

Analysis of Corporate Financial Fraud Pathway Factors and Pathway Identification Research-Based on ISM-MICMAC Model

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Abstract. In recent years, China's listed companies in various fields have frequent financial fraud in the market—this paper first constructs five dimensions of corporate financial fraud factor identification and extracts twenty representative indicators. Secondly, the interpretative structural model is used to determine the hierarchical relationship between the influencing factors. Then, the cross-influence matrix multiplication is used to analyze the driving force and dependence of each influencing factor, and the dependence-driving force diagram is drawn to verify the rationality of the hierarchical relationship between the influencing factors in the interpretative structural model. Finally, based on the results of the ISM-MICMAC Model, the conclusions are drawn, and suggestions are put forward according to the actual situation. This paper analyzes the causes of corporate financial fraud, explores the means of corporate financial fraud, and constructs a framework for identifying financial fraud, which has specific reference significance for the identification, prevention, and governance of corporate financial fraud in China.

Keywords: ISM Model; MICMAC Model; Corporate Financial Fraud.

1. Introduction

Today, accounting fraud has become an important factor affecting the smooth operation of the economy. It is particularly important to analyze the internal mechanisms and identify the signals of financial fraud. Currently, relevant research on financial fraud shows that it is caused by the interaction of multiple factors. In the existing research, there are many studies on the means of financial fraud and preventive measures. Constructing a framework for the identification of financial fraud and studying its logical relationships, is conducive to extending systematic research on the causes and underlying mechanisms of financial fraud identification.

There have been many studies on the identification of financial fraud factors: Liu et al.[1] used emerging machine learning algorithms to predict and identify corporate financial fraud, facilitate real-time and efficient fraud identification and timely supervision, and achieve more accurate monitoring and analysis of economic operations, forecasting, and early warning, to improve the efficiency of market governance and promote economic development. Based on the ONE theory, Deng et al. [2] analyzed and explored the mechanisms of financial fraud in China by the qualitative comparative analysis of fuzzy sets, which enriched the research on financial fraud from the perspective of causal asymmetry. Luo et al.[3] studied the current situation and motivations of financial fraud governance in a sample of listed companies investigated and punished by the China Securities Regulatory Commission, focusing on the construction of a fraud governance model based on the fear of fraud, the inability to commit fraud, and the unwillingness to commit fraud, and proposes recommendations to strengthen the model at the four levels: prosecution, litigation, accountability, and claims, and claimed to promote governance and regulation. Ye et al. [4] used double-entry bookkeeping and accounting information system theory as the theoretical basis to construct a five-dimensional framework for identifying financial fraud, looking for fraud-related signals, forming measurable variables, and analyzing the logical relationships behind them, as well as discussing how to combine the analysis to achieve ex-ante fraud identification. Based on the

financial data of China's fraudulent listed companies in the past ten years. Sun et al. [5] used the fixed-effects regression model to conduct an empirical study on the mode of action and mechanism of influence of social audit supervision, and proposed measures and conclusions for the prevention of financial fraud. Zhou et al. [6] proposed Xscore, a financial fraud prediction model based on machine learning methods and introduced it into the field of financial fraud identification to promote the research and application of artificial intelligence and machine learning in accounting, and provide a reference for promoting the disclosure of high-quality financial information and maintaining the order of the capital market.

The existing research on financial fraud has focused on the identification of symptoms and recommendations for avoidance and measures of prevention, while there is a lack of systematic scientific research on the causes of financial fraud and its underlying mechanisms and logical relationships. Based on this, this paper introduces the theory of system engineering and discusses the index system of the causes of financial fraud in five dimensions, including finance and taxation, industry business, corporate governance, internal control, and digital characteristics. And it constructs an explanatory structure model and classifies the factors through the ISM-MICMAC research method.

Finally, according to the constructed index system and structural model, an in-depth discussion is conducted to propose targeted recommendations based on the causes of financial fraud.

Based on the causes of financial fraud, this paper is conducive to the prevention, identification, and reduction of financial fraud, and provides the methodology and decision-making database and for in-depth discussion of the factors causing financial fraud.

2. Identification of corporate financial fraud factors

2.1 Finance and taxation dimension

Financial statements are the main result of financial accounting work and are an important basis for reflecting the authenticity of the financial data of an enterprise by accounting standards. The revenue data is based on tax law, which is more rigid and less discretionary than accounting standards in terms of regulations and implementation [4]. In the financial aspect, there are mainly fictitious transactions of enterprises, whitewashing of financial statements, or avoidance of costs due to loopholes in accounting standards and intentional changes in accounting policies. In the tax aspect, there are abnormal tax means due to cost avoidance, resulting in relatively abnormal indicators of book-tax differences. Factors such as setting too high-performance high-performances and too high expectations of financial indicators lead to a mismatch between financial data and financial indicators, improper practices such as cost avoidance and tax evasion, and deficiencies in the quality of accounting information.

This dimension identifies linkage anomalies by comparing and analyzing the linkage index articulation relationship, which is highly correlated with financial fraud.

2.2 Industry business dimension

Business by industry is the business model and business model chosen by an enterprise in the course of its operation. The choice and emphasis of an enterprise's model and business vary from one industry chain to another and are often reflected in the financial statements.

The business dimension of the industry mainly involves the comparison of the prosperity indicators, operating indicators, and business expectation indicators of the industry in which the company operates, such as per capita output value, sales repayment cycle and industrial mean deviation, etc. [7].

Owing to the company's unreasonable property rights structure, financial distress enterprise status quo, and its financing capacity constraints, profitability threatened by the economic environment and future development needs, by comparing and auditing index data of the same industry, it is found that there are abnormal phenomena such as inflated operating profits and asset funds.

2.3 Corporate governance dimension

Corporate governance is an institutional arrangement for the supervision and coordination of internal institutions and multiple interests. Corporate governance often involves the effectiveness of internal governance structure and corporate system. A Good governance ecology can detect unreliability and even financial fraud in accounting information disclosures, while abnormal corporate governance ecology can become a hotbed for financial fraud [8].

Due to multiple factors such as the complexity of internal institutions, the form overweighs the essence, the defects of the governance system of appointment and removal of supervisors, as well as the loopholes in the external market supervision system and the defects of the legal and regulatory system and other factors, these led to internal inefficiencies within the company, the involvement of the governance layer, prompting collusion within the company, internal and external collusion. There are phenomena such as the stakeholders of the governance ecology authorizing the implementation of fictitious entities and transactions. Or due to the pressure and interest motivation brought to the shareholders and the actual controller by the performance commitment, which led to information distortion such as the authorization of the company's governance to inflate the operating income and profit.

2.4 Internal control dimension

Internal control is a restrictive division of labor system established in the process of enterprise financial management [7]. It is a mechanism jointly implemented by internal institutions and personnel to ensure the effectiveness of enterprise operations and the reliability and legitimacy of financial reports.

Due to the defects of internal control elements and the motivation of illegal collusion in external transactions, the lack of a scientific audit and billing system, the lack of independence of the working environment, and the lack of overall comprehensive quality of the current audit industry personnel and so on, these have led to inadequate supervision of controls, ineffective accounting systems, and information systems, and frequent replacement of personnel with inadequate working capacity. Carrying out accounting manipulations, leads to rigid internal controls of enterprises and inefficient operation efficiencies, stalling internal development and weakening core competitiveness, which in turn leads to the fraud of enterprise income and financial operations, as well as unfair related transaction cancellations.

2.5 Digital characteristics dimension

From business transactions in a company's industry to the preparation and disclosure of financial statements, digital data is usually involved. This article mainly involves the data characteristics following human manipulation of controls, with data covering all aspects of accounting information production.

The excessive pressure on management caused by the high market expectations of company performance, the difference between the professional ethics and ability of accountants, the difference in the understanding of the new accounting standards and regulatory requirements, and the need to pursue short-term profit effects, have led to the deviations from Benford's Law in the characteristics of financial statement accounts, the abnormal distribution of digital statistics. And the data are inconsistent with the industry characteristics, with a high potential for artificial manipulation.

As a result, financial fraud is carried out by inflating income and profits, and related party transactions are inflated by signing yin and yang contracts with customers.

In summary, the index system of financial fraud factors constructed in this paper is shown in Table 1:

Table 1 Financial Fraud Factors Index System Table

First Grade Indexes	Secondary Indexes	Indicator Description, Indicator Meaning, And Presentation	Indicator number	References
Finance And Taxation A ₁	Deficiencies in the quality of accounting information	Information asymmetry leads to efficiency decline, and inadequate disclosure leads to information distortion.	A ₁₁	[4],[7]
	Setting excessive sales performance incentive policy	Setting too aggressive targets, focusing too much on profit trends, and taking an aggressive approach to maintenance	A ₁₂	[4],[9]
	The mismatch between financial data and financial indicators	Unreasonable relationship between financial statement subjects	A ₁₃	[4]
	Excessive expectations of financial indicators	Too high expectations of indexes and a high tendency to use radical means to fabricate data	A ₁₄	[2],[4]
	Existing misconducts such as cost avoidance and tax evasion	The purpose is to seek greater operating profit and reduce tax costs	A ₁₅	[7]
Industry Business A ₂	Unreasonable ownership structure	Shares are too concentrated and lack checks and balances, resulting in increasing the possibility of actual controllers hollowing out interests.	A ₂₁	[3],[9]
	Focusing on future development requirements	Whitewashing financial statements to raise funds for future development	A ₂₂	[2],[8]
	The current situation of the business in financial distress	The limitations of business model selection restrict the financial situation and development.	A ₂₃	[2],[7]
	Profitability threatened by the economic environment	Reduced profitability of the business due to lack of market competitiveness	A ₂₄	[2],[9]
	Self-financing capacity constraints	Weak management and anti-risk ability resulting in limited financing ability	A ₂₅	[2],[8]
Corporate Governance A ₃	The redundant internal structure and form over substance	Due to the complexity of the organization, flexibility is greater than rigidity, and the operation efficiency is low.	A ₃₁	[3],[7]
	Deficiencies of the appointment and removal system of supervisors	The defects of the system lead to ineffective internal supervision and low efficiency of personnel work.	A ₃₂	[2],[3],[9]
	Imbalanced ownership structure and inefficient operation	The imbalance of internal structure leads to corporate deadlock and restricts long-term development.	A ₃₃	[1],[2],[8]
	Lack of laws and regulations, reducing the cost of fraud	The lack of laws and regulations leads to the low cost of multiple administrative penalties for fraud.	A ₃₄	[3],[9]
	Vulnerability of external	Due to the defects of the market	A ₃₅	[2],[4],[5]

	market supervision system	supervision system, enterprises find loopholes to avoid costs.		
Internal Control A ₄	Deficiencies in internal control elements	It easily leads to the deterioration of the business environment and increases business and financial risks.	A ₄₁	[4],[9]
	Lack of independence in the work of auditors	The audit work is reviewed by the insider of the firm, which weakens the independence of the work.	A ₄₂	[5],[9]
	The auditor lacks comprehensive professional quality	Lack of professionalism among audit practitioners due to lack of follow-up education	A ₄₃	[5],[9]
	Lack of scientificity in the audit and billing system	The system is not linked to time and loses the quality of practice to seek benefits.	A ₄₄	[3],[5],[9]
	Illegal conspiracy motives for foreign transactions	Related party transactions are conducted through collusion between internal and external stakeholders.	A ₄₅	[2],[8]
Digital Characteristics A ₅	Excessive pressure on management due to third-party expectations	Potentially inappropriate means to promote development due to high expectations	A ₅₁	[2],[9]
	Professional ethics of accountants	Professional ethics directly affects the scientific accuracy of accounting information.	A ₅₂	[4],[5]
	The pursuit of short-term profit-making effects	The pursuit of short-term profit leads to the confusion of accounting information caused by financial whitewash.	A ₅₃	[2],[9]
	Excessive market expectations for the company's performance	Highly susceptible to distortion of accounting information due to high-performance expectations	A ₅₄	[4],[7]
	New accounting standards and regulatory requirements are not fully understood	Information asymmetry leads to the deviation of understanding and the decline of accounting information quality.	A ₅₅	[4],[7]

3. ISM Model

ISM (Interpretative Structural Model) is a system engineering theory research method proposed by Professor John Warfield in the United States. It is mainly used to analyze complex socio-economic structural problems [10]. With the support of a computer, it uses a directed graph and adjacency matrix to examine the direct or indirect relationship between the levels of all involved elements. It transforms the complex relationship between various aspects into a multi-level structure model with precise levels. It can generate a transparent hierarchical structural model with unclear relationships between multiple elements.

The ISM steps are as follows:

STEP1: Analyze problems and clarify the goals of ISM.

STEP2: Through the analysis of the initial data, establish an 'adjacency matrix'.

STEP 3: Add the adjacency matrix and the unit matrix to obtain a new matrix.

STEP4: Establish 'reachable matrix' through calculation, 'reachable matrix' = 'adjacency matrix' + 'unit matrix', indicating that 'one element' will reach 'another element' after passing various paths. In the 'reachable matrix', '0' indicates that there is no arrival path between one element and another element, while one shows that there is an arrival path between one part and another element.

STEP5: Get the 'reachable set and antecedent set, including their sub-tables' by calculation. The table also contains 'reachable set R, 'antecedent set' Q, 'and their standard set $A = R \cap Q$; the reachable set R represents the set of elements containing 1 in the corresponding row of a component of the reachable matrix; the first set Q represents the set of parts containing 1 in the corresponding column of a particular element in the reachable matrix; the standard set A is the intersection of reachable set R and antecedent set Q.

STEP6: Hierarchical decomposition results are obtained by calculation.

4. MICMAC Model

J.C.Duperrin and M.Godet proposed MICMAC (cross-influence matrix multiplication), which is mainly used to analyze the relationship between the influencing factors and the role of the influencing factors in the system[11] The analysis results are displayed in the rectangular coordinate system, where the driving force is the sum of the element's rows in the 'reachable matrix, 'and the ordinate in the coordinate system indicates the influence degree of a specific influencing factor on other factors. Dependence is the sum of the columns of the element in the 'reachable matrix, 'and the abscissa in the coordinate system indicates the degree of influence of other influencing factors on the factor. According to its dependence and driving force, it can be divided into four categories: independent elements, contact elements, autonomous elements, and dependent elements. Among them, independent factors refer to highly driven but weakly dependent; the connection factor refers to the aspect with a strong driving force and dependence. The behavior related to this factor will affect other related behaviors, which in turn will affect the factor itself; autonomous factors refer to elements with poor driving force and dependence, which are less connected to other factors; dependent facets refer to factors with weak driving force but strong dependence.

The main steps of MICMAC are as follows:

STEP1: Collect data related to the problem to be solved.

STEP 2: Establish a causal relationship model and anticipate the relationship between all possible factors.

STEP 3: Set variables, including independence and dependence variables, and the selection should be operational and theoretical.

STEP4: Establish the model, use the MICMAC Model to establish and analyze the data, and input the set variables and the preset relationship into the model for calculation and simulation.

STEP5: Perform hierarchical analysis, and perform hierarchical analysis on the established MICMAC Model, including causality analysis.

5. Calculation and analysis

5.1 ISM calculation and analysis

In this paper, 10 experts were invited to conduct 0-1 Boolean on the relationship between each element scoring, to get the adjacency matrix shown in Table 2 and bring the data in Table 2 into SPSSPRO operation to get the reachable matrix shown in Table 3 and organize to get the hierarchical situation shown in Table 4 and draw the ISM interpretation structure shown in Figure 1.

Table 2 Adjacency Matrix

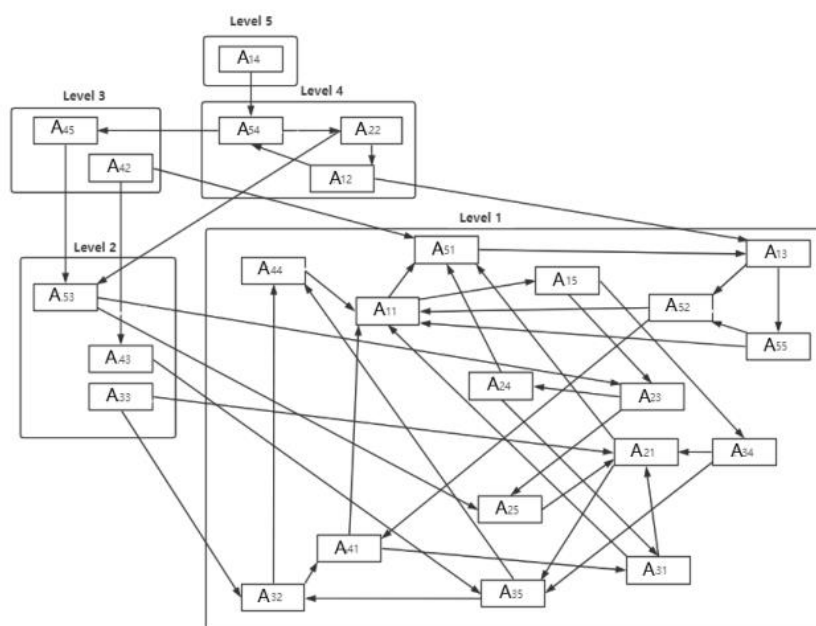
25*25	A ₁₁	A ₁₂	A ₁₃	A ₁₄	A ₁₅	A ₂₁	A ₂₂	A ₂₃	A ₂₄	A ₂₅	A ₃₁	A ₃₂	A ₃₃	A ₃₄	A ₃₅	A ₄₁	A ₄₂	A ₄₃	A ₄₄	A ₄₅	A ₅₁	A ₅₂	A ₅₃	A ₅₄	A ₅₅
A ₁₁	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
A ₁₂	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
A ₁₃	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
A ₁₄	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
A ₁₅	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
A ₂₁	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
A ₂₂	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
A ₂₃	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₂₄	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
A ₂₅	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₃₁	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₃₂	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
A ₃₃	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₃₄	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A ₃₅	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
A ₄₁	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₄₂	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
A ₄₃	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A ₄₄	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₄₅	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
A ₅₁	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₅₂	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
A ₅₃	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A ₅₄	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
A ₅₅	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

Table 3 Reachable Matrix

25*25	A ₁₁	A ₁₂	A ₁₃	A ₁₄	A ₁₅	A ₂₁	A ₂₂	A ₂₃	A ₂₄	A ₂₅	A ₃₁	A ₃₂	A ₃₃	A ₃₄	A ₃₅	A ₄₁	A ₄₂	A ₄₃	A ₄₄	A ₄₅	A ₅₁	A ₅₂	A ₅₃	A ₅₄	A ₅₅
A ₁₁	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₁₂	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	1	1	1
A ₁₃	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₁₄	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	1	1	1
A ₁₅	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₂₁	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₂₂	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	1	1	1
A ₂₃	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₂₄	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₂₅	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₃₁	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₃₂	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₃₃	1	0	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	0	0	1
A ₃₄	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₃₅	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₄₁	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₄₂	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0	0	1
A ₄₃	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	1	1	0	1	1	0	0	1
A ₄₄	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₄₅	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	1	0	1
A ₅₁	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₅₂	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1
A ₅₃	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	1	0	1
A ₅₄	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	1	1	1
A ₅₅	1	0	1	0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	1	1	0	0	1

Table 4 Level situation

Levels	Elements
Level 1	A ₁₁ , A ₁₃ , A ₁₅ , A ₂₁ , A ₂₃ , A ₂₄ , A ₂₅ , A ₃₁ , A ₃₂ , A ₃₄ , A ₃₅ , A ₄₁ , A ₄₄ , A ₅₁ , A ₅₂ , A ₅₅
Level 2	A ₃₃ , A ₄₃ , A ₅₃
Level 3	A ₄₂ , A ₄₅
Level 4	A ₁₂ , A ₂₂ , A ₅₄
Level 5	A ₁₄


Figure 1 Hierarchical Chart

With the above calculation results, the study of this paper of 25 elements can be divided into five tiers.

The first level elements are deficiencies in accounting information quality, the mismatch between financial data and financial indicators, the existence of cost avoidance, tax evasion, and other misconduct, unreasonable property rights struct, the current status of financially distressed enterprises, profitability threatened by the economic environment, constraints on their financing ability, redundant internal organizations, form over substance, deficiencies in the appointment and removal system of supervisors, lack of laws and regulations to reduce the cost of fraud, loopholes in the external market regulatory system The company's internal control elements are deficient, the audit and auditing billing system lacks scientificity, meeting third-party expectations and excessive pressure on management, professional ethics of accounting staff, new accounting standards and regulatory requirements are not well understood. Tier 2 elements include an imbalance in equity structure, inefficient operation, lack of comprehensive business quality of auditors, and pursuit of short-term profit-making effects. The third level element is the lack of independence of auditors' work and illegal collusimotivesive in external transactions. The 4th level elements are setting excessive sales performance incentives, focusing on future development needs, and high market expectations of company performance. The 5th level element is excessive expectations of financial indicators.

5.2 MICMAC Calculation and Analysis

The MICMAC method can classify the system elements and help to clarify the roles of the 25 elements in the system and the interrelationships among the elements in this paper. Based on the reachability matrix calculated in section 5.1, the horizontal and vertical sums of each element are obtained by arithmetic, which is noted as driving force and dependency, with driving force indicating the degree of influence of the element on other elements and dependency indicating the degree of

influence of the element on other elements. The quadrants to which each factor belongs are divided into I, II, III, and IV, which are four different quadrants of autonomous factor, independent factor, associated factor, and dependent factor, respectively, and drawn in the MICMAC diagram, as shown in Figure 2.

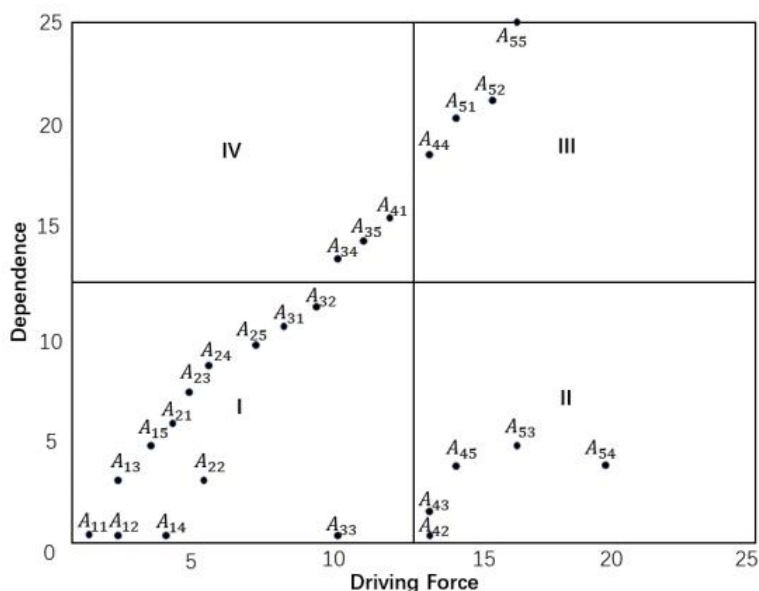


Figure 2 Power Map

In Figure 2, it can be found that there are deficiencies in the quality of accounting information (A₁₁), setting excessive sales performance incentives (A₁₂), the mismatch between financial data and financial indicators (A₁₃), excessive expectations of financial indicators (A₁₄), improper behaviors such as cost avoidance and tax evasion (A₁₅), unreasonable ownership structure (A₂₁), focus on future development needs (A₂₂), financial distress corporate status (A₂₃), profitability is threatened by the economic environment (A₂₄), its financing capacity constraints (A₂₅), redundant internal institutions, form over substance (A₃₁), defects in the appointment and removal system of supervisors (A₃₂), imbalance in the equity structure and inefficient operation (A₃₃) is located in quadrant I, the driving force and dependence are low, but has the most direct impact on financial fraud, which cannot be ignored for financial fraud.

Lack of independence in the work of auditors (A₄₂), lack of comprehensive business quality of auditors (A₄₃), illegal collusion motive in external transactions (A₄₅), the pursuit of short-term profit-seeking effect (A₅₃), and high market expectations of company performance (A₅₄) are located in quadrant II, with higher driving forces and less dependence, these are less influenced by other factors, but more influential on other factors, and are the core factors of financial fraud.

Lack of science in audit billing system (A₄₄), meeting third party expectations and excessive pressure on management (A₅₁), professional ethics of accounting staff (A₅₂), new accounting standards, and regulatory requirements not well understood (A₅₅) are located in quadrant III with higher drivers and dependencies, which are vulnerable to and have a greater impact on other factors and are the more relevant factors for financial fraud.

The lack of laws and regulations to reduce the cost of fraud (A₃₄), loopholes in the external market regulatory system (A₃₅), and deficiencies in internal control elements (A₄₁) are located in quadrant IV, which is less driven, more dependent, and susceptible to other factors, but less influential to other factors, and are factors that affect financial fraud at a deeper level and therefore cannot be ignored.

5.3 Financial Fraud Factors Recommendations

Through the above calculations and analysis, the following recommendations are made for corporate financial fraud:

In terms of financial taxation (A_1) and numerical characteristics (A_5), we should comply with the new accounting standards and regulatory requirements to ensure the quality of accounting information and to reflect rigor. We will resolutely refrain from overestimating the strength of enterprises, avoid setting excessive financial performance, excessive market performance, and pursuing excessive financial data, and resolutely combat cost avoidance, tax evasion, and other improper behaviors.

In terms of industry business (A_2), companies should reasonably focus on future development needs and explore new financing paths. Make them break through their financing capacity limitations, and financial dilemma status quo, and avoid unreasonable property rights and equity structure. It is important to set reasonable performance targets that meet future development needs, strengthen the management of the company's supervisory bodies and continuously learn from the regulatory experience of companies in other countries.

In terms of corporate governance (A_3), the external market supervision of enterprises should be strengthened. The penalties for financial fraud of listed companies in China are not very heavy and will generally be in the form of fines as a means of punishment. Therefore, it is important to improve the intensity of regulation to fundamentally reduce the occurrence of fraudulent behaviors.

In terms of internal control (A_4), firstly we should clarify the principles of internal control of enterprises and stabilize the internal control structure. Secondly, we should focus on internal control auditing, establish a scientific and reasonable auditing and audit system, improve the requirements for auditors, and do a good job of auditing. For the motive of illegal collusion in external transactions, it is necessary to fundamentally improve the internal control system and crack down on any behavior that makes internal activities inefficient to avoid financial fraud.

6. Conclusion

Based on the ISM-MICMAC Model, this paper sorts out the five dimensions of financial fraud identification, establishes 20 indicators, explores the mechanism of corporate financial fraud, and draws the following conclusions:

Firstly, the influence of simple factors cannot constitute a necessary condition for corporate financial fraud. The interconnection of multiple elements forms five levels of influence that easily lead to financial fraud: the financial tax dimension, industry business dimension, corporate governance dimension, internal control dimension, and digital feature dimension.

Secondly, by analyzing and measuring the dependence and driving force of the indicators in the two models, it is found that the lack of independence of auditors, the lack of professional quality of auditors, the motivation of illegal collusion in external transactions, the pursuit of short-term profit effect, and the high expectation of the company's performance market are the core factors leading to the occurrence of fraud factors.

Through the empirical analysis process, this paper verifies that the ISM-MICMAC Model has a significant recognition effect on financial fraud. The results obtained have specific enlightenment significance for corporate autonomy, supervision and control, and protection of owners' rights and interests. However, due to its limited ability in the research process, there are still some areas for improvement in the systematic construction of the model and the standardized selection of samples. The follow-up research can start by expanding the reliability of establishing research-level verification indicators and broadening the channels of verification indicators.

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