CHAPTER – V

ANALYSIS OF RELATIONSHIP BETWEEN HUMAN RESOURCE VALUE AND VALUE ADDED PERFORMANCE WITH REFERENCE TO VISAKHAPATNAM PORT TRUST

5.1 Introduction

Human Resource Accounting and Value-added information provided by the organisation is not only used for economic purpose but also used for social purpose. They are many parties who are interested in organizational voluntary statements. It is necessary for the firms to report the Human Resource Accounts and Value Added Statements (voluntary statements) to the parties who are involved with organization, directly or indirectly. Measurement of value-Added and Valuing Human Resource plays a crucial role, in this context; the present study has concentrated on knowing the relationship between Human Resource Value and Value Added Performance of the Visakhapatnam Port Trust (VPT) for a period of 10 years 2002-03 to 2011-12.

For the purpose of analyzing relation between human resource values and Value Added Performance, several items were taken into the calculation of human resources like age, and class/designation of human resources to the firm’s value added performance. For this purpose two dependent variables namely gross value-added (GVA) and net value-added (NVA) as taken into consideration.

Value added is an extremely important index allowing the precise determination of the company’s own contribution. It accurately expresses the efficiency of the management acting starting with the phase of products; it also shows accurately the company’s contribution to its productive processes. The rate of value added represents the share of the newly created value of the company within the company’s total activity. J.B.Acheampong M.E.Wetzstein (2001)

Value added measures are an application of economic profit, a concept developed by A.Marshall(1890) Value added expresses the surplus of value which results through the use of production factors: labour and capital (technical and financial), in the context of a general infrastructure ensured by the state. Value added represents the source of the accumulations which allow the remuneration of the direct and indirect participants in the economic activity of the company Petcu et.al (2005)
Value added is a fundamental synthetic indicator which expresses a new created value, representing the wealth of a company and it results from the activity of it from which the material expenses are deducted Popa et.al (2010)

In the present study, Net Value Added is considered as dependent variable, and the following seven variables are identified as independent variables namely, Materials used (stores), Repairs, power and fuel lubricants, Dredging, Other operational expenses, General expenses and depreciation.

In the present study, to find out the relationship between Net Value Added and Human Resources Value, the author considered the linear model to calculate relationship between NVA and its influencing factors, because estimated equation is considered has the best fit to the linear values. And non linear or log linear model is taken for observing the relationship between NVA with reference to Human Resources Value (Age wise and Class Wise) as it found to be the best fit to the log values.

Regressions are used to determine relationships between a dependent variable and one or more independent or explanatory variables. A simple regression is concerned with the relationship between a dependent variable and a single independent variable; a multiple regression is concerned with the relationship between a dependent variable and a series of independent variables. A linear regression is used to describe the relationship between the dependent and independent variable(s) as a linear function or line (or hyper plane in the case of a multiple regression). The simple Ordinary Least Squares regression (OLS) takes the following form with n observations measured by dependent variable ‘Y’ and independent variable xi, and two parameters describing a line, a vertical intercept term b0 and slope term b1 and an error term ‘U’ that represents the error or difference between the actual observation value ‘Y’ and the value ‘Y’ predicted by the line Freedman DA(2005)

According to R.Cook Dennis & W. Sanford (1982), a variable in statistical and/or mathematical model which is created, when the model does not fully represent the actual relationship between the independent variable(s) and dependent variable. As a result of this incomplete relationship exists and the error term is the amount at which the equation may differ during empirical analysis.

The error term is also known as the "residual" or the "remainder" term.

5.2. Multiple Regressions (Linear Model) for NVA:
H₁: There is a relationship between Value Added and its Influencing factors

To test the above hypothesis variables are divided into

\[ Y = \text{Net Value Added (Dependent Variable)} \]

Where Net Value Added (NVA) = Gross Output – Bought in materials + Depreciation

Also,

\[ \text{NVA} = \text{Gross Output} - (\text{Materials used} + \text{Repairs} + \text{Power and Fuel} + \text{Dredging} + \text{Other operational expenses} + \text{general expenses} + \text{Depreciation}). \]

There are quite a large number of independent variables that are statistically significant and that are explaining the variation in the dependent variable.

The significant independent variables are as follows:

1. \( X₁: \text{Materials used} = \text{consumption of stores on spare parts} \)
2. \( X₂: \text{Repairs} = \text{Repairs to plant and machinery, repairs to buildings and civil structures, other repairs, which includes special repairs, special repairs covered by estimates and office machine hire and service charges}. \)
3. \( X₃: \text{Power and Fuel} = \text{power and fuel lubricants towards stores operational, and electric power etc.,} \)
4. \( X₄: \text{Dredging} = \text{Dredging charges} \)
5. \( X₅: \text{Operational Expenses} = \text{damages and deficiencies payable to railways, wagon hire charges, floating craft charges, charges for vehicles and fire charges, sundry expense operational, safety, freight and handling charges, security charges, stores general etc.,} \)
6. X6: General Expenses = Rent, rates and taxes, audit fees, water charges, communication expenses, other charges, insurance, travelling expenses, furniture and office equipment, trustees fees, books and periodicals, legal and professional charges, license fees, telephones, research and development subscription donations and contribution etc.,

7. X7: Depreciation = Depreciation charged on machinery

U = Error term

The specific model is

Y = a + b1x1 + b2x2 + b3x3 + .......... + U

Where

Table No.5.1 Regression summary for Net Value Added

<table>
<thead>
<tr>
<th></th>
<th>BETA</th>
<th>of BETA</th>
<th>St. Err.</th>
<th>of B</th>
<th>t(2)</th>
<th>p-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>STORES</td>
<td>0.0624</td>
<td>0.0275</td>
<td>1.5863</td>
<td>0.6983</td>
<td>2.2717</td>
<td>0.1511</td>
</tr>
<tr>
<td>REPAIRS</td>
<td>-0.8332</td>
<td>0.0417</td>
<td>-12.3507</td>
<td>0.6180</td>
<td>-19.9837</td>
<td>0.0025</td>
</tr>
<tr>
<td>POWER</td>
<td>1.0466</td>
<td>0.0464</td>
<td>14.7101</td>
<td>0.6262</td>
<td>23.4895</td>
<td>0.0018</td>
</tr>
</tbody>
</table>
\[
Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + \ldots \ldots + U
\]

**THE ESTIMATED EQUATION IS**

\[
Y = 285.54 + 1.59 X_1 - 12.35 X_2** + 14.71 X_3** - 1.18 X_4
\]

\[
(2.27) \quad (-19.98) \quad (23.49) \quad (-0.93)
\]

\[
- 1.82 X_5** + 23.91 X_6** - 12.45 X_7**
\]

\[
(-13.03) \quad (16.79) \quad (-10.53)
\]

R SQUARE=0.9993, R BAR SQUARE=0.9970

F-VALUE (7, 2) = 430.34, P< .0023

The following hypotheses are tested in estimating the regression model:

**5.3.1. Materials consumption (X1):**

The materials consumed in Visakhapatnam Port Trust are POL, Iron ore and pellets, coking coal, Thermal coal, Fertilisers, Fertilisers raw materials, container cargo, other cargo. There is a positive relation between Materials consumption and Net Value Added. When the usages of materials are high, it is obvious that, the production/services will be higher, and it definitely leads to increase in sales volume and finally, it results in more income.

**5.3.2. Repairs (X2):**

The cost of up keeping machinery and equipment for the use of business operations or the upkeep of the properties. Expenses incurred for the maintenance of general cargo handling, modernization of berths, maintenance of dry dock, ship repairs etc., it has a negative relationship with Net Value Added. The increase in repairs cost leads to decrease in the NVA. So it can be concluded that there is a negative relationship between Net Value Added and Repairs cost.
5.3.3. Power (X3):

The consumption of power and fuel is directly related with the production / services. If production rate / services rate is in increasing trend, obviously the usage of power and fuel rate will be in increasing trend. Multiple regression analysis for the present study shows a positive relationship between power and fuel with NVA.

5.3.4. Dredging (X4):

Dredging is an activity or operation usually carried out at least partly underwater, in shallow seas or areas with the purpose of gathering up bottom and disposing of them at a different location. This technique is often used to keep waterways navigable. The expenses incurred for the maintenance of dredgers comes under dredging expenses and it has a negative relationship with NVA. As the dredging expenses increases there is a decrease in NVA and vice versa.

5.3.5. Operating Expenses (X5):

Operating expenses are costs associated with running a business's core operations on a continuous basis. Operating expense is a key component in the calculation for operating income, and operating income is a crucial component of many financial measures. The lower a company's operating expenses are, the more profitable it generally is. There is a negative relationship between NVA and Operating expenses.

Several things can affect operating expenses such as pricing strategy, prices for raw materials, or labour costs, but because these items directly relate to the day-to-day decisions managers make, financial measures based on operating expenses are also measures of managerial flexibility and competency, particularly during tough economic times.

5.3.5. General Expenses (X6):

General and administrative expenses pertain to operation expenses rather than the expenses that can be directly related to the production of any goods or services. A general and administrative expense includes rent, rates and taxes, audit fees, water charges, communication expenses, other charges. The study shows there is a positive relationship between general expenses and NVA.
5.3.7. Depreciation (X7):

Depreciation refers to the expenditure resulting from the wear and tear of tangible assets. Some asset classes that are particularly prone to significant levels of depreciation include vehicles, expensive industrial machinery and high-tech equipment. As a corporation uses its tangible assets, these assets usually lose some of their value. The more you drive a truck, for example, the less it will be worth. Even though depreciation does not result in an immediate cash drain, you must still recognize it as an expense, and you must eventually repair, replace or otherwise restore assets that are worth less, which will then result in lump sum expenditure. In present study there is a negative relationship between depreciation and NVA.

Hypothesis is tested to know the relation between Net Value Added and its Influencing factors, the tested hypothesis are accepted, because there a positive or negative relationship was identified with the analysis.

Few factors which are directly in connection with the increase in sales revenue had a positive relationship with Net Value Added; where as a negative relationship was identified with few factors which are not connected in increase of sales revenue.

The estimated equation is the best fit because the F-value is 430.34 which statistically significant at one per cent level (p<0.0023). The value $R^2$ quantifies goodness of fit. It is a fraction between 0.0 and 1.0, and has no units. Higher values indicate that the model fits the data better. When $R^2$ equals 0.0, the best-fit curve fits the data no better than a horizontal line going through the mean of all Y values. In this case, knowing $X$ does not help you predict $Y$. When $R^2=1.0$, all points lie exactly on the curve with no scatter. If you know $X$ values you can calculate $Y$ exactly. In the above table the value of $R^2= .99933652$, that means, by using $X$ values, it is easy to calculate the value of $Y$ exactly.

Adjusted $R^2$ is instead a comparative measure of suitability of alternative nested sets of explanatory. The adjusted $R^2$ can be negative, and its value will always be less than or equal to that of $R^2$. Here in this case the Adjusted $R^2= .99701433$, which is less than $R^2$.

5.4. Multiple Regressions (Linear Model) for Gross Output (Total Revenue):

H$_{0}$: There is positive relationship between Value Added and Total Revenue generated
The specific model is

\[ Y = a + b_1 x_1 + U \]

Where

\( Y = \text{Net Value Added (Dependent Variable)} \)

\( X_1 = \text{Gross Output (Independent Variable)} \)

Gross Output is the revenue generated within the organization for a given period, and the elements included in gross output are

Amount generated from sales i.e. sales revenue (SR) + income generated from other services (IS) i.e. Financial and Miscellaneous income

**Table No .5.2. Regression summary for Gross Output**

<table>
<thead>
<tr>
<th></th>
<th>St. Err. of BETA</th>
<th>St. Err. B</th>
<th>t(8)</th>
<th>p-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.5788</td>
<td>0.6357</td>
<td>0.9104</td>
<td>0.3892</td>
</tr>
<tr>
<td>Gross output</td>
<td>0.9502</td>
<td>0.1102</td>
<td>0.8513</td>
<td>0.0988</td>
</tr>
</tbody>
</table>

**THE ESTIMATED EQUATION IS**

\[ Y = 65.32 + 0.58 X_1^* \]

\( (10.61) \)

**R SQUARE=0.933, ADJUSTED R SQUARE=0.925**

**F (1, 8) = 112.57, P<0.00001**
Hypothesis are tested by using multiple regressions technique, the tested values clearly shows a positive relationship between Value Added and Gross Output and thus, the hypothesis are accepted.

The estimated equation is the best fit because the F-value is 112.57 which are significant at less than 1% level. The explanatory variable explains 93% variation (R bar square=0.925) in the dependent variable.

The dependent variable is found to be significant at 1% level. The significance of the result is when $R^2=1.0$, all points lie exactly on the curve with no scatter. If you know X values you can calculate Y exactly. In the above table the value of $R^2=.90279105$, that means, by using X values, it is easy to calculate the value of Y exactly.

Adjusted $R^2$ is a comparative measure of suitability of alternative nested sets of explanatory. The adjusted $R^2$ can be negative, and its value will always be less than or equal to that of $R^2$. Here in this case the Adjusted $R^2=.89063994$, which is less than $R^2$.

5.5. Multiple Regressions (Log Linear Model) for Human Resources Value (with reference to Age Group):

$H_3$: There is a statistical significance between designation / class of human resources value and Value Added performance

The human resources value is very high in number; due to the reason and also for the convenience reason both dependent (Y) and independent variables (X) are converted into logarithm values i.e. log values to get best analysis

$$\log Y = a + b_1 \log x_1 + b_2 \log x_2 + b_3 \log x_3 + \ldots + \log U$$

Where $Y =$ Net Value Added (Dependent Variable)

- $X_1 =$ Age of the worker 20 and <20 and 20
- $X_2 =$ Age of the worker between 21-30
- $X_3 =$ Age of the worker between 31-40
- $X_4 =$ Age of the worker between 41-50
- $X_5 =$ Age of the worker between 51-60
U = Error term

Hypotheses:

The following hypotheses are tested in estimating the regression model:

5.5.1. $X_1 = \text{Age of the worker 20 and } <20$, Assuming the age of employees, in case of, this group, considered as 18 years old. In order that, the remaining service in the organization considered as 42 years i.e. (60-18). Hence, his/her earnings are determined for the coming 42 years.

5.5.2. $X_2 = \text{Age of the worker 21-30}$, Assuming the age of employees, in case of, this age group, considered as 25 years old. In order that, the remaining service in the organization considered as 35 years (60-25). Hence, his/her earnings are determined for the coming 35 years.

5.5.3. $X_3 = \text{Age of the worker between 31-40}$, Assuming the age of employees, in case of, this age group, considered as 35 years old. In order that, the remaining service in the organization considered as 25 years (60-35). Hence, his/her earnings are determined for the coming 25 years.

5.5.4. $X_4 = \text{Age of the worker between 41-50}$, Assuming the age of employees, in case of, this age group, considered as 45 years old. In order that, the remaining service in the organization considered as 15 years (60-45). Hence, his earnings are determined for the coming 15 years.

5.5.5. $X_5 = \text{Age of the worker between 51-60}$, Assuming the age of employees, in case of, this age group, they considered as 55 years old. In order that, the remaining service in the organization considered as 5 years (60-55). Hence, his earnings are determined for the coming 5 years.
Table No. 5.3. Regression summary for Age wise human resources value

<table>
<thead>
<tr>
<th>Age Group</th>
<th>BETA of BETA</th>
<th>B of B</th>
<th>t(4)</th>
<th>p-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-10.9570</td>
<td>9.8344</td>
<td>-1.1141</td>
<td>0.3276</td>
</tr>
<tr>
<td>20 and &lt;20</td>
<td>0.0896</td>
<td>0.3098</td>
<td>0.0512</td>
<td>0.1770</td>
</tr>
<tr>
<td>21-30</td>
<td>0.1342</td>
<td>0.3634</td>
<td>0.0585</td>
<td>0.1584</td>
</tr>
<tr>
<td>31-40</td>
<td>-0.0825</td>
<td>0.2763</td>
<td>-0.0351</td>
<td>0.1176</td>
</tr>
<tr>
<td>41-50</td>
<td>0.8813</td>
<td>0.8594</td>
<td>0.6309</td>
<td>0.6152</td>
</tr>
<tr>
<td>51-60</td>
<td>0.1026</td>
<td>0.7403</td>
<td>0.0906</td>
<td>0.6537</td>
</tr>
</tbody>
</table>

THE ESTIMATED EQUATION IS

\[
\text{Log Y} = -10.95 + 0.05 \text{Log X}1 + 0.05 \text{Log X}2 - 0.04 \text{Log X}3
\]

\[
+ 0.63 \text{Log X}4** + 0.09 \text{Log X}5
\]

R SQUARE=0.8553, R BAR SQUARE=0.6744

F-VALUE (5, 4) = 4.7289, P< .0023

Hypothesis are tested by using multiple regressions technique, the tested values clearly shows a statistical significance between Value Added and age groups of employees of VPT, and thus, the hypothesis is accepted.
The estimated equation explains only 67% of the variation in the dependent variable of Net Value Added. Out of the five variables only one variable is found to be statistically significant at 1% level. The variable is the number of workers of the age group 41-50.

The dependent variable is found to be significant at 1% level. The significance of the result is when \( R^2 = 1.0 \) or nearly 1.0, then all points lie exactly on the curve with no scatter. If you know X values you can calculate Y exactly. In the above table the value of \( R^2 = .85530488 \), that means, by using X values, it is easy to calculate the value of Y exactly.

Adjusted \( R^2 \) is a comparative measure of suitability of alternative nested sets of explanatory. The adjusted \( R^2 \) can be negative, and its value will always be less than or equal to that of \( R^2 \). Here in this case the Adjusted \( R^2 = .67443598 \), which is less than 0.85530488 (\( R^2 \)).

The importance of this variable has a direct effect on commitment levels towards their jobs and is the most important factor affecting a firm’s financial performance. With passage of work experience, the effectiveness and efficiency of the employees will increase and on the other hand the wastage in terms of time and effort will be low. With the same human resources, existence and higher efforts will lead to the increase in the financial performance of the firm. Better pay system of the firm leads to higher motivation and the ability to retain the experienced personnel. The expertise of the personnel will enhance the productivity levels of the system and channelize all efforts to improve financial performance of the firm.

5.6. Multiple Regressions (Log Linear Model) for Human Resources Value (with reference to Class of employees):

H₄: There is a statistical significance between Class /Designations of human resources and Value Added Performance

\[
\text{Log } Y = a + b_1 \text{ Log } x_1 + b_2 \text{ Log } x_2 + b_3 \text{ Log } x_3 + \ldots + \text{ Log } U
\]

Where Y (Dependent Variables) = Net Value Added

Independent Variables are as follows:

\( X_1 = \text{Employees falls under Class I} \)
X2 = Employees falls under Class II
X3 = Employees falls under Class III
X4 = Employees falls under Class IV
U = Error term

Hypotheses:

The following hypotheses are tested in estimating the regression model:

5.6.1. X1 = Employees falls under Class I, The employees falls under class I, irrespective of
the age group, Chairman, Deputy Chairman, Secretary, Dy. Secretary, Director, Dy. Director,
Personnel Officer, Chief law officer, Chief Engineer, etc., comes under this group.

5.6.2. X2 = Employees falls under Class II, usually under this group, Accounts officer, A.E.
(Electrical) (Mechanical) (FC) (Electronics) , Assistant Managers, Assistant Vigilance
Officer, Chief Cashier, etc.,

5.6.3. X3 = Employees falls under Class III, employees under this group , as Assistant
Marine Foreman, Assistant Shipwright Foreman, Assistant Ward Keeper, Assistant Foreman,
Assistant Accountant, Assistant Accountant, Assistant Station Master, Accountant, Punch
Supervisor, Senior K.P.O, A.H.I. etc.,

5.6.4. X4 = Employees falls under Class IV, A.M.Khallasi, Ayah, Battery Man, Boat
Repairer, Capstan Man, Carpenter, casaba, Cook-cum-Bearer, Coupling Porter, D.M.O, Deck
Lascar, Dolly Man, Daftly, Duplicating Machine operator, Electrician Grade III, Fire man,
Gang Man etc.,

Table No. 5.4: Regression summary for Class wise human resources value

<table>
<thead>
<tr>
<th>Regression Summary for Dependent Variable: NVA (new.sta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R=.94353767 R²=.89026333 Adjusted R²=.80247400</td>
</tr>
<tr>
<td>F(4,5)=10.141 p&lt;.01287 Std.Error of estimate: .11675</td>
</tr>
<tr>
<td>St. Err.</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
THE ESTIMATED EQUATION IS

\[
\log Y = -10.47 + 0.92 \log X_1 + 0.03 \log X_2 - 0.13 \log X_3
\]

\[
(2.11) \quad (0.33) \quad (-0.99)
\]

\[
+0.012 \log X_4^{**}
\]

\[
(0.04)
\]

R SQUARE=0.89, R BAR SQUARE=0.80

F-VALUE (4, 5) = 10.14, P< .0128

Hypothesis are tested by using multiple regressions technique, the tested values clearly shows a statistical significance between Value Added and Class / Designation of employees of VPT, and thus, the hypothesis is accepted

The estimated equation explains 80% of the variation in the dependent variable of Net Value Added. Out of the four variables, only one variable i.e., class I employee contribution is found to be statistically significant at 1% level.

As employees shift vertically up in the ladder, the responsibilities, esteem and commitment towards higher job satisfaction may lead to higher performance and better quality of work life. It directly influences the achievement of organizational goals and targets. It further leads to the enhancement of the financial performance of the firm.

The dependent variable is found to be significant at 1% level. The significance of the result is
know X values you can calculate Y exactly. In the above analysis the value of $R^2 = 0.89026333$, that means, by using X values, it is easy to calculate the value of Y exactly.

Adjusted $R^2$ is a comparative measure of suitability of alternative nested sets of explanatory. The adjusted $R^2$ can be negative, and its value will always be less than or equal to that of $R^2$. Here in this case the Adjusted $R^2 = 0.80247400$, which is less than 0.89026333 ($R^2$).

5.7. Conclusion

The Human resource accounting has been receiving much attention in the past three decades, because there is a genuine need to arrive at the value of human resource at each organization, which can be used for improving and evaluating not only the performance of human resources but also to assess their influence on the financial performance of the organization. The traditional framework of accounting is in the process of being expanded to include a much broader set of measurement than was thought possible or desirable in the past.

The main objective of this study was to establish the extent of the influence of human capital on total value added performance of VPT, a major port in India. The results showed statistically the influence of different classes and grades of human capital on net value added performance of the Port during study period of 10 years from 2002-2003 to 2011-2012.

Importantly, NVA and its influencing factors, as well as NVA with gross output values are highly significant, and NVA with age wise and grade/ class wise human resource values were not highly significant when compared to others.

These findings, recommends new insight into exploring the relationship between a firm’s values added performance and human resources value of the firm. The study has arrived at the concrete conclusion of explaining how age and designation of the Port employees are influencing the value added performance. The results are satisfactory and provide greater scope for further research in this direction.

Considering the result of the statistical analysis which revealed that human asset significantly affects management decisions as supported by various empirical findings and relevant recommend literatures which also considered employees as important asset critical to the survival of organisations within the competitive economic environment, there is need for this
assets to be valued and capitalised like other intangible assets, like goodwill that are captured on organisations balance sheets or statement of financial position.

Theoretical significance is completely different from statistical significance. There are several theoretical considerations should be taken, while presenting a study, like selection of an appropriate method, size of sample, method of analysis etc., large sample is required for more accurate and to get statistical significance. It was found from the present study, arrived values shows highly significant, when observing the actual values, but when observing the statistical values, it was found to be not much significant with all the variables. In general, the economists take minimum of 25 years to test statistical significance of a particular issue. In the present study, multiple regressions technique was used to test the statistical significance of the variables, and this is a statistical tool that allows one to examine how multiple independent variables are related to a dependent variable. Once one had identified how these multiple variables relate to the dependent variable, one can take information about all of the independent variables and use it to make much more powerful and accurate predictions about why things are the way they are. This process is called “Multiple Regression”. Many techniques for carrying out regression analysis have been developed. Familiar methods such as linear regression and ordinary least squares, regression are parametric in that the regression function is defined in terms of a finite number of unknown parameters that are estimated from the data. And which is used for the present study.

10 years period is a very less period and it became a limitation for the study to get statistical significance. It was noticed from the present study, there was no severe changes that had occurred in the Visakhapatnam Port Trust during the study period. There is a huge scope for further research to analyse the relationship between Human Resource Value and Value Added Performance of the Visakhapatnam Port Trust.

The HRA implementation helps to improve managerial decisions like layoffs, better performance evaluation measures of the firm and also acts as a guide during buying, selling and merger transactions. Human resource accounting and value added concepts are new concepts, even though Visakhapatnam Port Trust has been in operation since 1993. No systematic efforts have been made by VPT in introducing human capital accounting and measuring value added performance. The results from the study may influence the Port authorities to prepare the organization to introduce valuing human capital as well as measurement of value added performance as the findings showed the positive influence of
human capital on value added performance of the Port. In addition to achieve overall turnaround performance of the Port, it is important that the Port authorities consider the significance of human capital as a vital asset of the organization to achieve its goals and objectives and to perform better than competing private ports, both locally and globally.