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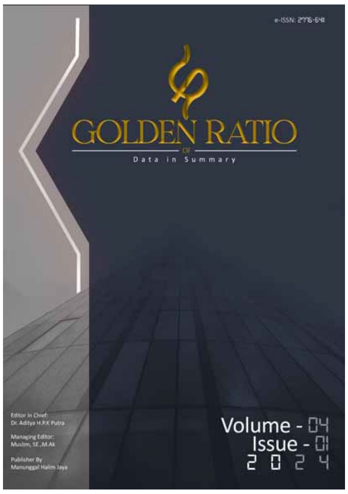

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DESCRIPTIVE OF QUANTITATIVE DATA | SUPPLEMENTARY

Enhancing Investment Decisions Through Financial Literacy: The Mediating Role of Income in Medan's Community Using SEM-PLS Modeling

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Abstract: The objective of this research is to elucidate and analyze the extent to which foundational knowledge of investment products and financial analysis influences investment decisions in Medan, incorporating community income enhancement in Medan as a mediating variable. The subjects of this study are entities that utilize green energy, where the independent variables are the basic understanding of investment products and financial analysis, the dependent variable is the investment decision-making in Medan, and the intervening variable is the enhancement of community income in Medan. Data analysis employed the Structural Equation Modeling (SEM) technique utilizing SMART PLS 4.0 software. Data collection methods included questionnaires and observation. The research methodology applied was quantitative descriptive analysis utilizing the SEM method, where data processing with SEM was performed using PLS 4.0 application. The findings indicate that, partially, the variables of basic understanding of investment products and financial analysis significantly affect investment decisions and impact the enhancement of community income. Simultaneously, these variables influence investment decisions through the mediating variable of community income enhancement. A deeper understanding of investment products and financial analysis enables investors to assess whether such conditions can enhance community income, thereby aiding in the decision-making process regarding the allocation of capital for the economic upliftment of the community.

Keywords: Financial Literacy, Investment Products, Investment Decisions, Community Income.

1. INTRODUCTION

Investment is a fundamental method of capital infusion by a nation aimed at stimulating economic revitalization and enhancing employment opportunities, thereby fostering economic equilibrium. This balance is not solely focused on consumer spending patterns but also encompasses government spending and investments (Widyakto et al., 2022). As a cornerstone of economic advancement at individual, corporate, and national levels, investments manifest in various forms, such as infrastructure projects and manufacturing. These investments not only create new job opportunities but also increase community income, thereby enhancing purchasing power and consumer spending (Buchdadi, 2020). Investments in technology and workforce training improve efficiency and productivity, allowing companies to produce more goods and services with the same or fewer resources, ultimately increasing economic output (Persaud & Thaffe, 2024). Furthermore, investments in capital markets, such as stocks and bonds, facilitate capital flow to companies needing funds for expansion. A robust financial market instills confidence among investors, both domestic and foreign, promoting capital investment in a country. Additionally, investments in the health, education, and other social services sectors elevate the quality of life, correlating with increased productivity and, consequently, economic growth (Rahmawati et al., 2024). Executing investments requires an understanding of financial literacy, where an individual knowledgeable in financial matters comprehends how to manage and plan capital or credit allocation, enhancing income and mitigating risks. These risks, once understood, foster knowledge and decision-making among individuals and organizations, enhancing investment activities in a country or region (Molina-García & Jos, 2024).

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Investments must consider the financial risks within a country or region, as well as in the institutions and organizations involved. If these entities can increase income and reduce debt, it ensures that decisions to invest are viable. However, if a country or organization is burdened with excessive debt, it may deter investment decisions, prompting investors to avoid investing due to the associated risks, thus demonstrating their understanding of financial literacy emanating from such investments (Garg, 2022). A sound investment strategy not only creates a positive impression among the public but also increases production, job opportunities, and community income. Such investments are immensely beneficial for the economic trajectory and growth of a nation or region, as increased income allows for higher consumption and further economic growth (Cossa et al., 2022). Enhancing financial literacy relates to a basic understanding of financial products, particularly investment vehicles, and conducting financial analyses. Individuals or institutions wishing to invest must comprehend the various forms of investment products, including stocks, bonds, mutual funds, real estate, and others. This understanding allows individuals to select products that align with their goals and risk tolerance (Thomas & Subhashree, 2020).

Investment, a critical vehicle for capital allocation, is employed by nations to stimulate economic growth and enhance employment, thereby achieving economic equilibrium. This equilibrium extends beyond mere consumer spending patterns to include government expenditures and investments, which collectively underpin economic stability (Widyakto et al., 2022). Investments serve as a foundational pillar for economic advancement at the individual, corporate, and national levels. They take various forms, such as infrastructure projects and manufacturing initiatives, which not only create new job opportunities but also elevate community income, thereby boosting purchasing power and consumption (Buchdadi, 2020). Further, investments in technology and workforce training enhance efficiency and productivity, enabling companies to produce more goods and services with fewer resources, thus increasing economic output (Persaud & Thaffe, 2024). The capital markets play a pivotal role by facilitating investments in stocks and bonds, which channel funds to companies needing capital for expansion. A robust financial market instills confidence among both domestic and foreign investors, encouraging them to invest capital in the country. Investments in the health, education, and social services sectors notably improve the quality of life, leading to increased productivity and economic growth (Rahmawati et al., 2024). Financial literacy is essential for effective investment as it enables individuals to understand and manage the allocation of capital or credit, enhancing income and mitigating risks. This understanding of financial risks fosters informed decision-making across individuals and organizations, promoting investment activities within a region or country (Molina-García & Jos, 2024). Investors must be cognizant of the financial risks associated with their investments, particularly in contexts where managing debt and enhancing income are critical. High levels of debt can deter investment, as investors are likely to be cautious of the risks involved and may choose not to invest (Garg, 2022). A well-executed investment strategy not only improves public perception but also stimulates production, increases employment, and boosts community income, which in turn supports the economic growth and activity of a nation or region (Cossa et al., 2022).

An understanding of financial products, especially investment vehicles, and the ability to conduct financial analyses are integral to enhancing financial literacy. Individuals and institutions aiming to invest must be knowledgeable about different investment products such as stocks, bonds, mutual funds, real estate, etc., which enables them to select options that align with their financial goals and risk tolerance (Thomas & Subhashree, 2020). In addition to knowing about investment products, individuals and groups must also perform risk analyses, particularly financial analyses of the institutions, organizations, or countries where they intend to invest. Such analyses are crucial for identifying high-risk investment opportunities, enabling investors to manage their funds effectively and avoid significant losses (Lin & Bates, 2022). A robust understanding of financial analysis promotes caution in investment decision-making, ensuring that investments are made judiciously to avoid losses and enhance income not only for companies but also for the community (Cotton, 2021).

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For stock investors, the ability to read and interpret corporate financial reports is critical, as it helps assess the financial health and growth potential of companies, influencing decisions on whether to invest based on the potential for production enhancement and community income growth (Jutte et al., 2021).

Financial literacy also helps in setting realistic investment goals and developing strategies to achieve them, such as investing for children's education, retirement, or homeownership. Understanding the financial conditions and performing accurate financial analyses are essential to avoid losses and ensure that investments are made wisely (Im et al., 2022). Moreover, financial literacy involves the ability to analyze market conditions and economic trends, enabling investors to make decisions based on data and information rather than emotions or speculation. This analytical approach reduces financial risks and investment failures, potentially impacting income levels and influencing investment decision-making processes (Gilenko & Chernova, 2021). Medan presents a target investment opportunity with several strategic national projects. However, investment levels have shown a decline, with the economic growth rate in 2024 projected at 5.04%, slightly lower than in 2022. This reduction in growth has led investors to be cautious, hesitating to invest substantial amounts due to perceived high financial risks and a lack of robust financial analysis, thus affecting consumption and production negatively (Local Economic Data, 2024). The number of investors in North Sumatra has decreased, reflecting a broader trend of reduced investment due to the risks involved and a challenging economic environment that does not promise a favorable cash flow cycle, leading financial analyses to recommend a reduction in investment amounts in Medan (Local Investor Data, 2024).

2. LITERATURE REVIEW

2.1. Understanding Basic Investment Products

Grasping the fundamentals of investment products is a crucial step for anyone wishing to manage their finances prudently and maximize the potential returns from their invested funds (Essel-Gaisey, 2024). Comprehending these investment products enables investors to select instruments that align with their financial goals, risk tolerance, and investment horizons. This knowledge also aids in effectively managing investment portfolios and making more informed decisions (Owusu, 2024). The basic forms of investment products include:

- Stocks: Represent ownership shares in a company. When you purchase stocks, you become one of the owners of that company.
- Bonds: These are debt securities issued by governments, corporations, or other entities to raise funds. When you purchase bonds, you are lending money to the issuer and will receive periodic interest payments and the return of principal at maturity.
- Mutual Funds: Investment vehicles that pool funds from many investors to invest in a diversified portfolio managed by professional investment managers. These can include stocks, bonds, or money market instruments.
- Certificates of Deposit (CDs): Bank products with a specified term where funds cannot be withdrawn before maturity without a penalty. The interest offered is usually higher than that of regular savings accounts.
- Cryptocurrencies: Digital assets that utilize blockchain technology to secure transactions and control the creation of new units. Well-known examples include Bitcoin and Ethereum.
- Pension Funds: Investment programs designed to provide income during retirement. These funds are typically invested in a diverse portfolio for long-term growth (Tan, 2020).

Indicators of understanding basic investment products are:

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- Knowledge of Investment Types: This is demonstrated by knowing and understanding various investment products such as stocks, bonds, mutual funds, real estate, gold, and others.
- Understanding of Diversification: Recognizing the importance of diversification in managing investment risk by spreading investments across various products or sectors.
- Comprehension of Risk: Understanding and being able to assess the level of personal or corporate risk tolerance, and choosing investment products that match this tolerance.
- Awareness of Regulations and Investor Protection: Being aware that the prices of investment products, especially stocks and commodities, can fluctuate and possessing the ability to remain composed and adhere to long-term investment strategies (Khalisharani et al., 2022).

These components form the bedrock of investment literacy, equipping investors with the tools necessary to navigate the complexities of the financial markets effectively.

2.2. Financial Analysis

Financial analysis is a critical process of evaluating financial data to comprehend the financial performance of an organization, individual, or project. This analysis supports making informed and strategic business or investment decisions (Krijnen, Hidde K., 2022). It is a comprehensive process that employs various techniques and methods to understand the financial condition and growth potential of an entity. Effective financial analysis is essential for sound decision-making in investment, financial management, and business planning (Ardila, Isna, Febriaty, & Astuti, 2021). The main aspects and methodologies utilized in financial analysis include:

- Financial Statement Analysis: This involves the examination of profit/loss statements, statements of changes in equity, balance sheets, and cash flow statements.
- Financial Ratio Analysis: This includes the evaluation of ratios such as the current ratio, return on assets, gross profit margin, debt-to-equity ratio, and asset turnover ratio.
- Break-Even Analysis: This calculates how many units of a product must be sold or the revenue required for the company to reach a break-even point, where total revenue equals total expenses.
- Accounts Receivable Ratio Analysis: This assesses the receivable turnover ratio and the ratio of receivables to sales.
- Risk Analysis: This involves assessing various risks that could affect financial performance, including market, credit, liquidity, and operational risks (Yang, Junhong, Wu, & Huang, 2024).

Indicators of financial analysis include:

- Profitability: Assessed through metrics such as Gross Profit Margin, Net Profit Margin, and Return on Assets.
- Efficiency: Evaluated by the Asset Turnover Ratio and Inventory Turnover Ratio.
- Solvency: Measured by the Debt-to-Equity Ratio and Debt Ratio.
- Growth: Indicated by the Revenue Growth Rate and Earnings Growth Rate (Putri, Linzzy Pratami, 2021).

2.3. Investment Decisions

Investment decision-making is the process where an individual, company, or institution determines the allocation of financial resources to achieve specific objectives, such as wealth growth, passive income, or inflation protection. This process involves a deep analysis of various factors, including potential profits, risks, liquidity, and time horizons (Liu, Liu, and Zhang, 2021). Investment decision-making is a complex process that requires careful planning, analysis, and monitoring. Wise decisions are based on a thorough understanding of investment products, risk awareness, potential returns, and alignment with short-term and long-term financial goals. A structured and disciplined approach allows investors to effectively achieve their financial objectives and manage risks more efficiently (Davoli, Maddalena, and Rodríguez-Planas, 2020). Key steps and factors to consider in making investment decisions include:

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- Setting Investment Goals: Investors should define their aims, such as funding retirement, children's education, purchasing property, or capital appreciation.
- Risk Profile Assessment: Investors evaluate the level of risk they can bear, both financially and psychologically.
- Investment Product Analysis: Choosing diverse types of investments to mitigate risks, for example, a mix of stocks, bonds, real estate, and commodities.
- Market and Economic Analysis: Analyzing macroeconomic conditions like inflation, interest rates, and economic growth that can influence investment performance.
- Investment Performance Evaluation: Investors can assess the financial performance of companies (for stocks) or investment projects through financial reports, cash flows, and other indicators (Farida, Mamik Nur, Soesatyo, Yoyok, and Aji, 2021).

Indicators of investment decisions include:

- Return on Investment (ROI): Measures the percentage of return generated relative to the investment cost. ROI is utilized to evaluate the efficiency and profitability of investments.
- Internal Rate of Return (IRR): The discount rate that sets the Net Present Value (NPV) of an investment's cash flows to zero, indicating the expected annual return rate from an investment. Higher IRR values make the investment more attractive, whereas lower IRR values suggest reduced viability.
- Liquidity Ratio: Assesses a company's ability to meet its short-term obligations. A healthy liquidity ratio indicates lower financial risk.
- Break Even Point (BEP): Measures the number of units that need to be sold to cover all fixed and variable costs, aiding in determining the feasibility of investing in new businesses or projects (Abbott, Pamela, 2020).

2.4. Increasing Community Income

Enhancing community income is a primary goal in economic and social development. Higher incomes can improve living standards, enhance access to basic services, and foster more inclusive economic growth (Kumar, Parul, 2024). Achieving increased community income requires a comprehensive and integrated approach involving various sectors and governmental levels. By effectively implementing these strategies, it is anticipated that an environment conducive to economic growth will be created, thereby enhancing overall societal well-being (Andarsari, Pipit Rosita, & Ningtyas, 2022). Several strategies and approaches can be utilized to boost community income: Investing in education and skills is crucial as it enhances workforce skills, leading to better job opportunities and higher salaries. Infrastructure development, such as roads, bridges, and transportation facilities, improves accessibility and creates new job opportunities. Enhancing access to credit through microcredit for small businesses and farmers can boost productivity and their incomes. Government policies and social protection, including setting and adjusting minimum wages, ensure that workers receive adequate income (Baptista, Stella Maris Juhar, & Dewi, 2021). Indicators of increased community income include: Per capita income measures the average income received by each individual in a country or region. An increase in per capita income indicates improved overall economic welfare. Household income growth, measured by the percentage change in household income from year to year, reflects how much household incomes have increased over time. This indicates improved economic conditions at the household level (Davies, John, & Smith, 2023). By employing these strategies and monitoring these indicators, policymakers and stakeholders can effectively work towards achieving sustainable economic growth and improving the quality of life for communities.

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2.5. Conceptual Framework

The conceptual framework of the research is:

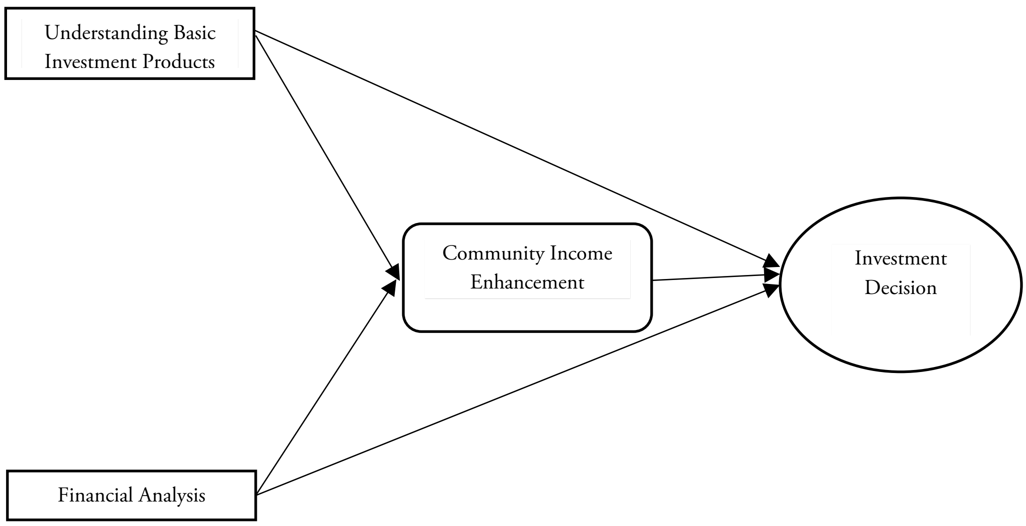

Figure 1. Conceptual Framework

2.6. Hypotheses

1. There is a significant influence of understanding basic investment products on investment decisions.
2. Financial analysis significantly affects investment decisions.
3. Understanding basic investment products significantly impacts community income enhancement.
4. Financial analysis significantly influences community income enhancement.
5. Community income enhancement significantly affects investment decisions.
6. Understanding basic investment products significantly influences investment decisions, mediated by community income enhancement.
7. Financial analysis significantly impacts investment decisions, mediated by community income enhancement.

3. RESEARCH DESIGN AND METHOD

This research utilizes a descriptive quantitative approach, employing structural equation modeling (SEM) for data analysis. SEM is a data analysis method that explains the interactions between construct variables that significantly influence one another (Farida, Mamik Nur, Soesatyo, Yoyok, and Aji, 2021). The population for this study comprises 207,405 investors who have invested in the city of Medan. The sampling method used is accidental sampling, where samples are selected based on their availability within the research context (Farida, Mamik Nur, Soesatyo, Yoyok, and Aji, 2021). The sample size was determined using the Slovin formula: n = N / (1 + Ne²) = 207.405 / (1 + 207.405 x 0.1²) = 100 = Therefore, a sample of 100 investors from Medan was selected for this study.

4. RESULT AND DISCUSSION

4.1. Research Result

The outcomes of the SEM analysis can be illustrated through the following Bootstrapping diagram:

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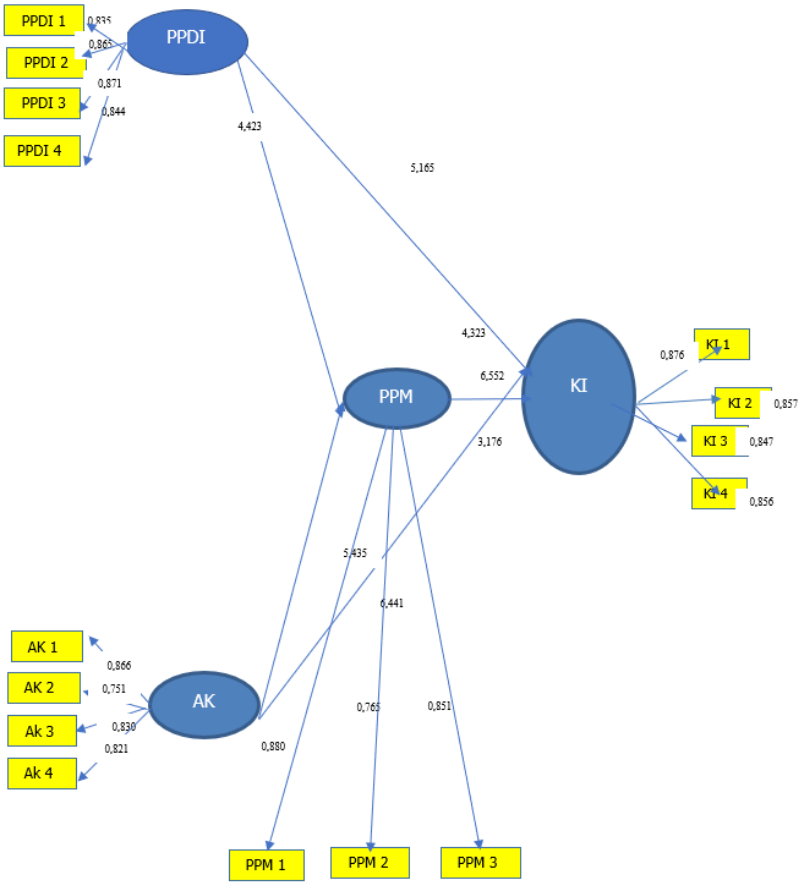

Figure 2. SEM-PLS Boostrapping Result

According to Farida, Mamik Nur, Soesatyo, Yoyok, and Aji (2021), convergent validity analysis is a test used to assess the validity of construct variables. The results of the convergent validity test in this study are as follows:

Table 1. Convergent Validity

Variable	Indicator	Outer Loading
Understanding Basic Investment Products (X1)	PPDI 1	0,835
	PPDI 2	0,865
	PPDI 3	0,871
	PPDI 4	0,844
Financial Analysis (X2)	AK 1	0,866
	AK 2	0,751
	AK 3	0,830
	AK 4	0,821
Investment Decision (Y)	KI 1	0,876
	KI 2	0,857
	KI 3	0,847
	KI 4	0,856
Community Income Enhancement (Z)	PPM 1	0,880
	PPM 2	0,763
	PPM 3	0,851

Source: Data Analysis Results, 2024

Table 1 indicates that the data for each construct variable has been validated.

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Average Variance Extracted (AVE) Analysis

According to Farida, Mamik Nur, Soesatyo, Yoyok, and Aji (2021), the AVE test is used to determine whether the data from the construct equations are suitable. The results of the Average Variance Extracted (AVE) test are presented in the following table 2:

Table 2. AVE Test

Variable	AVE
Understanding Basic Investment Products (X1)	0,833
Financial Analysis (X2)	0,873
Investment Decision (Y)	0,843
Community Income Enhancement (Z)	0,860

Source: Data Analysis Results, 2024

Table 2 shows that the AVE values are greater than 0.5, indicating that the data from the construct equations are appropriate and fit the model.

Composite Reliability Analysis

Farida, Mamik Nur, Soesatyo, Yoyok, and Aji (2021) state that composite reliability analysis is used to determine whether the data are reliable. The results are shown in the following table 3:

Table 3. Composite Reliability Test

Variable	Composite Reliability
Understanding Basic Investment Products (X1)	0,880
Financial Analysis (X2)	0,830
Investment Decision (Y)	0,820
Community Income Enhancement (Z)	0,850

Source: Data Analysis Results, 2024

Table 3 indicates that the composite reliability values exceed 0.6, confirming that the data for each variable and equation are reliable.

Discriminant Validity Analysis

In confirmatory factor analysis (CFA) or structural equation modeling (SEM), discriminant validity analysis assesses the extent to which the relationships within the construct equations meet the criteria for discriminant validity. The results of the Discriminant Validity analysis are presented in Table 4 below:

Table 4: Discriminant Validity Analysis

Variable	Investment Decision Moderating Effect 1	Investment Decision Moderating Effect 2	Investment Decision Moderating Effect 3	Investment Decision Moderating Effect 4
Use of Renewable Energy	.758	1.000	.758	.628
Effectiveness of Usage	.665	.738	1.000	.728
Consumer Purchase Decision Improvement	.758	.787	.838	1.000
Creation of Green Marketing Strategies	1.000	.748	.668	.638

Source: PLS Data Analysis, 2024

Based on Table 4, it can be observed that the AVE values meet the assumptions for Discriminant Validity, as indicated by the values presented.

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Path Coefficient Testing

The path coefficient testing results are summarized in the following table 5:

Table 5. R Square Test

Variable	R Square
Understanding Basic Investment Products (X1)	0,882
Financial Analysis (X2)	0,854
Investment Decision (Y)	0,877
Community Income Enhancement (Z)	0,855

Source: Data Analysis Results, 2024

From Table 5, it is evident that the R Square value for the investment decision variable is 87.7%, meaning that this variable can be explained by financial analysis, understanding of basic investment products, and initiatives for community income enhancement. The remaining 13.3% can be attributed to other variables not included in this study.

Hypothesis Testing

The results of the hypothesis testing are presented in the table below 6:

Table 6. Hypothesis Testing

Hypothesis	Effect	T-Statistics	P-Value	Result
H1	Understanding basic investment products on investment decisions	5,165	0,000	Accepted
H2	Financial analysis on investment decisions	6,441	0,001	
H3	Understanding basic investment products on community income enhancement	4,423	0,002	
H4	Financial analysis on community income enhancement	5.435	0,000	
H5	Community income enhancement on investment decisions	6,552	0,000	
H6	Understanding basic investment products on investment decisions through community income enhancement as a mediating variable	4,323	0,000	
H7	Financial analysis on investment decisions through community income enhancement as a mediating variable	3,176	0,000	

Source: Data Analysis Results, 2024

Based on the table 6, it can be concluded that, individually, the variables of understanding basic investment products and financial analysis significantly influence both investment decisions and community income enhancement. Simultaneously, these variables also affect investment decisions through community income enhancement as a mediating variable.

4.2. Discussion

The Influence of Understanding Basic Investment Products on Investment Decisions in Medan

The study indicates that understanding basic investment products significantly influences investment decisions in Medan. This finding aligns with the research by ul Abdin (2022), which suggests that when investors have a clear understanding of basic investment products, they are more confident and convinced of the products' profitability, leading them to invest their funds in those ventures.

The Influence of Financial Analysis on Investment Decisions in Medan

The research also demonstrates that financial analysis significantly impacts investment decisions in Medan. This is consistent with the findings of Bose et al. (2021), which highlight that effective financial analysis increases investor willingness to continue investing in a particular region.

The Influence of Understanding Basic Investment Products on Community Income Enhancement in Medan

The study shows that understanding basic investment products has a significant impact on community income enhancement in Medan. This result is in line with the research by Damra et al. (2024), which asserts that a deeper understanding of basic investment products enables investors to allocate their funds in ways that enhance the economy and increase community income.

The Influence of Financial Analysis on Community Income Enhancement in Medan

The research reveals that financial analysis significantly influences community income enhancement in Medan. This finding is consistent with the study by Imai et al. (2021), which explains that sound financial analysis of a region's or company's financial conditions leads to direct investment, thereby improving community income.

The Influence of Community Income Enhancement on Investment Decisions in Medan

The study indicates that community income enhancement significantly affects investment decisions in Medan. This is supported by the research of Callis (2024), which suggests that increased community income in a specific area encourages investors to make decisions that boost local economic growth.

The Mediating Role of Community Income Enhancement on the Relationship Between Understanding Basic Investment Products and Investment Decisions in Medan

The research findings show that understanding basic investment products influences investment decisions in Medan through community income enhancement as a mediating variable. This is in agreement with the study by Abbott (2020), which explains that a solid understanding of basic investment products motivates investors to invest in regions with the aim of fostering economic growth and increasing community income.

The Mediating Role of Community Income Enhancement on the Relationship Between Financial Analysis and Investment Decisions in Medan

The study also reveals that financial analysis impacts investment decisions in Medan through community income enhancement as a mediating variable. This finding is consistent with the research by Krijnen (2022), which states that effective financial analysis of business units in a region encourages investors to invest, thereby boosting production, creating jobs, and enhancing community income.

5. CONCLUSIONS

The findings of this study suggest that, individually, the variables of understanding basic investment products and financial analysis significantly influence investment decisions and community income enhancement. Collectively, these variables also affect investment decisions through community income enhancement as a mediating variable. The better an investor understands basic investment products and financial analysis, the more likely they are to assess whether these factors can enhance community income. This assessment is crucial for determining whether to invest capital to promote economic growth and improve community welfare.

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