Total Expenses Performance For UHBVNL, DHBVNL & HPGCL Null hypothesis is rejected because these corporations are significant at .014,0.001and 0.002 . It means these power units are required to pay more attention because these are highly significant at 5% level of significance.

## Suggestions

- The power corporations are necessary to use computerized and update knowledge for its all operations so that a system to be adopted instead of hap hazarded system for overall good performance.
- The average total expenses of DHBVNL, UHBVNL and HPGCL are 1.05, 1.02 and 0.92 respectively. The total expenses performance of DHBVNL, UHBVNL and HPGCL is significantly changed for the period under consideration for the study. Thus, the alternate hypothesis is accepted for total expenses of DHBVNL, UHBVNL and HPGCL. These power units are required to pay more attention towards wastage and units produced for consumption.
- UHBVNL and DHBVNL can be clubbed to reduce expenditure of the corporation, for better coordination of electricity supply and maintaince in the state. It will help to improve NPR and ATR of the units and over all performance will improve.
- There is also a problem of changing the old mindset and attitudes towards the sector. As a legacy of past, an impression has gone down that the government-ownership and control is good for the employees and society at large, bureaucratic control is superior to professional management and populism gets votes. Such a mindset and attitudes must change for the better performance.

**Graph – 7**


Comparative Appraisal of Total Expenses Performance of Haryana Power Corporations
Productivity Perfomance
Years
DHBVNL
UHBVNL
HPGCL
HVPNL

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