



A Study on Responsibility Accounting with reference to Indian Companies using ISM

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ABSTRACT

Responsibility Accounting has emerged as a vital managerial control mechanism in an era of increasing organisational complexity and decentralisation. It enables systematic performance evaluation across responsibility centres while aligning managerial accountability with organisational objectives.

Purpose: The purpose of this paper is to highlight the relevance and significance of Responsibility Accounting as an effective managerial control tool in modern organisations, particularly in the context of decentralised decision-making. The study aims to understand how responsibility centres—cost centres, profit centres, and investment centres—contribute to organisational goal achievement.

Design/Methodology/Approach: This study is based on expert opinion supported by an in-depth review of existing literature. Primary insights were collected from chartered accountants, commerce professors, and academicians to identify key elements influencing the implementation of Responsibility Accounting. Interpretive Structural Modelling (ISM) was employed to analyse the interrelationships among these elements and to develop a theoretical framework.

Findings: The ISM analysis revealed a structured hierarchy of three levels, demonstrating how different elements of Responsibility Accounting influence one another. The findings confirm that Responsibility Accounting serves as a foundation for evaluating managerial performance, controlling costs, planning revenues, and facilitating differential decision-making in decentralised organisations.

Research Limitations/Implications: The study is limited to expert opinions and does not include empirical data from organisations practicing Responsibility Accounting. The subjective nature of expert judgments may influence model formation and may vary across industries.

Originality/Value: This paper proposes an ISM-based model that conceptually explains the role and functioning of Responsibility Accounting in organisational settings. The model offers practical applicability for managers, accountants, and decision-makers seeking to strengthen organisational control mechanisms.

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INTRODUCTION

Cost control is an essential part of the company. It essentially means- to identify and to control (reduce) the costs of the company. This is where responsibility accounting comes into play. (Abo & Mohamad, 2010) To simply put- Responsibility accounting translates as the measurement of each centre of responsibility i.e., responsibility centre in the company. Responsibility Accounting is closely related to the performances related to revenue and cost (Meda, 2003). Hence, it is closely related to cost control and revenue centre along with other centres like profit etc. It is also based on the concept of autonomy and evaluation in the company. To combine both, Responsibility Accounting is that system which overall controls the administration and management that leads to the combined ability of the concepts of responsibility and authority (Zimmerman 2011). It combines three centres, which is further illustrated in the paper, investment centre, cost centre and profit centre.

In responsibility accounting, the role of the accountant is to manage decentralisation which comprises of delegation, segregation, providing autonomy etc. It also brings in the system of evaluating performances and serves as a tool for motivating the company. With this, it can be easily inferred that Responsibility Accounting, in practicality, is a system that helps in managing the difficulties of the organisation with the help of full-fledged tools like cost control management system, revenue model, evaluation system and other systems of such nature (Owino, et al. 2016). Herewith, another concept of integration of smaller units in the organisation comes into the picture and hence, requires a mention.

These smaller units can be seen working under a prescribed set of objectives and responsibility accounting works as their mother concern. (Horngren, Datar, & Foster, 2006) These can be small tools like budget control methods etc. Managers of responsibility accounting work under the values of accountability and maximising profitability while also working in the horizontal line of action.

LITERATURE REVIEW

Responsibility Accounting

(Patel, AT. 2013) in their study showcased that responsibility accounting is one of the most important control systems and which also evaluates the performance, hence, used as a tool in many companies. Generally, the size of organization determines the implementation of responsibility accounting. In this research author pointed out the wide-ranging companies gained a lot from this system in comparison with narrow ranging companies where every department and unit is liable for their performances. as stated by (Akenbor and Nkem, 2013) the responsibility accounting plays a vital role in judging the performances of various segments of companies and to reach their goals and objectives, they tried to find out questions based on their research and then formulated a hypothesis. The next step was making an appropriate questionnaire for which they took around 32 accountants' sample from the manufacturing industry. (Baiman and Noel, 1985) The analysis from the data which was collected was done by using various statistical tools such as chi square test and percentages. after this long research, it was concluded that for this type of manufacturing firms, segment evaluation is not suitable with responsibility

accounting. (Fakir. A.N.M. Asaduzzaman, 2014)

Responsibility Centre

Any functional entity in the organisation with its own goal, different functions, dedicated men power, policies and procedures and the financial report, is termed as Possibility centre. Responsibility Centre ensures the accomplishment of the organisation goals (Rowe, et al. 2007). To design a responsibility centre, the management must keep in mind the characteristics of each centre and the limit of the concerned managers authority (Bevan & Messner, 2008).

Making it simpler, we can say a large organisation may consist of various small groups these organisational groups set up a responsibility centre (cansey & Enahoro, 2012).

The types of Responsibility Centres are illustrated as-

1) Cost Centre - Location or apart where the cost is allocated the cost units for the purpose of cost control is defined as a cost centre. Cost centre is known as the basis for building up the records related to cost which are further used for budgeting and cost control.

2) Profit Centre - A unit of organisation which is mainly responsible for the revenues is a profit centre. What is the unit where the cost and revenues are allocated to measure the profitability of the unit?

3) Investment Centre - Unit in an organisation where a manager takes decision about the amount of investment by a unit.

Performance Reporting

The responsibility accounting is a control device; ineffective control system must be established so that the plants should be reported at the earliest to take the corrective measures for the future (Nyakuwanika et al.

2012). The deviations in the performance can be noted only when the performance is reported to the organisation. System of responsibility accounting mainly focuses on performance reporting also known as responsibility reports which are prepared for each responsibility centre. We can say that the performance report is a budget which gives us the comparison between the actual cost and the budgeted amount of controllable cost (Akenbor and Nkem, 2013).

These reports are to be issued at regular basis so that the information is readily available when it is required. Comparative figures to be included in the Performance Report wherein the comparison is made of the actual with budgeted figures (Bevan & Messner, 2008). Responsibility report gives the highlights of the efficiency and inefficiencies of a department. Proper care should be taken in order to draft a performance report so that the performance of the organisation is evaluated and necessary steps to be taken in case of deviations (Odum, 2006).

Transfer Pricing Policy

The monetary value which measures the value of goods and services transferred from one unit to another unit in the organisation is termed as Transfer Price. (Okoye 1997). However, transfer pricing is illustrated differently by various authors. (Adendiji 2005) defines it as the price which is associated with merchandise produced and manufactured by a specific unit which is responsible for all the decisions and further it is transmitted to next unit with the major aim of utilisation as a finished divisional product. While Dean, Feucht and Smith (2008) say that Transfer price is the price of merchandise and utilities which are fetched amongst

employees of an organisation which includes head organisation to its Subsidiary, Also Subsidiary to head organisation and allying various subsidiaries.

However, transfer pricing is an important term in an Organisation which helps in appraising the performance of the different units, it contributes in evaluating the revenues from selling unit and the expense by the buying unit.

Decentralization

The top management cannot look all the operations of the organisation and simultaneously take the decisions required, therefore here comes the need of delegating some functions to the subordinate managers (Safa, 2012). Decentralization is delegating the authority to the different units if the company, the process is said to be Decentralization. The units here include the different divisions, profit centres, cost centres, investment centres, etc.

A profit centre may not have the authority to make the decisions regarding investment but may have the authority to take the decisions regarding the expenses of the company. Therefore, we can see the variation in the extent of decentralisation (Rani, R. & Rani, M., 2015). Decentralisation is all about the decision makers working close with the market in order to make appropriate and faster decisions. Decentralisation is an effective tool in an organisation if it results in individuals sharing the work which is involved in decision making, Resulting in a good training programme for the employees. The main objective of the Responsibility Accounting is the decentralisation which ultimately results in the controllability. Delegating the authority and responsibility encourages initiatives

and motivates the managers wish thereby increases flexibility and reduces the communication gap in the organisation.

RESEARCH METHODOLOGY

To derive the model on the factors affecting Responsibility Accounting, Interpretive Structural Modelling (ISM) was taken into consideration. To come up with the final model, the steps are divided into 3 parts – First part is all about highlighting the variables with a well- defined literature review. The identified variables are then evaluated with the expert opinion. For level partitioning and the final model, the steps of ISM were practised.

Table 1- Identified Variables

Sr. No	Identified variable
V1	RESPONSIBILITY ACCOUNTING a. Control System b. Administrative accounting method
V2	RESPONSIBILITY CENTRE a. Cost and Profit Centre b. Investment Centre
V3	PERFORMANCE REPORTING a. Summary Report b. Controlling Deviation
V4	TRANSFER PRICING POLICY a. Arm length principle b. multi-disciplinary nature
V5	DECENTRALISATION a. Delegation of Authority

ISM – Research Method

ISM is a well- defined methodology, proposed by Warfield in 1976, which evaluates the relationship between specific items, which portrays a problem. For a particular problem, there may be many factors related to it. The relationship between the factors either direct or indirect relationship defines the situation more precisely than the individual factor.

The dimensions of ISM are as follows-

- It is a well- defined learning procedure.

- It gives a graphical representation of the relationship between different variables based on expert opinion.
- The derived model consists of the elements which are related to some extent.

The first step in the ISM model is Identifying the variables which are related to the problem which then merges with the technique of group problem solving. Taking into consideration the elements it and a contractual relation Structural Self Interaction Matrix (SSIM) is formed which relies on the differences amongst the identified variables. Following this, the reachability matrix is developed in the final stages level partitioning. Once this procedure is completed, the ISM model is derived.

SSIM MATRIX (Structural Self Interaction Matrix)

SIM defines the contextual relationship between the variables via expert opinion. For this study, Chartered Accountants, Commerce professors, Company Secretaries were contacted. The experts were requested to define the relationship between the variables with the values V, A, X and O.

‘i’ and ‘j’ acts as a connoting symbol here which which helps in defining the relationship among the variables.

The Rules of SSIM Matrix are as follows-

I – VERTICAL

J – HORIZONTAL

VAXO – Symbols are used to arrive at the relation.

V = I is a sub-set of J but J is not a sub-set of I.

A = I is not a sub-set of J and J is a sub-set of I.

X = I is a sub-set of J and J is also a sub-set of I.

O = none of them are the sub-sets of each other.

Table 2 - SSIM Matrix

J →	V5	V4	V3	V2	V1
I ↓					
V1	X	V	X	X	-
V2	V	X	V	-	-
V3	X	A	-	-	-
V4	X	-	-	-	-
V5	-	-	-	-	-

Reachability Matrix

The symbols V A X O are converted into the binary digits according to the below mentioned rule-

For $\{(i,j), (j,i)\}$ -

V – (1,0), A- (0,1) , X - (1,1) , O- (0,0)

Table 3 – Reachability Matrix

IJ	V1	V2	V3	V4	V5	Driving variable
V1	1	1	1	1	1	5
V2	1	1	1	1	1	5
V3	1	0	1	0	1	3
V4	0	1	1	1	1	4
V5	1	0	1	1	1	4
Dependent variable	4	3	5	4	5	

Level Partitioning

Reachability Matrix provides us the two main sets known as Reachability Set (RS) and Antecedent Set (AS). A precept of steps were followed to come up with the different levels.

Reachability Set - Horizontal

Antecedent Set - Vertical

Table 4 - Level Partitioning [Level 1]

IJ	Reachability matrix	Antecedent Matrix	RSAS	Level
V1	1,2,3,4,5	1,2,3,5	1,2,3,5	Level 1
V2	1,2,3,4,5	1,2,4	1,2,4	
V3	1,3,5	1,2,3,4,5	1,3,5	
V4	2,3,4,5	1,2,4,5	2,4,5	
V5	1,3,4,5	1,2,3,4,5	1,3,4,5	Level 1

Table 5 - Level Partitioning [Level 2]

IJ	Reachability matrix	Antecedent Matrix	RSAS	Level
V2	12345	124	24	Level 2
V3	135	12345	3	
V4	2345	1245	24	Level 2

Table 6 - Level Partitioning [Level 3]

IJ	Reachability matrix	Antecedent Matrix	RSAS	Level
V3	135	12345	3	Level 3

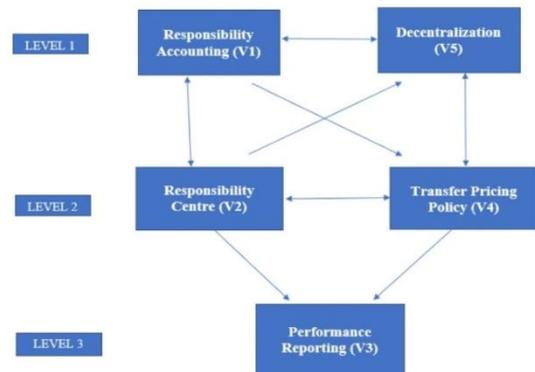
Level Matrix

The relationship between the five variables has been evaluated and presented into 3 level. The directions of the variables are depicted by arrows.

Table 7 – Level Matrix

LEVEL	VARIABLE
Level 1	Responsibility Accounting (V1)
Level 1	Decentralization (V5)
Level 2	Responsibility Centre (V2)
Level 2	Transfer Pricing Policy (V4)
Level 3	Performance Reporting (V3)

Figure 01- ISM Model on factors affecting Responsibility Accounting with reference to Indian Companies (Author’s Contribution)



CONCLUSION

The above figure represents the ISM model with a well-defined literature review and the formation of relationship between the variables. Here the five variables are categorised in three levels. The figure reflects the strong link between Responsibility Accounting and Decentralization (V1 & V5) as Decentralization is the main aspect of Responsibility Accounting. Also, we can see a strong link between Responsibility Centre and Transfer Pricing Policy (V2 & V4). Different units in the organisation need to transfer their goods and services with one another thereby resulting in the transfer pricing policy.

As Responsibility Centre plays a vital role in Responsibility Accounting, these two variables complement each other (V1 & V2). Performance Reporting (V3) is a requirement of Responsibility Centre (V2) as the performance of each unit is evaluated and a report is prepared for each centre. All the highlighted variables resulted as an essential part of Responsibility Accounting. The derived model can be further used to

enhance the practise of Responsibility Accounting and develop practical strategies for the today's competitive business world.

LIMITATIONS AND FURTHER RESEARCH DIRECTIONS

The proposed ISM model defines and explains the thoughts and experience of the specialised resource person, which brings the important insights but their application in the real world may demand certain modification. To come up with a true picture, the research must be repeated for certain institutes. Adding to this, some statistical data can go a good way with the expert opinion.

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