CHAPTER - FOUR

AN ACCOUNTING MODEL TO SUPPLEMENT THE EXISTING ACCOUNTING SYSTEM OF NONPROFIT ORGANIZATIONS
Introduction

The basic objective of financial reporting of a non-profit organization, we have already discussed, is to provide information useful for evaluating the effectiveness of the management of the resources in achieving the organization's goal. Again, goal of an welfare organization is to provide services to the society. Hence, the effectiveness of the management of the resources requires measurement of the performances of the organization. Though it is difficult to measure such performances we are to devise ways to provide information on the value of the services that the organization renders, the means with the help of which such services are generated (i.e. the sacrifices of the employees and the organizers) and the value of the stock of such services (i.e. the values of the people associated with the organization). It is evident from the previous chapter, the conventional accounting system of NPOs does not make provision for reporting such information. This chapter aims to devise an accounting model to measure such services and report the same to the resource providers and other well-wishers of the organization.

With this end in view this chapter tries first to account for the flows of services rendered to the society and the resources and sacrifices necessary to generate such services. An accounting model is designed subsequently to incorporate the value of the services rendered by the employees and the organizer as well. Based on the model an attempt has been made to develop a system to evaluate the performance of the organization in achieving its objective. A series of related ratios have

1. FASB, op. cit, para 33 which provides, "information that satisfies the objectives should be useful to all who are interested in a non business organization's present and future capacity to render services and achieve its operating goals".
been projected to complete the appraisal. Having discussed the implications of these ratios to the people interested in the entity, the chapter suggests by way of conclusion that the model may be used to supplement the existing accounting system to make the information system more useful.

I

Accounting for Flows of Sacrifices and Services

Since the existing accounting system fails to provide the information on the quantum of services generated and distributed by the associated people, and the sacrifices made by them as well as the organization itself, a comprehensive accounting system of NPOs should, therefore, be so designed as to provide the following information.

(a) To indicate whether or not the entrusted funds are utilised according to the imposed restrictions.

(b) To report the volume of services rendered by the organization to the society.

(c) To disclose the sacrifices made by the selfless people of the welfare organization to generate such services.

(d) To impute in financial terms (even though it is very difficult to measure their values in material and objective manner) the value of these people to the organization.

(e) To gauge separately the contribution to the society made by the organization.

3. The idea of imputing the value of goods or services produced by nonprofit organizations is not novel one. For national income measurement, value of such production should be imputed, otherwise, information on production for the economy as a whole, would not be available. Vide, R. Ruggle & N. D. Ruggles, National Income Accounts and Income Analysis, 2 ed. McGraw Hill Book Co. Printed in India by Khosla Publishing House, 1980, P. 51.
Since the conventional system deals adequately with the first one, the proposed model humbly attempts to design an accounting model which may be capable of reporting on the other four.

NPOs, in general and voluntary welfare organizations in particular, are basically meant for rendering services to society with the financial assistance from the funding agencies and the sacrifices of the people associated with the organizations. The financial reporting of the NPOs, therefore, should thrash out two important properties, namely,

(a) Inflow of sacrifices from the benefactors in the shape of donations, sacrifices of the employees and the organizers, and

(b) Outflow of services to the beneficiaries against token collection from them.

The process of such generation and distribution of services involves the following steps:

(i) Receipts of sacrifices through:

(a) collection of donations and subscriptions from interested parties and other various sources.

(b) employment of people who volunteer their services usually at free of cost or against a token salary.

(c) Sacrifices of the organizers.

(ii) Disbursement of services through providing medical or other benefits usually at free of cost to the hapless people. In fact such
services create social welfare, for activities of NPO make some individuals better-off and no one worse-off.\textsuperscript{4}

The above particulars may be presented in the following proposed accounting model:

II

An Accounting Model (for Welfare Organization)

A 'Service and Sacrifice Account', similar to the Income and Expenditure Account adopted under the conventional accounting system, may be drawn up (vide page no. 95). The credit side of the account should show the value of the services rendered to the society (represented by SS) which is derived by deducting the collections (however small that may be) from the beneficiaries (Q), from the market value of services rendered to the society (P). The debit side of the account should present the contributions made by the funding agencies (D), the sacrifices by the employees (W\textsubscript{1}) and the contributions of organizers (O). The contributions of the first group (i.e. D) and the token collection from the beneficiaries (Q) are used for paying goods and services acquired from outside (G), and for paying token salary to the employees (W\textsubscript{1}). If from the excess of value of services rendered to the society over the collection from beneficiaries (i.e. P-Q = SS), we deduct the contributions made by the donors (D) and the sacrifices made by the employees (W\textsubscript{2}), we shall get the measure of the contribution made by the organization (O) itself.

The net value of services rendered to the society (SS), therefore, depends on the contributions of the funding agencies (D), the

\textsuperscript{4} According to Vincenzo Parto (1848-1925), the eminent Italian Economist, any change that makes at least one individual better-off and no one worse-off is an improvement in social welfare. As reported in A. Koutsoyiannis, Modern Microeconomics, ELBS, 1979, P. 526.
sacrifices of the employees ($W_2$) and also the sacrifices made by the organizers ($O$). Relation among these variables may be symbolically presented as below:

$$SS = f(D, W_2, O)$$

Where, SS = Social surplus represented by the excess of the market value of the services rendered to the society over the token collection from the beneficiaries.\(^5\)

Here, \(D = G + W_1 - Q\)

When, \(D = \) Contribution made by the donors.

\(G = \) Cost of goods and services procured from outside.

\(W_1 = \) Payments to employees as a token payment for their volunteered services.

\(G = \) Token collection from the beneficiaries.

Again, \(W = W_1 + W_2\)

When, \(W = \) Market value of the services rendered by the employees.

\(W_1 = \) Actual payment to employees made by the NPOs as a token payment for their volunteered services.

\(W_2 = \) Sacrifices made by the employees, i.e. \((W - W_1)\).

And, \(O = \) Contribution of the organization

\[\text{[i.e. } O = SS - (D + W_2)\]

Finally, \(SS = P - Q\)

Where, \(P = \) Market value of services rendered to the society.

\(Q = \) Token collection from the beneficiaries.

When the relation among the variables are additive in nature, they may be put in the form of following equation,

\[ SS \ (i.e. \ P - Q) = [G + W_1 - Q] + W_2 + O \]

or,

\[ SS = D + W_2 + O. \]

The situation may be tabulated in the accounting model as under:

(Table - 10).

Table-10

Service and Sacrifice Account of ......
For the year ending on ......

<table>
<thead>
<tr>
<th>Sacrifices by benefactors</th>
<th>Services to beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sacrificing of the funding agencies through:</td>
<td>4. Social services rendered</td>
</tr>
<tr>
<td>Payment to supplier of goods and services</td>
<td>Market value of Social services</td>
</tr>
<tr>
<td></td>
<td>P</td>
</tr>
<tr>
<td>Add Token payment to dedicated employees</td>
<td>Less: Token collection from beneficiaries</td>
</tr>
<tr>
<td>[ \frac{W_1}{G+W_1} ]</td>
<td>[ Q ] SS</td>
</tr>
<tr>
<td>[ D ]</td>
<td></td>
</tr>
</tbody>
</table>
| 2. Sacrifices made by the employees | 6. 
| | Sacrifice made by the organization (excluding employees) |
| \[ W_2 \] | \[ O \] |

The rationale : The justification of such treatment may be described here in brief.

6. This amount should be net of depreciation. Since, we are considering here the market value of services, we should deduct the value of resources utilised to generate the services.
The beneficiaries of the services generated within a NPO, pay something, however small that may be. That is why, the value of net social services (SS) should be equal to the excess of the market value of services (P) over the token fees collected from the beneficiaries (Q). Since these items relate to the accomplishments or outflow in the hands of the organization they are shown on the credit side of the periodic account i.e. the service and sacrifice account.

The items relating to effort volunteered, i.e., the sacrifices necessary for achieving the accomplishments are shown on the debit side of the account. People rendering such services can be categorized broadly under three classes 1. funding agencies, 2. dedicated employees and 3. organizers. The contributions of these three categories may be represented by D, W₂ and 0 respectively. Again the contributions from the funding agencies (D), along with the token collection from the beneficiaries (R) are then utilized to meet the costs of goods and services procured from outside (G) and to make token payment to the dedicated people (W₁). The market value of services received from these people far outweigh the token payment made to them. The difference between the two amounts to their actual sacrifices and that is represented by (W₂). These people, however, would not avail themselves of the opportunity of making such sacrifices, had there not been such organizers. These organizations create a situation where the net value of the services rendered to the society exceeds the total of actual and imputed contribution of donors and employees (D + W₂). This surplus arising out of the sacrifices of the organization is represented here as (0). The sacrifices of all these three groups associated with an entity are placed on the debit side of the service and sacrifice account.
The above analytical information, although indispensable for representing the performance of NPOs, is not highlighted under the conventional accounting system. The income and expenditure account, as maintained under this system cannot portray fully the achievement of the objectives for which the organization is set up. The following journal entries may be made to incorporate the above information in the Accounting system of a NPO.

1. For services rendered by the NPO to the society,

   Services to society a/c. .........DR.
   
   To Service and Sacrifice a/c.
   
   (Being the amount of services rendered to the Society).

2. For sacrifices made by the funding agencies:

   Service and sacrifice a/c. ....... DR.
   
   To Sacrifices by the funding agencies.
   
   (Being the sacrifices made by the funding agencies).

3. For sacrifices made by the employees associated with the organization:

   Service and Sacrifice a/c. ............ DR.
   
   To Sacrifices made by employees.
   
   (Being the sacrifices made by the employees through rendering services to the society).

4. For sacrifices made by the organizers:

   Service and sacrifice a/c. ........... DR.
   
   To sacrifices made by the organizers.
   
   (Being the excess of services generated over the sacrifices made by the funding agencies and the employees i.e. the sacrifices made by the organizers).
The above entries, if incorporated in the accounting system of these NPOs in memorandum form, will make the financial reporting more informative. This will, in fact, be used by the resource providers and others in making rational decisions.

Here a question may arise: where should the social surplus created in a NPO should be transferred? In income and expenditure account of a NPO it is found that the excess of income over expenses or the excess of expenditure over income merges ultimately with ownership capital or capital fund, as the case may be. But in case of service and sacrifice account of a NPO, the surplus or services over sacrifices need not be transferred to any capital fund account, for such surplus does not represent any wealth. In fact, it is already consumed by the beneficiaries of the entity who are practically the members of the society.

**Balance Sheet**: Now comes the balance sheet. A balance sheet in an accounting system shows the financial position of an entity by detailing the different sources of funds (i.e. equities and liabilities) and the utilisation of these funds (i.e. assets). In other words, it presents the assets and liabilities of an entity in an articulated manner.

An asset has the following characteristics:

(i) The organization should have legally enforceable claim on it.

(ii) The organization should own it so that it can control the asset.

(iii) It should be possessed by the entity with the expectation of deriving services from it in the future.\(^7\)

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Liabilities and equities, on the contrary, represent the amount of obligations to outsiders which arise from transactions or other events of the entities and the value of ownership of the assets under the control of the entity.

Human resources are at the heart of an organization and in case of NPOs, we cannot think of a welfare organization where the associated people do not volunteer their services. In the true sense of the term, employees of NPO cannot be considered under the ownership control of the entity. It also cannot be supposed that an entity have legally enforceable claim on them. But it is expected that the entity will have the opportunity to enjoy the services in future as before from these HRs who will stay with the organization. Only on this count they may be considered valuable resources to the entity and also to the society. That is why they are termed as assets. So, the people of NPOs should be valued and reported which is not done in the conventional financial reporting. The balance sheet as said earlier, would be more useful if such information is provided in addition to what is usually provided in such statements.

However, presentation of assets in the balance sheet of a NPO raises some knotty problems. In the traditional accounting system physical and monetary assets at the disposal of an entity are shown in the assets side of the balance sheet. Questions generally arise: How should the human resources be valued? How should such values, if valued, be recorded in accounts? If they are recorded as assets (i.e. application of fund) what should be considered the source (i.e. fund)?

of such resources? In other words what should be the counterpart of such assets in the liability side of the balance sheet?

The question how the HRs should be valued has already been discussed in detail in chapter two. There the Lev-Schwartz model, because of the circumstances of the case, is suggested for application to our study. Answers to the other two questions are discussed below.

The HR value represents the embodiment of the social equity while the total of physical and monetary assets signifies the capital fund of the organization. Since value of HRs are considered as wealth to the entity it may naturally be assumed that there are some people who are to own and enjoy the same. In this context the society in general may be assumed to be the owner of such wealth and this is why value of HRs are shown as assets and similar amount has been posted in the opposite side as 'social equity'.

Moreover, the position of HRs in relation to other assets can present an interesting picture of the organization. For instance, it may be usually found that the ratio between other assets and HR assets is much higher in case of POs than that in case of NPOs. This ratio seems to be of very interesting and useful to the funding agencies and investors for evaluation of performance of HRs of the entity. In NPOs, higher the ratio between HR and other resources, better should be considered the performance of the organizations. Hence such a system of presentation and accounting may provide an index of asset structure of these entities. Anyway, a pro-forma of a balance sheet of a NPO may be presented as below (Table - 11).
Table - 11
Balance Sheet (incorporating HR value) of ...
As at ... ... ...

<table>
<thead>
<tr>
<th>Liabilities</th>
<th>Rs.</th>
<th>Assets</th>
<th>Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Fund</td>
<td>***</td>
<td>Physical Assets</td>
<td>***</td>
</tr>
<tr>
<td>Social Equity</td>
<td>***</td>
<td>Monetary Assets</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Human Resource Assets</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>

III
Ways to Appraise the Performance of NPOs

The persons associated closely with an organization, whether it is a profit seeking one or non-profit seeking one, are very much interested in the information on the overall as well as individual group performance obtained to attain the objective of the organization. How can we assess the performance of a NPO? At the first stage we are to measure the market value of services rendered to the society and the market value of services the employees provide to the entity. Once we can have an estimate of the two, we are in a position to draw up Service and Sacrifice Account as designed earlier. Then we are to value the sources of such services, that is, we are to value the HRs and draw up the balance sheet. How these items are to be valued are discussed in chapter five and six. As we have already designed the service and sacrifice Account and the Balance Sheet incorporating the HR value, we can develop some ratios with the help of which we can evaluate various matters like
relative sacrifices of funding agencies, employees and organizers, relative efficiency of physical and monetary assets and human resources etc. Thus we can evaluate the relative performance of a NPO. If the performances of a few NPOs with similar activities are analysed, compared and evaluated over the years, a trend of the services rendered by an organization can be identified. Moreover, the funding agencies will also be able to analyse the comparative efficiencies of NPOs where they are requested to contribute. An analysis of the various ratios may serve the above purpose.

The financial ratio analysis, it is a fact, is one of the most powerful tools in the hands of decision makers for assessing the financial strengths and weaknesses of a firm by establishing properly a relationship between the items of the Balance Sheet and the Profit & Loss Account. To quote Metcalf and Titard, "Analysing financial statements is a process of evaluating relationship of the component parts of financial statements to obtain a better understanding of a firm's position and performance".9

When we want to examine the financial performance of NPOs, the following ratios in line of the profit seeking organizations may be taken into consideration.

Let us interpret the above ratios to infer an inter-relation among various accounting parameters as drawn up earlier. Here the ratios are similar to those drawn on POs.

A. **Return on Investment**: In addition to its identification as the benefit accruing to the owners, the net profit is considered as an index of managerial performance. The ratio is considered to show the rate of return on capital invested by the owners. It is computed as:

\[
\text{Net Profit (before interest and taxes)} \quad \frac{\text{Owned capital or total assets}}{}
\]

10. Conventional assets refer to total of physical assets and monetary assets.

As this ratio signifies the index of managerial efficiency, various authorities use it too often for deciding on various issues on the funds invested in an organization. While the higher ratio denotes the success of the organization in attaining its objectives, the lower ratio, on the other, indicates the inefficiency of management.

In case of NPOs, a similar ratio may be drawn as below:

\[
\text{Return on Investment} = \frac{\text{Net service to society}}{\text{Conventional assets} + \text{HR assets}}
\]

Here neither the entity nor the contributors is interested in the profit earned by the organization, rather they are interested in the magnitude of services provided to the society in relation to the total assets (including HR assets) under the disposal of the organization.

As in the case of POs, this ratio can be treated as an index of performance of NPOs. The contributors also can use this ratio to come to a conclusion whether they will continue to contribute in favour of an organization or not. The numerator of the ROI ratio signifies the profit earned by the profit seeking organizations, whereas in case of NPOs this ratio will indicate the net services rendered to the society. The denominator, in both cases, however, represents the investment or resources used to earn profit or to render service, as the case may be. Net results in both the cases, signify the performance of the organizations.

However, the ratio in case of NPOs, is subject to some limitations. It is difficult to calculate the total assets (which comprises of the conventional assets and also the HR assets, as per our proposed model) in an objective manner. While the conventional assets can
be easily determined, the valuation of HRs is very contentious. However, it may be observed that if the ratio is calculated, taking into consideration the HR value, the information will be more informative and useful to the decision makers.

B. Margin Ratio: This ratio may be computed as:

\[
\text{Gross Profit} \over \text{Sales}
\]

Since profitability of a firm, in case of profit seeking organization, depends ultimately on sales margin (i.e. the surplus of sales over the cost of sales), the ratio is considered most important for financial analysis.\(^\text{12}\) The more the margin, the more the profitability. This ultimately determines the survival of the entity. A higher rate of profit margin on sales is also a sign of efficient management that minimises the cost of production resulting in sufficient return to the owner's equity.

The margin ratio in case of NPOs can be presented as below:

\[
\text{Sacrifices by the employees and organizers} \over \text{Net value of services to the society}
\]

Here, net value of services to society implies the excess value of services rendered over the collection from the beneficiaries. The ratio signifies the contributions or sacrifices made by the employees and organizers of an entity per rupee of net services provided to the beneficiaries. With the help of this ratio, in NPOs the degree of contribution of the employees in particular, and the organization in general, in relation to net value of the services can be identified. Like

the index of managerial efficiency of POs, this ratio may be considered as an index of performance of NPOs. A higher ratio generally implies greater efficiency in performance of the organizations in achieving the desired goal.

C. Turnover ratios and Turnover velocity: Turnover ratios are used to indicate how effectively the assets have been utilised. This is why it is called the activity ratio or assets management ratio. In business enterprises, efficient use of assets are measured through comparing them with sales. The ratio may be computed as below:

\[
\text{Turnover ratios - } \begin{align*}
1) & \quad \frac{\text{Sales}}{\text{Capital employed}} \\
2) & \quad \frac{\text{Sales}}{\text{Fixed assets}} \\
3) & \quad \frac{\text{Sales}}{\text{Debtors} \text{ etc.}}
\end{align*}
\]

The higher the turnover ratio, greater the efficiency in the utilisation of the assets in debt and credit management.

In the parlance of NPOs, similar ratios in the following form can be drawn.

\[
\text{Turnover velocity - } \begin{align*}
1) & \quad \frac{\text{Gross value of services to beneficiaries}}{\text{Conventional assets}} \\
2) & \quad \frac{\text{Gross value of services to beneficiaries}}{\text{Conventional assets + HR assets}} \\
3) & \quad \frac{\text{Gross value of services to beneficiaries}}{\text{HR assets}}
\end{align*}
\]

These ratios may assist the subscribers in evaluating the effective use of assets or resources vested with the entity. Higher the

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value of the ratios, greater the efficiency in utilising the assets. An establishment with higher turnover ratios will get preference to others while the donors consider to allocate their funds to various welfare organizations.

D. Operating Ratio: In profit seeking organizations, operating ratio, i.e. ratio between cost of goods sold to sales is used to denote how much of per rupee of sales is necessary to run the operation. Higher the ratio less the surplus is left to be utilised as profit. In other words, less the ratio, higher is the operating income.

A similar ratio may be drawn for a NPO. Here operating ratio can be drawn as below:

\[
\frac{\text{Salary paid to the employees & other expenses}}{\text{Net value of services to the beneficiaries}}
\]

The ratio can reveal how much of the value of services generated by the entity is necessary to meet the expenses for running the organization. The reciprocal of the ratio indicates the value of services to the beneficiaries per rupee of operating expenses.

Higher this reciprocal, greater should be considered the efficiency of the organization. This reciprocal provides an index of operating efficiency of the entity. Naturally an unit with lower operating ratio will draw the attention of the funding agencies, since it implies higher productivity capacity of the organization. Hence the organization will take necessary steps to economize the operating expenses so that the grantors may provide resources at higher rates.

E. Expenses Ratio: This ratio is calculated for analysing the profitability and the operational efficiency of a firm. An organization, whether it is a profit seeking or a non-profit seeking, incurs various operating expenses for its performance. Accordingly, the rate is computed by dividing expenses incurred to the sales made by the organization.

\[
\text{Expenses Ratio: } \frac{\text{Expenses}}{\text{Net Sales}}
\]

As a working proposition, a low value of this ratio rather than its high value is always desirable to the management. A high expense ratio implies a relatively small share of sales is available for meeting the financial liabilities of the entity. Through this ratio, the management can take preventive measures to reduce the operating expenses which ultimately leads to their better performance. In other words, it shows the ability of the management in controlling the expenses. However, this ratio may not always be considered so important to the owners and contributors of the firm.

In case of NPOs, a similar ratio can be derived as below:

\[
\frac{\text{Token Salary + Expenses}}{\text{Net value of services rendered to society}}
\]

Here, the expenses in profit seeking organization refer to the various operating expenses borne by these entities for their operation. The expenses in NPOs generally include the token salary paid to those service-minded people and the payment to the suppliers of goods and services. The higher value of this ratio implies a lesser volume of services rendered to the society and vice versa. The NPOs, through this ratio, can take suitable measures to economize their spendings.
agencies, it may appear, may not be much interested in this ratio because they may be interested only about the quantum of services rendered to the society. But for evaluating the cost structure of a NPO, this ratio is of much use.

F. Asset - turnover Ratio: In profit seeking organizations this ratio is used to denote the effective use of resources in relation to sales (i.e. turning over the assets in the form of sales realisation). Such a ratio may also be calculated in relation to individual types of assets separately. Usually fixed assets and working capital turnover ratios are computed to gauge the effective use of these assets. These ratios also denote the profitable use of the resources.

The important lacuna is that the ratio may sometimes give misleading information. For instance, an old and established company may have a higher ratio of assets turnover in comparison to new organization, when its fixed assets are valued at historical cost and they are net of depreciation. The situation is not so grave in NPOs, since fixed assets here constitute a small fraction of the total of physical, monetary and human resources.

In NPOs, similar ratios may be drawn to evaluate the effective use of the resources vested to the organization. The following ratios may be drawn:

\[
\text{Total assets turnover} : \frac{\text{Net value of services}}{\text{Value of assets}}
\]

\[
\text{Physical assets turnover} : \frac{\text{Net value of services rendered}}{\text{Physical assets}}
\]

Monetary assets turnover : \( \frac{\text{Net value of services rendered}}{\text{Monetary assets}} \)

Human resource assets turnover : \( \frac{\text{Net value of services rendered}}{\text{Human resource assets}} \)

These ratios may be used to examine how effectively these assets were used to generate the services. These ratios indicate the velocity of each group of assets under the disposal of the entity. Higher the value of these ratios, greater the capability of the organization to use such resources.

G. Structural Ratios: Ratios necessary to indicate efficiency in the generation of services and the efficiency in the use of assets have been discussed so far. But ratios may be computed to appraise the structural relations between the various assets, between assets and funds (i.e. among sources of such assets, funds and liabilities). These ratios are similar to balance sheet ratios of the profit seeking organizations.

As an example, a ratio may be drawn to reveal the structural relation between conventional assets and human resources.

Ratio of Conventional Assets to Human Resource Assets: This ratio has much significance to the NPOs, as it may assist in making a comparative analysis between the conventional assets and HR assets of the organization. In comparison to profit seeking organizations the HR value of NPOs should be much higher than the other conventional assets, for the HRs constitute the pivotal position of every NPOs. Hence, lower the ratios, more the HRs, more the prospect of deriving services from them for the benefit of the hapless people. The funding agencies should consider this point for evaluating the prospect of a NPO.
Although the HRs in NPOs are indispensable, the performance of other assets cannot be ignored. Because it is not possible by the HRs to render services without the help of physical and monetary assets. The conventional assets though occupy a small fraction of total assets of such organization, effective use of them also need scrutiny.

IV
A Comprehensive list of Ratios:

Analysis of financial statements through ratios is very much essential for sound decision making for the outsiders (e.g. investors, creditors, bankers etc.). Various financial ratios are used to analyse and interpret accounting reporting of an organization. We have discussed earlier a few of them considering their applicability to both POs and NPOs. This section attempts to provide a list of probable ratios which may be applied to NPOs for better understanding of accounting of those entities. These ratios can be categorised under three heads:

(a) Service and Sacrifice (similar to Revenue) Statement Ratios.
(b) Balance Sheet Ratios.
(c) Balance sheet and Service & Sacrifice (Revenue) statement ratios.

Service & Sacrifice Statement ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Margin Ratio</td>
<td>$\frac{\text{Sacrifices by the employees and organizers}}{\text{Net value of services}}$</td>
</tr>
<tr>
<td>2. Operating Ratio</td>
<td>$\frac{\text{Token Salary + Expenses}}{\text{Net value of services}}$</td>
</tr>
</tbody>
</table>
### Ratio Components

3. **Efficiency Ratio**
   - Components: 
     - **Sacrifice by employees and organization**
     - **Net value of services rendered**

4. **Token salary to net value of services rendered to society**
   - Components: 
     - **Token salary**
     - **Net value of services rendered**

5. **Expenses (excluding salary) to net value of services rendered**
   - Components: 
     - **Expenses**
     - **Net value of services rendered**

6. **Sacrifice of the employees to net value of services rendered**
   - Components: 
     - **Sacrifice by employees**
     - **Net value of services rendered**

7. **Sacrifices of the funding agencies to net value of services rendered**
   - Components: 
     - **Sacrifice by funding agencies**
     - **Net value of services rendered**

8. **Sacrifice of the organization to the net value of services rendered**
   - Components: 
     - **Sacrifice by the organization**
     - **Net value of services rendered**

### Balance Sheet Ratios

9. **Conventional assets to total assets**
   - Components: 
     - **Conventional assets**
     - **Physical assets + human resource assets**

10. **Human resource assets to total assets**
    - Components: 
      - **Human Resource assets**
      - **Physical assets + HR assets**

11. **Physical assets to human resource assets**
    - Components: 
      - **Physical assets**
      - **Human resource assets**

12. **Organization equity to social equity**
    - Components: 
      - **Organization Equity**
      - **Social Equity**

13. **Social equity to total assets**
    - Components: 
      - **Social Equity**
      - **Total assets**

14. **Organization Equity to total assets**
    - Components: 
      - **Organizational Equity**
      - **Total assets**
Balance Sheet and Service & Sacrifice Statement ratios

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Return on Investment</td>
<td><strong>Net Value of service</strong></td>
</tr>
<tr>
<td></td>
<td>Physical assets + HR assets</td>
</tr>
<tr>
<td>16. Turnover Ratio</td>
<td><strong>Gross value of services</strong></td>
</tr>
<tr>
<td></td>
<td>Physical assets + HR assets</td>
</tr>
<tr>
<td>17. Physical assets turnover</td>
<td><strong>Net value of services</strong></td>
</tr>
<tr>
<td></td>
<td>Physical assets</td>
</tr>
<tr>
<td>18. Human resource assets turnover</td>
<td><strong>Net value of services</strong></td>
</tr>
<tr>
<td></td>
<td>Human resource assets</td>
</tr>
<tr>
<td>19. Net value of services to physical assets</td>
<td><strong>Net value of services</strong></td>
</tr>
<tr>
<td></td>
<td>Physical assets</td>
</tr>
<tr>
<td>20. Net value of services to human resource assets</td>
<td><strong>Net value of services</strong></td>
</tr>
<tr>
<td></td>
<td>Human resource assets</td>
</tr>
<tr>
<td>21. Sacrifice by employees to physical assets</td>
<td><strong>Sacrifice by employees</strong></td>
</tr>
<tr>
<td></td>
<td>Physical assets</td>
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<tr>
<td>22. Sacrifice by employees to human resource assets</td>
<td><strong>Sacrifice by employees</strong></td>
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<td></td>
<td>Human resource assets</td>
</tr>
<tr>
<td>23. Sacrifice by organization to physical assets</td>
<td><strong>Sacrifice by organization</strong></td>
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<tr>
<td></td>
<td>Physical assets</td>
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<tr>
<td>24. Sacrifice by organization to Human resource assets</td>
<td><strong>Sacrifice by organization</strong></td>
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<tr>
<td></td>
<td>Human resource assets</td>
</tr>
<tr>
<td>25. Sacrifice by funding agencies to physical assets</td>
<td><strong>Sacrifice by funding agencies</strong></td>
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<tr>
<td></td>
<td>Physical assets</td>
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<tr>
<td>26. Sacrifice by funding agencies to Human resource assets</td>
<td><strong>Sacrifice by funding agencies</strong></td>
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<td></td>
<td>Human resource assets</td>
</tr>
<tr>
<td>27. Donations to organization equity</td>
<td><strong>Donations</strong></td>
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<td></td>
<td>Organizations' equity</td>
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<td>28. Donations to social equity</td>
<td><strong>Donations</strong></td>
</tr>
<tr>
<td></td>
<td>Social Equity</td>
</tr>
</tbody>
</table>

Users of the Ratios

The questions may arise: Who are interested in these ratios? Do these ratios provide any guideline to the interested parties? These may be discussed here briefly in the following way.
1. From Donor's angle: The funding agencies may find the following ratio useful:

\[
\frac{\text{Net value of services rendered}}{\text{Total donations received from donors}}
\]

This ratio is the reciprocal of donation and subscriptions received to total services provided to the society. The funding authorities through this ratio, may have some idea about the performance of the organizations and about the efficiency of the organization in utilising the funds in generating and distributing such services.

This ratio, therefore, indicates the services generated per rupee of donations granted to the organization.

2. From employee's angle: The personnel who have volunteered their services to the organization may also be desirous of evaluating their performances in the generation and distribution of services to the society. The following ratio may provide such information to these interested people.

\[
\frac{\text{Net value of services rendered}}{\text{Value of employee's sacrifice}}
\]

The higher the ratio, the greater is the proportion of sacrifice by these people. The reciprocal will indicate the value of the services rendered to the society per rupee of their sacrifice.

3. From the angle of the Society: The society as a whole may be interested in knowing the volume of services generated per rupee of sacrifices made by the associated employees and the organizers. The donors may want to learn about the effective use of their donations. The society barring the donors. On the other, is interested in the information on the
magnitude of services consumed by the hapless people. This can be identified by the following ratio.

\[
\frac{\text{Sacrifices of the employees & the organizers}}{\text{Net value of service generated}}
\]

The reciprocal of the same may be used to indicate the value of services to the beneficiaries per rupee of sacrifices of the employees and organizers.

4. From Organizer's view: The organizers always want to maximise services that can be rendered to the beneficiaries per rupee of expenses incurred, because the ultimate goal of these NPOs is to generate and distribute as much services as possible to the society. The following ratio may be used for the purpose:

\[
\frac{\text{Expenses Turnover Ratio}}{\text{Net value of services to the beneficiaries}} = \frac{\text{Net value of services to the beneficiaries}}{\text{Expenses incurred}}
\]

The ratio indicates value of services per rupee of expenses. In other words it may be considered as an index of efficient use of money spent for running the organization. Higher the ratio, more fruitful the expenses.

V

Conclusion

A large number of other ratios based on the proposed model can be computed to have an in depth study about the performances by a welfare organization. But model building is one thing and applying it to practice is another thing. In case of traditional accounting system, the question of measurement of the various elements in the accounting statement is not very difficult since they are based on transactions or exchanges. That is not so
with the application of the present model. Here value judgement, personal prejudices and other subjective matters create barriers to have a objective assessment of the items. Such limitations notwithstanding, a subjective measure will indicate a trend about the performances of the organization. Here let us make an attempt to verify the model with the help of data from real world situation so that its various components representing services rendered and sacrifices of various groups of people can be measured and reported in the proposed accounting format. Next chapter is an humble attempt to that end.