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Application of the MICMAC Interpretive Structural Technique in Assessing the Quality of Fair Value Accounting Information in Banks

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ABSTRACT

The quality of fair value accounting information in banks contributes to the transparency and accuracy of financial information. The purpose of this article is to apply MICMAC's interpretive structural technique to the quality of fair value accounting information in banks. The research is practiced and scrutinized. The community is investigating managers and experts in the banking industry, which has been used by the judicial sampling method. First, using the Delphi technique, sieve and evaluate identification components. The following is a model using the interpretive structural method. Excel and MICMAC software are used. According to the results obtained in the qualitative analysis, 9 main criteria were identified. The main criteria include flexibility, supervision, laws and regulations, organizational conditions, knowledge and education, government agents, need assessment, economic growth, and transparency of performance. These 9 main criteria are the need for strengthening as well as an important factor in the use of fair value accounting in banks. Also, based on the interpretive structural model, a hierarchical model is formed. Fair value accounting conclusions allow banks to manage their financial resources more effectively. Fair valuation assures bank managers that assets and debts are properly evaluated and that they can do more economic activities through the optimal use of these resources. **©authors**

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1. Introduction

The quality of accounting information in banks enhances the transparency and accuracy of financial data. Fair value enables banks to report their assets and debts at market value, reflecting actual economic conditions and market fluctuations. This reporting method makes bank financial information more reliable and understandable for shareholders, investors, and other stakeholders. As a result, evaluating the financial performance and liquidity status of banks is facilitated, leading to better and more timely decision-making.

In addition, the use of fair value can help to better identify and manage risks. With a more precise reflection of the value of assets and debt, banks can identify weaknesses and financial threats promptly and take the necessary measures to address them. Also, this method reduces the mismatch of information and increases financial transparency in the banking system, ultimately leading to increased public confidence and financial sustainability of banks. In general, the quality of fair value of accounting information plays a crucial role in enhancing the performance and financial stability of banks. Fair Value Accounting is a financial reporting method that allows companies to report assets and liabilities based on estimated prices that would be received if they were to sell assets or settle debts (Dong, 2022). According to fair value accounting, companies report losses caused by devaluation or increase in their debt (Santoni et al., 2023). It is possible to estimate fair value through fair value accounting. In other words, according to fair value accounting, companies report losses caused by the depreciation of assets or increase their debt (Sampaio et al., 2022). These losses can lead to a decrease in owners' salaries and the profits of companies and institutions. Fair value accounting advocates believe that this method reveals complete information. Accounting transparency ensures that financial statements are accurate and provide comprehensive information on the institution's activities and the company's financial status. These losses may lead to a decrease in ownership rights. And make a profit (Jiang et al., 2024). In today's dynamic economic world, banks play a vital role in providing financial services and fostering trust in financial markets. Fair value in banks has emerged as one of the key concepts in the field of financial accounting. This concept involves establishing a fair price for bank assets and debt, which significantly influences the value of financial assets and bank financial results (Alimoradi et al., 2019). Identifying a fair evaluation accounting model in banks is vital because it plays an important role in managerial decisions, resource allocation, and bank performance evaluation (Badri et al., 2023). On the other hand, this pattern must comply with international accounting standards to ensure market trust and transparency of information. This introduction aims to identify and present a fair evaluation accounting model in banks to establish a robust foundation for strategic and economic decisions in the industry (Ozili et al., 2021).

The continuous and rapid advancements in the activities and types of economic entities have heightened the necessity for economic units to prepare and provide pertinent, trustworthy, and comparable financial information (Bick et al., 2017). One of the ways to obtain useful information for users to make decisions is through the correct and accurate estimation of accounting elements. Among the measurement bases that have received more attention recently is the fair value of assets. This approach, which emphasizes the features related to the presentation of information, has sparked discussions about its use in place of or alongside historical prices (Fiechter et al., 2017; Badia et al., 2017). Market discipline has become increasingly important with the liberalization and deregulation of financial markets. The market increasingly penalizes and rewards the decisions made by the board and management of listed companies. Several international organizations emphasize the benefits of enhanced market discipline for society, highlighting the

importance of market regulators in ensuring financial stability. To optimize market orders, the market requires information (Cristea et al., 2015). One source of information is the accounts of the companies in question, so it is important that they provide as true and fair a view as possible. Annual financial statements should focus more on measuring and presenting current values. For financial companies, the heightened emphasis on current values has led to the introduction of the fair value principle as the new valuation standard. Greater utilization of up-to-date values in financial statement presentation facilitates market opportunities for exercising control (Chen et al., 2020). The adoption of fair value accounting practices has been mandated in the banking industry in many jurisdictions that have deviated from traditional historical cost accounting practices. However, fair value procedures raise reliability concerns because they are not based on transactions. The financial performance of banks has been very volatile over the last few decades. The theories of banking have evolved from the theory of credit creation to the theory of financial intermediation, which is more dominant today. However, there are still proponents of both the credit creation theory and the deficit reserve theory. The three major theories of banking are mostly based on financial data prepared using historical cost accounting principles. Recent developments in fair value accounting in the banking sector have raised concerns about banking theories related to the financial performance of banks in terms of efficiency and the stability of the financial system. How is the application of MICMAC interpretative structural technique in the quality of fair value accounting information in banks?

2. Literature Review

Definition of fair value

Fair value, defined as market value, was developed during the 18th century (Barth, 1994). However, it was based on various elements from earlier periods, with Adam Smith's "Wealth of Nations" being the most relevant. Despite these earlier developments, recently standard setters have become more committed to fair value measurement and have issued SFAS 107 (Financial Accounting Standards Board, 1991) and SFAS 115 (International Accounting Standards Board, 2003; Abbott et al., 2018). In addition, SFAS 133 (International Accounting Standards Board, 2011) established accounting and reporting standards for derivative instruments. These include specific derivative instruments embedded in other contracts for hedging activities, as well as International Accounting Standard 39 (International Accounting Standards Board, 2003), which provides principles for recognizing and measuring financial assets, financial liabilities, and certain contracts for the purchase or sale of items. Created non-financial. It was later replaced by IFRS 9 Financial Instruments (International Accounting Standards Board, 2014). It also prescribes principles for identifying financial instruments and hedge accounting. These regulations are similar in standardizing derivatives and other financial instruments (Adwan et al., 2020).

A further extension of this definition suggests that if market participants consider the measurement date characteristics of an asset or liability when pricing, entities should also consider these characteristics when applying fair value measurements (Defond et al, 2020). SFAS 157 (FASB, 2006) and IFRS 13 (IFRS, 2011) established a set of three hierarchical levels for measuring fair value. Level 1 inputs can be measured through readily available and observable quoted prices in active markets for identical assets or liabilities. Level 2 inputs refer to inputs (other than prices quoted in Level 1) that are observable directly or indirectly through cross-checking with observable market data for similar assets or liabilities in active or inactive markets and other relevant market data. Level 3 inputs are unobservable inputs that reflect the entity's reporting assumptions about the assumptions of market participants in pricing the asset or liability, including assumptions about risk (Alexander et al,

2012). Fair value accounting uses several techniques to periodically review the financial values of financial assets such as stocks, options, swaps, and other tradable items. However, Level 1, 2 and 3 assets are classified according to their reliability. Level 1 assets are easily observed market values, while level 2 and 3 assets are valued based on the prices of comparable or financial models or the company's reporting assumptions, respectively (Wayne et al, 2009). These definitions are settled and, despite the fact that they may appear unchallenged, are a set of hybrid ideas and assumptions that are used to estimate the prices that an asset or liability will fetch in the market (Barth, 1994). However, the emergence of the 2008-2009 financial crisis brought numerous criticisms from financial leaders (Zhang et al, 2020). It has been argued that fair value measurement is flawed to the extent that well-intentioned management estimates are based on faulty forecasts and assumptions. (Al-janabi et al, 2021).

IFRS 13 defines fair value as "the price received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date". A further extension of this definition suggests that if market participants consider the measurement date characteristics of an asset or liability when pricing, entities should also consider these characteristics when applying fair value measurements (Defond et al., 2020). SFAS 157 (FASB, 2006) and IFRS 13 (IFRS, 2011) established a set of three hierarchical levels for measuring fair value. Level 1 inputs can be measured through readily available and observable quoted prices in active markets for identical assets or liabilities. Level 2 inputs refer to inputs (other than prices quoted in Level 1) that are observable directly or indirectly through cross-checking with market data for similar assets or liabilities in active or inactive markets and other relevant market data. Level 3 inputs are unobservable inputs that reflect the entity's reporting assumptions regarding the assumptions of market participants in pricing the asset or liability, including assumptions about risk (Alexander et al., 2012). Fair value accounting employs various techniques to regularly assess the financial values of financial assets, such as stocks, options, swaps, and other tradable items. ### Level 1 assets have easily observable market values, while level 2 and 3 assets are valued based on the prices of comparable assets or financial models, or the company's reporting assumptions, respectively (Wayne et al., 2009). These definitions are established and, although they may seem unquestioned, they represent a combination of ideas and assumptions that are utilized to predict the prices that an asset or liability will attain in the market (Barth, 1994). However, the emergence of the 2008-2009 financial crisis brought numerous criticisms from financial leaders (Zhang et al., 2020; Al-janabi et al., 2021; Liao et al., 2022). In the following, internal and external research have been reviewed in line with the research objectives. Sahibgharani et al. (2023) conducted a study titled "Investigating the Relationship between Asset Revaluation and Stock Price Fluctuations and Analyzing Shareholders' Behavior." Due to the current increase in inflation prevailing in the country and the relevance of the issue of revaluation among individuals in the capital market, several companies are taking steps to address it, making it a significant topic. The impact of revaluation on stock prices and the news influencing company shares lead to varied responses from users, investors, creditors, and shareholders. Sediqi et al. (2018) conducted a study titled "The Effect of Applying the Fair Value Approach on the Performance Indicators of Small and Medium Investment Companies." The results showed that the ratio of return on assets and return on equity, as performance indicators, do not change significantly after the application of the international standard of financial reporting for small and medium enterprises. Moradi et al. (2018) presented a research study titled "Challenges and Opportunities of Measuring Fair Values in Line with the Implementation of International Financial Reporting Standards in Iran." In order to implement international financial reporting standards, attention must

be paid not only to the economic environment, behavioral factors, and measuring fair values but also to the crucial aspect of training accountants and auditors. Measuring and reporting fair values also enhance accuracy, transparency, and comparability, ultimately improving the usefulness of accounting information.

Moghadsi et al. (2018) presented a research study titled "Measuring and Reporting the Value of Facilities Provided by Banks." After the recent financial crisis, there has been a trend towards measuring and reporting the prospective approach of expected credit losses instead of the retrospective approach of realized losses. This shift has led to a move from the historical cost method to the measurement and disclosure of the fair value of bank loans. Mergan et al. (2017) conducted a study titled "Explanation of Accounting Fair Value and Accounting Conservatism in Companies Listed on the Tehran Stock Exchange." The results of the research show that accounting conservatism has a positive effect on the relationship between the fair value of investments and future cash flows. It is significant to note that accounting conservatism does not affect the relationship between the fair value of investments and stock prices. Haji Kermani et al. (2016) conducted a study titled "The Effect of Using Fair Value in Financial Reports on Improving the Value Relevance of Accounting Information." The results of this research show that the relationship between profit per common share and book value is higher in companies that used fair value compared to companies that used the cost system. Karmi et al. (2016) presented a research study titled "The Development of a Fair Value System Implementation Model in Iran with an Emphasis on Measurement." Using the database theory research method, a model was presented that includes causal conditions, strategies, background conditions, intervening conditions, and consequences related to the implementation of fair value, with a focus on the measurement sector in Iran. The attention and development of the field of evaluation and valuation within the country, along with the establishment of evaluation standards for independent evaluators, are among the significant accomplishments of the research mentioned. Sampaio et al. (2022) presented a research study titled "How the 2008-2009 Financial Crisis Shaped the Fair Value Accounting Literature: A Bibliometric Approach." The results show a sharp increase in the fair value accounting literature that began due to the 2008-2009 financial crisis. This indicates a further shift from fair value accounting regulations to topics such as fair value measurement, earnings management, value communication, and banks. Stay relevant.

Dong (2022) presented a study titled "Research on Fair Value and Bank Accounting." Studies related to banks' accounting practices for valuing financial instruments and assessing risks, as well as banks' discretion in managing regulatory capital and profits, are reviewed. Takacs et al. (2021) presented a research study titled "The Effect of Fair value on the Quality of Banks' Profit: Empirical Evidence from Developed and Emerging European Countries." The results showed that the change in interest observed throughout the entire period and the size of banks significantly and negatively affect the value of assets, while AEQ has a significant positive effect. We show that the latter is valid only for developed countries. The analysis of financial information of companies was carried out using the Automatic Distributed Lag (ARDL) in the EViews software environment. The findings of the present study show that fair value accounting does not have a significant effect on the stock price, not only in the short term but also in the long term. In 2020, a study titled "Does fair value accounting contribute to systematic risk in the banking industry?" was presented. The research findings should be of interest to regulators and policymakers, as recent regulatory changes in light of the Basel III recommendations require the inclusion of unrealized gains and losses in securities. AFS is a component of regulatory capital for banks using advanced approaches.

Innovating the quality of fair value accounting information in banks requires the use of advanced technologies and modern data analysis methods. One way to innovate is by leveraging artificial intelligence and machine learning to analyze large volumes of financial and market data. These technologies can identify hidden patterns and trends, improving the accuracy of valuations. Additionally, using blockchain technology can increase the transparency and security of data, enhancing the traceability and verification of information, which in turn boosts confidence in the valuation process.

Furthermore, developing digital platforms for real-time data collection and analysis can lead to improved information quality. These platforms can provide faster and more accurate access to the data needed for valuations. Collaborating with research institutions and universities to conduct advanced and applied studies in the field of fair value assessment can also contribute to the development of new methods and tools. Sharing the results of these studies and implementing them in practice can ensure continuous innovation and improvement in the quality of accounting information in banks.

3. Methodology

The research has been conducted using both qualitative and quantitative methods to identify and present the accounting model of fair value in banks. Mixed research is a method that involves collecting, analyzing, and combining both quantitative and qualitative data in a single study or a set of studies. This research has been conducted using an applied and survey methodology, where a set of respondents is used to collect data. In this research, the target population consists of managers and experts in the banking industry. They were selected using the judgmental sampling method, with a total of 12 participants. Through the library technique, the essential components of fair value accounting in banks were identified. First, the Delphi technique was used for screening and evaluating the identification components. In the following, modeling has been conducted using the Delphi method and the interpretive structural method. EXCEL and MICMAC software were used.

4. Findings

The Delphi part of this study was conducted based on the views of 12 experts familiar with the concepts of fair value in banking. In terms of gender, 8 people are male and 4 are female. Finally, 5 people have between 10 and 15 years of work experience, and 7 people have more than 15 years of work experience, as indicated in Table 1 based on their frequency.

Table 1. *Demographic Characteristics of Experts*

	category	Percent	Frequency
gender	Man	66%	8
	Female	34%	4
Work Experience	10 to 15 years	42%	5
	Above 15 years	58%	7
degree of education	Masters	50%	6
	P.H.D	50%	6
Total		12	12

In this study, nine main components have been identified through an examination of the research literature. In the following study, the Delphi technique was employed to verify the authenticity of the identified dimensions and components, as well as to establish the validity of these components and address the research questions. The Delphi method was conducted as follows.

Table 2*. Delphi Analysis of Identified Components*

Component	Symbol	Average	standard deviation	Condition
Supervision	C1	6.50	0.80	confirmation
Government agents	C2	7.00	1.17	confirmation
flexibility	C3	6.00	1.02	confirmation
Terms and Conditions	C4	5.50	0.75	confirmation
needs assessment	C5	6.00	0.98	confirmation

Component	Symbol	Average	standard deviation	Condition
Organizational conditions	C6	7.00	0.80	confirmation
Performance transparency	C7	6.00	0.49	confirmation
Knowledge and education	C8	6.00	0.75	confirmation
Economic Growth	C9	6.00	0.75	confirmation
Number of respondents		12		
Kendall statistics		0.669		
Chi square statistic		129.18		
Degrees of freedom		8		
Significance level		0.000		

Based on the results obtained in the Delphi technique, all scores above 5 have been achieved. Therefore, no components were removed, and all were approved. Kendall's statistic is also 0.669, confirming that Delphi is confirmed in the first round. In the following, the Interpretive Structural Modeling (ISM) method was utilized in the MICMAC software for data analysis. Designing an Interpretive Structural Model (ISM) is a method used to investigate the impact of each variable on other variables. This approach is comprehensive and aims to measure communication effectively. The design is crucial in developing the framework of the model to ensure that the research's overall objectives can be achieved. The first step in structural-interpretive modeling is to calculate the internal relationships of the indicators. Experts' viewpoints are used to illustrate the internal relationships between indicators. The matrix obtained in this step shows which variables are affected by a variable and from which variables it receives influence.

Conventionally, symbols such as Table 3 are used to identify the relationship pattern of elements.

Table 3. *Modes and signs used in expressing the relationship of the identified indicators*

O	X	A	V
Absence of relationship	Two-way relationship	Variable j affects i	Variable i affects j

The structural self-interaction matrix comprises the dimensions and indicators of the study, which are compared using four modes of conceptual relations. The resulting information is formed based on the method of interpretive structural modeling of summation and the final structural self-interaction matrix. According to the signs listed in Table 3, the structural self-interaction matrix will be shown in Table 4.

Table 4. *Structural self-interaction matrix of SSIM*

C9	C8	C7	C6	C5	C4	C3	C2	C1	Variable
V	V	V	A	V	X	V	X		C1
V	V	V	A	V	X	V			C2
V	A	X	A	A	A				C3
V	V	V	A	V					C4
V	X	V	A						C5
V	V	V							C6
V	A								C7
V									C8
									C9

The received matrix is obtained by transforming the structural self-interaction matrix into a binary matrix consisting of zeros and ones. In the received matrix, the dimensions of the main diameter are equal to one. Therefore, the matrix obtained through the ISM technique is shown in Table 5.

Table 5. *Matrix of Identified Indicators*

C9	C8	C7	C6	C5	C4	C3	C2	C1	Variable
1	1	1	0	1	1	1	1		C1
1	1	1	0	1	1	1		1	C2
1	0	1	0	0	0		0	0	C3
1	1	1	0	1		1	1	1	C4
1	1	1	0		0	1	0	0	C5
1	1	1		1	1	1	1	1	C6
1	0		0	0	0	1	0	0	C7
1		1	0	1	0	1	1	0	C8
	0	0	0	0	0	0	0	0	C9

The method of obtaining the access matrix is by using Euler's theory, where we add the adjacency matrix to the unit matrix.

Table 6. *The final access matrix of the identified indicators*

C9	C8	C7	C6	C5	C4	C3	C2	C1	Variable
1	1	1	0	1	1	1	1	0	C1
1	1	1	0	1	1	1	0	1	C2
1	0	1	0	0	0	0	0	0	C3
1	1	1	0	1	0	1	1	1	C4
1	1	1	0	0	0	1	0	0	C5
1	1	1	0	1	1	1	1	1	C6
1	0	0	0	0	0	1	0	0	C7
1	0	1	0	1	0	1	1	0	C8
0	0	0	0	0	0	0	0	0	C9

– Determination of relationships and standardization of dimensions and indicators

To determine the relationships and hierarchy of the criteria, the outputs and inputs for each criterion should be extracted from the provided matrix.

ϖ Access set (row elements, outputs or effects): Variables that can be accessed through this variable.

ϖ Prerequisite set (column elements, inputs or effects): variables through which this variable can be reached. The set of outputs includes the criterion itself and the criteria that are affected by it. The set of inputs includes the measure itself and the measures that affect it. Then, the set of two-way relations of the criteria is determined.

Table 7. *Set of inputs and outputs (effects) for each variable*

Symbol	component	output	Input
C1	Supervision	3	7
C2	Government agents	3	7
C3	flexibility	7	2
C4	Terms and Conditions	3	7
C5	needs assessment	5	4
C6	Organizational conditions	0	8
C7	Performance transparency	7	2
C8	Knowledge and education	5	4
C9	Economic Growth	8	0

For the variable C_i, the access set (output or effects) includes the variables that can be reached through the $C_i$variable. The prerequisite set (input or effects) includes the variables that lead to the variable C_i. After determining the achievement set and the prerequisite set, the intersection of the two sets is calculated. The first variable for which the intersection of the two sets equals the achievable set (outputs) will be the initial level. Therefore, the elements of the first level will have the most influence in the model. After determining the level, the criterion with a known level is removed from the entire set. Then, the set of inputs and outputs is reformed, and the next variable level is determined.

Table 8. *Determining the first level in the ISM hierarchy*

Symbol	Level	Common	Output	Input
C1	2	C4،C2،C1	C9،C8،C7،C5،C4،C3،C2،C1	C6،C4،C2،C1
C2	2	C4،C2،C1	C9،C8،C7،C5،C4،C3،C2،C1	C6،C4،C2،C1
C3	4	C7،C3	C9،C7،C3	C8،C7،C6،C5،C4،C3،C2،C1
C4	2	C4،C2،C1	C9،C8،C7،C5،C4،C3،C2،C1	C6،C4،C2،C1
C5	3	C8،C5	C9،C8،C7،C5،C3	C8،C6،C5،C4،C2،C1
C6	1	C6	C9،C8،C7،C6،C5،C4،C3،C2،C1	C6
C7	4	C7،C3	C9،C7،C3	C8،C7،C6،C5،C4،C3،C2،C1
C8	3	C8،C5	C9،C8،C7،C5،C3	C8،C6،C5،C4،C2،C1
C9	5	C9	C9	C9،C8،C7،C6،C5،C4،C3،C2،C1

Therefore, variable C6 is the first-level variable. After identifying the variable(s) at the first level, these variable(s) are removed, and the set of inputs and outputs is calculated without considering the variables at the first level. The common set of identifiers and variables, whose commonality equals the set of inputs, are chosen as the second-level variables. C4, C2, and C1 variables are second-level variables. C8 and C5 variables are third-level variables. C7 and C3 variables are at the fourth level. Variable C9 is the fifth-level variable. The final pattern of the levels of the identified variables is shown in the figure. In this diagram, only the meaningful relationships between the elements of each level and the elements of the lower level, as well as the meaningful internal relationships of the elements within each row, are considered.

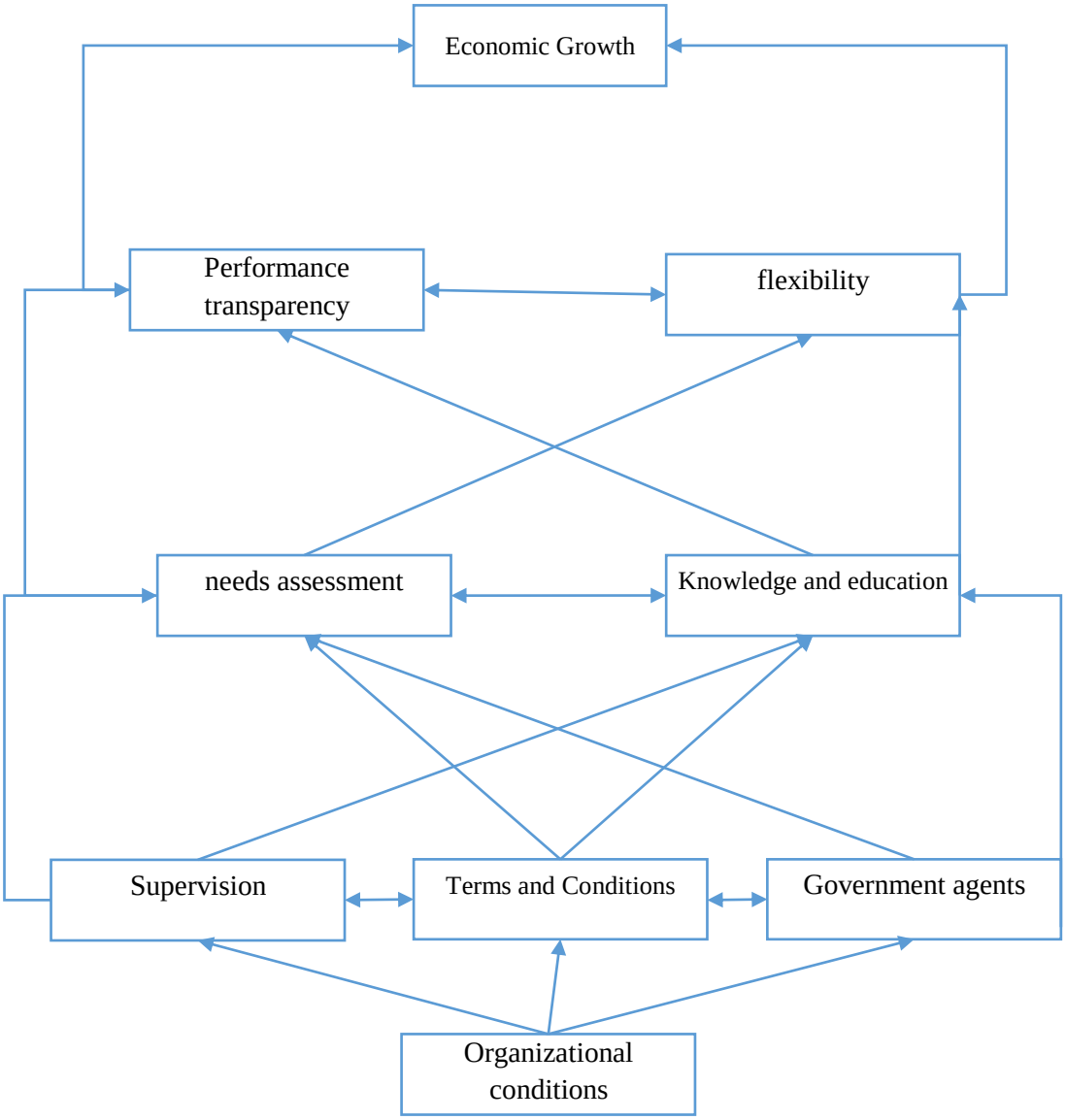

Figure 1. *Basic model developed by ISM method*

In the (ISM) model, the interrelationships and influences between the criteria, as well as the relationships of the criteria at different levels, are clearly depicted. This enhances managers' comprehension of the decision-making environment. In order to determine the key criteria, the penetration power and the interdependence of the criteria are established in the final access matrix. The power-dependence diagram for the studied variables is shown in Figure 1. Table 9presents the power of influence and the degree of dependence of research variables.

Table 9. *The power of influence and the degree of dependence of research variables*

Rank	Symbol	Direct effect	Symbol	direct effectiveness	Symbol	Indirect affecting	Symbol	Indirect effectiveness
1	C6	2162	C9	1891	C6	3109	C9	2731
2	C1	1891	C3	1621	C1	2184	C3	1932
3	C2	1891	C7	1621	C2	2184	C7	1932
4	C4	1891	C8	1351	C4	2184	C8	1134
5	C5	1081	C5	1081	C5	168	C5	756
6	C3	540	C1	810	C3	84	C1	504
7	C7	540	C2	810	C7	84	C2	504
8	C8	0	C4	810	C8	0	C4	504
9	C9	0	C6	0	C9	0	C6	0

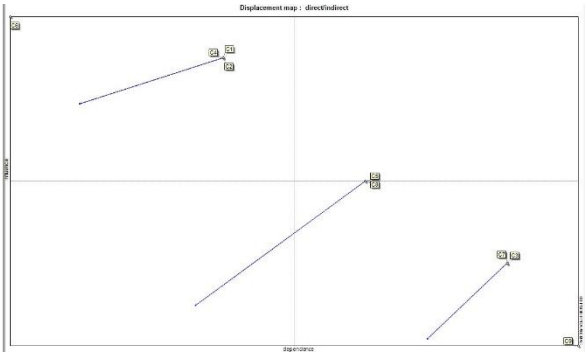

Figure 2. *Diagram illustrating penetration power and degree of dependence (Mic-Mac output)*

A coordinate system can be established based on the strength of dependence and influence of variables, dividing it into four equal parts. In this research, a group of variables was included in the stimulus subgroup. These variables have a high influence but low dependence. In the next category, there are dependent variables, which are the outcomes of the model development process and are less likely to serve as the foundation for other variables. In this analysis, the variables are divided into four categories: autonomous, dependent, linked, and independent groups. Autonomous variables have a low degree of dependence and guiding power. These criteria are typically isolated from the system due to their weak connections with it. A change in these variables does not cause a significant alteration in the system. Dependent variables exhibit a strong dependence but weak direction. Essentially, these variables have a significant impact and a minimal impact on the system. Independent variables have low interdependence and high direct impact. In other words, these variables exhibit high influence and low dependence. Linked variables, such as interface or linked variables, exhibit high interdependence and significant guiding influence. In other words, these criteria have a substantial impact, and even minor adjustments to these variables can lead to fundamental changes in the system.

5. Discussion

Based on the results obtained in the qualitative analysis, nine main criteria were identified. The main criteria include flexibility, supervision, rules and regulations, organizational conditions, knowledge and education, government factors, needs assessment, economic growth, and performance transparency. These nine main criteria need to be simultaneously strengthened and are also crucial factors in the application of fair value accounting in banks. Based on the interpretive structural model, a hierarchical model is also formed. Organizational conditions have been identified as the most influential component in this model. Strengthening organizational conditions enhances economic growth as the most influential component of the model, while weakening organizational conditions poses a challenge to reducing the effectiveness of fair value accounting in banks. As a result, the quality of fair value accounting information is very important in banks. This reporting method enhances financial transparency and offers a more precise depiction of the banks' economic situation. Fair value, by accurately reflecting the value of assets and liabilities based on market conditions, assures shareholders and investors that the financial information provided is up-to-date and reliable. This transparency and accuracy of information increase public trust and strengthen banks' relationships with stakeholders. Consequently, this can help attract capital and enhance banks' economic conditions.

Fair value helps banks manage risk more effectively. By understanding and evaluating the real value of assets and liabilities more accurately, banks can identify weaknesses and financial threats in a timely manner and adopt appropriate strategies to manage them. This not only leads to the improvement of the financial performance of banks but also contributes to the strength and stability of the financial system. Therefore, the use of fair value accounting methods can significantly contribute to improving the quality of financial information and better management of banks. The government has the authority to enforce accounting regulations and financial standards. Creating or changing standards can have a direct impact on the

knowledge and training of bank accountants. Up-to-date and efficient training on changes in standards is essential to ensure the proper implementation of fair value accounting. Government policies in financial and economic fields can have a direct impact on the performance of banks. These effects may necessitate changes in accounting processes and procedures, which will demand new training and knowledge for bank employees. Government obligations are another factor that can have a significant impact on fair value accounting. For example, changes in financial regulations or government mandates may necessitate adjustments in the valuation of assets and liabilities. Government tax decisions can also have a significant impact on banks' accounting. The importance of accurate education and knowledge in the field of taxation and its connection with fair value accounting cannot be overstated. In general, the government, through its measures and policies, can influence the trajectory of fair value accounting in banks and establish new training requirements to enable bank employees to effectively adapt to the changes. Based on the research conducted by Eidi et al. (2021), they demonstrated that there is a direct and significant relationship between conservative political ideology and the determination of the fair value of fixed assets based on the value of similar items. The fair value accounting model in banks is influenced by numerous laws and regulations that impact expertise and training in this field.

Laws and regulations pertaining to fair value accounting in banks may establish specific requirements for financial reporting, accounting procedures, and asset valuation. These points emphasize the necessity of ongoing education and training in the field of compliance with these laws. Laws may require monitoring measures to oversee the implementation of fair value accounting. This necessitates current knowledge and ongoing training for bank personnel to stay informed about changes in supervision and requirements. Changes in accounting standards and methods may necessitate new training and knowledge to ensure that fair value remains consistent with the most recent updates. Accountants and individuals involved in valuation at banks require expertise and profound knowledge in the areas of accounting, finance, and economics. Laws may require more emphasis on training and expertise. Laws and regulations may contribute to a more precise and accurate assessment of fair value accounting. This requires continuous training to improve knowledge and skills. In general, laws and regulations have multiple effects on knowledge, training, and needs assessment in the field of fair value accounting in banks. These matters show the importance of the need for a proper and continuous training system in this industry. Zare Rafi et al. (2021) also showed the importance of policy and rules and regulations in the implementation of fair value accounting.

In the accounting model of fair value in banks, knowledge and training have significant effects on the flexibility and transparency of performance. These factors directly enhance and have positive effects on the valuation and financial management of banks. Appropriate knowledge and training empower bank managers to make fair value decisions. This increase in ability enables managers to quickly adapt to changes in the business environment and financial system, allowing them to make the best decisions in various situations. Understanding fair value accounting can assist managers in enhancing and managing appropriate responses to financial and economic risks. This increased flexibility allows the bank to adapt to various adverse conditions in the best possible way. Knowledge and training in the field of fair value accounting enable bank employees to present financial information in a transparent and comprehensible manner to stakeholders. This transparency increases stakeholders' trust. Knowledge and training are essential for compiling and publishing favorable financial reports.

This enhances the quality of their services and products, leading to increased competition and a boost in the economy. In general, transparency in performance in fair value accounting can serve as a promoting and facilitating factor for economic growth

within banks and the macro financial system. Fair value accounting enables banks to manage their financial resources more effectively. Fair value ensures that bank managers accurately evaluate assets and liabilities, enabling them to engage in more economic activities by optimizing the use of these resources. Fair value accounting encourages banks to present their financial information transparently. This transparency instills trust in the bank among various stakeholders, such as investors and customers. This trust has the potential to foster economic growth and stimulate increased economic activities. Fair value accounting enables banks to accurately identify and assess their financial risks. With optimal risk management, banks can fulfill their obligations by providing credit facilities to businesses and individuals, thereby fostering economic growth. Fair value accounting enables banks to make informed financing decisions for different businesses and projects by providing precise information about the value of assets and liabilities.

6. Conclusion

Creating knowledge in the field of fair value accounting in banks requires the use of advanced research techniques and data analysis. Initially, collecting data related to fair value assessment from various sources, such as financial reports, market data, and macroeconomic information, can help identify patterns and trends. Utilizing mathematical and statistical models, such as valuation estimation models and sensitivity analysis, along with machine learning techniques, can enhance the accuracy of valuations and generate new knowledge. Additionally, comparative analysis between banks and international standards can help identify best practices and improve existing procedures.

Furthermore, sharing this knowledge through the publication of scientific articles, organizing conferences and workshops for accountants and financial analysts is of high importance. Creating digital platforms for the exchange of information and experiences among professionals can also accelerate the learning process and improve the quality of information. Moreover, collaboration with regulatory and educational institutions can aid in the development and formulation of new standards in fair value accounting, thereby strengthening and updating the existing body of knowledge. This facilitation of financing plays a crucial role in stimulating economic growth. Therefore, fair value accounting plays a crucial role in establishing a conducive financial environment for economic growth. By offering precise and transparent information, it enhances stakeholders' trust in banks. This trust serves as a foundation for investments and fosters additional economic activities. Based on the presented model, the following suggestions have been made: To increase flexibility in fair value accounting, banks can update their accounting systems and processes. This action involves flexibility in determining valuation criteria and methods, updating software and IT systems, and adapting to changes in the business environment.

- To ensure proper supervision in fair value accounting, banks can review and strengthen their internal systems and processes. Additionally, advocate for the adoption of new technologies to enhance monitoring and improve transparency in financial information. In order to comply with laws and regulations, banks must constantly align their accounting processes with changes in financial and accounting laws. Enhancing cooperation with regulatory authorities and rigorously implementing legal guidelines and requirements are essential measures to ensure compliance with laws. To enhance organizational conditions in fair value accounting, banks can bolster their organizational culture by emphasizing professional values and ethics. Establishing internal processes to promote transparency and ensure the accuracy of information is another effective measure. The development of knowledge and training in the field of fair value accounting through training courses, workshops, and skill development programs enables employees to enhance their professional capabilities and prevent potential errors.

- To address changes in government regulations, banks should allocate sufficient resources to stay abreast of legal and financial developments. Furthermore, safeguarding financial information within the scope of privacy and information security regulations is also crucial. To meet the needs of stakeholders, banks can design risk management and valuation processes in a way that offers the most suitable response to the needs and expectations of shareholders, customers, and other stakeholders.

- In the conditions of economic growth, banks can update their strategies to attract new customers and develop financial products and services. Please ensure that the analysis of economic growth effects on valuation risks and opportunities is kept up-to-date.

- To enhance performance transparency, banks can encourage regular and transparent reporting of their financial information. Creating mechanisms and tools to obtain information in an easy and comprehensible way for stakeholders plays a key role in this field.

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