INTERPRETIVE STRUCTURAL MODELING APPROACH TO EFFECTIVE INTERNAL CONTROL PRACTICES FOR PREVENTION OF ACCOUNTING FRAUD IN SMALL BUSINESSES USING MICMAC ANALYSIS

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ABSTRACT

Internal control is one of the vital tools for management which can be compared to the nervous system of the organization that ensures effective execution of the organization's functions. In this study an attempt has been made to identify the important internal control practices in small businesses and study the relationship between them with the objective of prioritizing the practices for making the internal control system effective in the organization, primarily to detect and prevent fraudulent activities in financial matters. The study has been conducted employing interpretive structural modelling approach and MICMAC Analysis. The study shows the dependence and driving power of individual factors and interaction between them to point out relatively important factors the small business organisation must focus on to make the internal control system effective.

KEY WORDS

Internal control, Internal audit, fraud prevention, Micmac analysis, accounting control

1. INTRODUCTION

Internal control is a very important tool in the hands of the management to ensure accuracy of accounting records, to determine the weaker areas of operation, to safeguard the assets and capital and to ensure smooth flow of business. The underlying objective of IC system is optimum use of men, machine, money and material. IC also acts as a primary tool for the auditor to verify different aspects of the business and to aid the process of internal audit. Internal Control may be classified in to two parts viz. Accounting Control and Administrative Control. While accounting control consists of the plan of organization and all methods and procedures concerned with safeguarding of assets and reliability of financial records and statements, administrative control, on the other hand has a very wider scope including plans, policies, procedures of organization to the distribution of authority and the process of decision making.

Accounting Fraud may be defined as a false representation which is made intentionally with some malicious objective. The accounting fraud may take different shapes in a small business concern which can be listed as below:

1- Misappropriation of cash
2- Misappropriation of goods/materials/assets
3- Manipulation of accounts
4- Over-statement or Under-statement of profits

The type of fraud depends on the objective of the person committing it. Sometimes even top management is found to be involved in such frauds. Hence, detention and prevention of frauds in the organization is of utmost importance and a primary objective of IC system to be ensured.

2. OBJECTIVES OF THE STUDY

The study has the following objectives:

➢ To identify important internal control practices.
➢ To study the inter-relationship between the factors by finding dependency and driving power of each factor

3. FACTORS IDENTIFIED

Based on observation of traditional practices adopted by small businesses and available literatures, the following internal control factors have been identified to conduct the study.

SL No.	Code No. for Analysis	Name of the factor	Description
1	F1	Division of Work	Dividing the entire task between different persons so that one person doesn't get more than one responsibility. From financial control point of view, the person authorizing payment should not be the one verifying it. The person in charge of collection of cash should not be the one in charge of depositing the cash in the bank. Correspondence with debtors and creditors should be under charge of different persons.
2	F2	Centralization	It shows the separation between administrative control and financial control. No single person should have independent control over any aspect of the business.
3	F3	Regular Reconciliation	The sales figure and the bank balance should be regularly reconciled to avoid any error in recording receipt/income.
4	F4	Job rotation	The company should follow the policy of job rotation strictly, in which one person should not be assigned a single responsibility continuously for a long period of time. The responsibilities should be rotated between the personnel.
5	F5	Technology	As far as possible use of technological tools and mechanism should be employed in matter related to purchase, sales, receipt and disbursement of cash. Electronic

			locker should be used for the safe custody of cash as it is relatively safer, similarly accounting softwares should be used to record all transactions.
6	F6	Interim and Surprise Audit	Interim audit refers to auditing of books of accounts between two annual general meeting. An interim audit helps in preparation of periodical financial statements which helps the business in knowing whether their plans, policies and procedures are appropriate for achieving organizational objectives. Surprise audit may be defined as an audit procedure undertaken without any prior notice to the employees. It doesn't only help in early detection and prevention of errors and frauds, but also instils a sense of responsibility among the employees handling the financial matters.
7	F7	Quality of personnel	Good quality of personnel ensures fairness in financial matters without much supervision from the top management whereas bad quality of personnel needs strict supervision. Quality of personnel represents the extent of honesty, loyalty, co-operation and initiative among the workers,
8	F8	Strict Supervision at all level	The business can't access the quality of personnel. Hence, it is very much required to exercise strict supervision at all levels so that dishonest employees get no scope of committing fraud.
9	F9	Fraud Prevention Policy and Orientation	As far as possible, every company should have a written fraud prevention policy for the knowledge of employees, which must include punishment for the workers who indulge in fraudulent activities.
10	F10	Mandatory Leave Policy	Every member of the staffs should be encouraged to go on leave at least once in a year, which helps in detecting the fraudulent activities which might have been undertaken by the concerned employees.

Table-1

4. INTERPRETIVE STRUCTURAL MODELLING

Figure 1: Self Interaction Matrix:

		F10	F9	F8	F7	F6	F5	F4	F3	F2	F1
F1	Division of Work	O	A	X	V	O	O	X	X	X	
F2	Centralisation	O	A	X	A	X	O	X	O		
F3	Regular Reconciliation	O	A	X	X	X	O	X			
F4	Job Rotation	X	A	X	V	V	O				
F5	Technology	O	X	X	O	X					
F6	Interim Audit	O	A	V	V						
F7	Quality of Personnel	A	V	X							
F8	Strict Supervision at all level	X	X								
F9	Fraud Prevention Policy and Orientation	V									
F10	Mandatory Leave Policy										

Table-2

4.1. DETERMINATION OF SELF-INTERACTION MATRIX

In order to determine the code to be assigned to different factors in the self interaction matrix, it is necessary to analyse the relationship between the factors. It is called self interaction matrix as it shows the interaction of factors within themselves i.e. relationship of one factor with the others. So basically this matrix gives us idea about how the factors interact with each other. The codes used to denote the direction of relationship between the factors are as follows:

- V: Factor x will help achieve factor y
- A: Factor y will help achieve factor x
- X:Both factors x and y help achieve each other
- O: Both factors x and y are unrelated

The above matrix has been prepared keeping in view the above rules. Some of the examples are given below:

V: Division of work (F1) among the workers will help to achieve better quality of personnel (F7) as it will keep moral check on the employees.

A: Written fraud prevention policy and orientation (F9) of employees will help achieve job rotation (F4) as a part of the organisation's policy.

X: Use of technology in financial operation (F5) and strict supervision at all level (F8) will help achieve each other.

O: Division of work (F1) and mandatory leave policy (F10) are not related to each other.

Figure 2: Final Rechability Matrix:

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	Total of Rows
F1	1	1	1	1	0	0	1	1	0	0	6
F2	1	1	0	1	0	1	0	1	0	0	5
F3	1	0	1	1	0	1	1	1	0	0	6
F4	1	1	1	1	0	1	1	1	0	1	8
F5	0	0	0	0	1	1	0	1	1	0	4
F6	0	1	1	0	1	1	1	1	0	0	6
F7	0	1	1	0	0	0	1	1	1	0	5
F8	1	1	1	1	1	0	1	1	1	1	9
F9	1	1	1	1	1	1	0	1	1	1	9
F10	0	0	0	1	0	0	1	1	0	1	4
Total of Columns	6	7	7	7	4	6	7	10	4	4	

Table- 3

5. MICMAC ANALYSIS

Figure-3: Micmac Analysis Table:

Table- 4

5.1. EXPLAINING THE MICMAC ANALYSIS TABLE

The X-Axis in the above table represents the dependence power of the factors whereas the Y-Axis shows the driving power.

The Micmac table has been divided into four clusters as follows:

Sl. No.	Denoted by	Cluster name	Description	Factors which fall into the cluster
1	A	Autonomous Factors	Low dependency and low driving power	F5- Technology F10- Mandatory leave policy
2	B	Dependent Factors	High dependency but low driving power	F2- Centralization F7- Quality of personnel
3	C	Independent Factors	Low dependency but high driving power	F9- Fraud prevention policy and orientation
4	D	Linage Factors	High dependency and high driving power	F1- Division of work F3- Regular Reconciliation F4-Job rotation F6- Interim Audit F8- Strict supervision at all levels.

Table -5

6. INTERPRETATION

F5 (Use of technology) and F10 (Mandatory leave policy) come under the first Cluster-A, which signifies weak dependency as well as weak driving power. Hence these factors are autonomous and not inter-related. Use of technological devices for financial control or establishing a mandatory leave policy for the accounts staffs can be undertaken in isolation at the convenience of the management. Neither these factors depend on any other factor for their success, nor they require mandatory implementation of other factors in order to get implemented. However, weak driving power states that mere implementation of these two will not help the business much in detection and prevention of accounting frauds.

F2 (Centralization) and F7 (Quality of personnel) come under the Cluster-B which denotes weak driving power but strong dependency. It means separation of accounting and administrative work in the organization, behaviour, integrity and conduct of personnel are dependent on other factors and need proper implementation of other factors for their success. For e.g.- If the assignment of work is not appropriate or the organization lacks manpower, there is no meaning of separation of accounting and administrative work. Similarly if proper moral check is not exercised on the staffs or there is lack of proper supervision, their integrity and fairness can't be guaranteed.

F9 (Fraud prevention policy and orientation) comes under Cluster-C which shows low dependency but high driving power making this factor a very important one in prevention of accounting frauds. A written fraud prevention policy and orientation of accounts staffs on this policy upon their joining in the organization act

as a guide for the employees and exercise moral check on their activities. Like when we read a law stating that we will be punished for committing this and this crime, we tend to avoid such circumstances, similarly a written fraud prevention policy becomes much more effective in controlling accounting frauds in small organizations, as the staffs grow more conscious regarding the consequences of fraudulent activities.

F1 (Division of work), F3(Regular reconciliation), F4(job rotation), F6 (Interim audit) and F8 (Strict supervision at all level) come under Cluster-D which denotes high dependency as well as high driving power. These are called linkage factors and are dependent on each other for their implementation. Strong driving force also shows that, if implemented together, these factors will contribute the most in the purpose of controlling accounting frauds. Out of these F8 (Strict supervision at all level) with dependency index 10 and driving index 9 is the most significant factor, which shows even if all factors are employed properly, it will be futile unless strict supervision is exercise at all levels of the organization, starting from entries in books of accounts to physical custody of assets and financial resources. Regular review of staffs, their activities with proper feedback mechanism will help the most in early detection and prevention of accounting frauds in the organization. Hence, apart from employing all tools and techniques, the small business must also employ strict supervision of activities of their staffs for achieving the objectives of fraud prevention. Same goes for F6 (Surprise audit) as well having dependency and driving index of 8. Small businesses must include surprise audit in their internal control system for proper review of financial records, custody and books of accounts. Properly planned surprise audit while ensuring its confidentiality should be conducted at regular interval in the organization to keep the staffs under check and prevent the accounting frauds.

7. CONCLUSION

Internal control system is the backbone of any business organization. Small businesses in particular face several challenges like lack of manpower, technology, capital etc. But that doesn't mean the internal control aspect can be overlooked in such businesses. Because without internal control, any organization, small or large is exposed to the risk of financial frauds. Hence, IC system should be properly planned by the small businesses that will ensure optimum utilization of the limited resources they have at their disposal. As we have found above, apart from all traditional IC practices, surprise audit and strict supervision of personnel at all level in the organization should be given more importance for prevention of accounting frauds. Similarly, the division of work should be made in accordance with internal check principle i.e. the manner of work arrangement should be such that the activities of one staff automatically come under check of another staff. This practice makes it difficult for staffs to commit any fraud. Additionally their alertness for surprise audit, performance appraisal and review and awareness about consequences of fraudulent activities will ensure that the records of the business are fraud-proof and will make the financial statements reliable.

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