

GAME TEORY AND ECONOMIC SKILLS: EXPLORING LITERACY NEEDS FOR STRATEGY BUSINESS ENTREPRENEURSHIP IN THE DIGITAL ERA

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Abstract

This article examines literacy skills in facing the challenges of entrepreneurial management in the technological era. Digital literacy skills play an important role in the existence of entrepreneurship today. Entrepreneurial management is currently facing new challenges with a situation of change from the traditional to the modern era, namely the all-digital era. Exploring entrepreneurial management knowledge is very vital in today's entrepreneurial world to achieve its goals, opportunities and challenges. entrepreneurship as a part of economics that involves the good use of management strategies and economic principles. This article examines exploring entrepreneurial management strategies for literacy skills in entrepreneurial management based on a creative and innovative economy adapting to changes. In this research, entrepreneurial management strategies with creative and innovative digitalization skills are very important. The method has been used with a literature review as a type of descriptive research as well as a qualitative assessment. The data was generated from a review of the results of previous research papers. The analysis method is carried out through game the stages of collecting research data, reducing research data, presenting research data, then drawing conclusions from the research results. This research produces an analysis that shows that literacy skills are capital for implementing entrepreneurial management ,analysis that shows that as capital for implementing entrepreneurial management with entrepreneurial management strategy skills, namely aspects of game theory ,financial literacy, economic literacy, managerial literacy, decision making. and problem solving

Keywords: Game Theory, Economic Literacy, Financial Literacy, Managerial Literacy, Decision Making, Entrepreneur.

1.Introduction

Unpredictable developments in the times have knocked many industries out of competition. In strategic planning, uncertainty and time play an important role. Unexpected changes have thwarted many plans. Entrepreneurs face new products, new markets, and new technologies, and the strategies they choose often do not meet their needs in this dynamic environment. Frenzied change has created environmental instability and uncertainty has become an important aspect of the strategic planning process. Entrepreneurs who are nimble enough to adapt to these changes can succeed. Strategic planning experts do not see traditional methods as successful in today's conditions. This has led to the emergence of tools such as scenario planning, stochastic planning, and literacy to help plan management more efficiently and effectively. These interactions are called games and the parties involved in this game are players who can be individuals or

groups. In classical game theory, players are assumed to act logically. Rational players are those who decide on the basis of what is most profitable for them and choose the strategy (Jameson, 2014).

The sustainability businesses can of course be seen from the presence of quality human resources. Quality human resources will be a benchmark for business in managing their business with the aim of increasing business and maintaining business sustainability. Business are a type of business that ranges from home-based businesses that are well managed independently to medium-sized businesses that have human resources in the form of employees. The quality of HR in this research contributes to the sustainability of business in the digital era with intense competition. Its contribution can be seen in indicators such as education, literacy or knowledge, and business management skills..business are part of the business class group most managed by the business world people. Business are businesses run by individuals or business entities on a small scale. As the main driver of the national economy, business now need to adapt to the digital era to remain competitive, because traditional methods are no longer adequate in facing intense market competition (which means marketing carried out online via the web or internet and can contribute to business activities such as advertising, marketing and selling. The problem studied is how business use digital marketing strategies to increase sales and sustain their business. This research also focuses on the challenges that business face when implementing digital marketing and how these strategies can help business become more competitive in an ever-changing market.Increasing human resources is one of the strategies for developing business to maintain business sustainability (Ariani & Utomo, 2017),

The application of economic terminology also requires knowledge and application of good management in the form of planning, organising, acting, and controlling functions, which are very relevant to be applied in various aspects of people's lives such as career management, income management, expense management, family management, and time management, all of which aim to improve welfare .Knowledge and ability to apply economic, financial and managerial terminology boils down to optimising decision making by considering the situation and completeness of information and being careful in conducting critical, in-depth and comprehensive analysis (Aminatuzzahra', 2014). Literacy variables, both economic, financial and managerial literacy, cannot be separated from the context of decision making (Budiwati et al., 2020; Wardani & Lestari, 2020). In making decisions, a person is required to have high rationality. Collecting as much information as possible, extracting relevant information, determining alternatives and their consequences, then choosing that alternative with clear, rational, and acceptable considerations for many parties are stages in decision making A person is faced with certain conditions to think critically to find solutions to various problems faced. This ability will help in improving careers to higher managerial levels with consequent increases in welfare (Fitria, 2022)

In the business sector, there are still many people who do not manage their finances properly. They have not been able to separate family financial management from business finances. This shows that managerial behaviour is still low. Planning, business organisation, daily activities, and business evaluation are still not professional. In decision-making, people tend to only follow trends, for example, online lending trends, TikTok trends, fomo trends, meme trends, online shopping trends, fashion trends, and healing trends. This shows that decision-making attitudes are still low, have not shown creativity, dare to take risks and problem-solving factors that often only see profit calculations through the expenditure and revenue side, have not seen comprehensively such as psychosocial aspects or community demographics. Based on the urgency stated above, this research needs to be carried out immediately to obtain a comprehensive picture of the determinants and impact factors of economic skills.

The advancement of financial technology, such as digital wallets, online loans, and appbased investments, has significantly transformed how people manage their finances. However, the low level of economic literacy poses a serious challenge. Many individuals lack a solid understanding of fundamental financial concepts, such as debt management, safe investment practices, and long-term financial planning. As a result, they become vulnerable to risks like digital fraud, irrational financial decisions, and debt traps. This issue becomes even more critical in the digital era, where access to technology-driven financial services is easier but often not accompanied by sufficient knowledge. Therefore, it is essential for society to enhance economic proficiency to wisely leverage financial technology opportunities and remain resilient in the ever-evolving economic landscape.

Research on antecedent factors in the constructs of economic literacy, financial literacy, managerial literacy, decision making, and problem solving has been widely researched in previous studies referred to this research. However, the researcher wants to process the existing research gap into the novelty of this study, namely identifying and exploring the indicators that form economic proficiency based on the introduction that has been described. The rationality is that a person who is proficient in economics is a person who has in-depth knowledge of economics, is able to analyse economic data, then use it to predict economic trends and make the right decisions to achieve financial goals derived from the formation of more comprehensive variables including the ability and knowledge possessed about teory game and economic skill , economics, finance, managerial, decision making, and problem solving skills. Based on this explanation, the researcher formulates the problem of this study is how the factors that form the economic proficiency of Indonesian society.

Research Method

Research Design, this research is a literature review that synthesizes the results of similar research. The research results are tabulated in such a way as to produce a theoretical model related to the research topic under study. The subjects in this research are various groups such as students, young executives/professionals, and housewives. Entrepreneurs

and general business people who are active in the business world. Meanwhile, the objects in this research are game theory role variables and factors that influence the construct of economic skills. What entrepreneurs need. This research uses secondary data collected from documentation of the results of similar research which discusses the variables of the role of game theory and economic skills for entrepreneurs. This research uses primary research data that has been published in international databases as many as journals and official websites. Institution credible. The data used in this research is data that meets the criteria quantitatively or is an empirical result.

This secondary data is processed to find patterns and trends related to forming variables and factors that influence economic capacity. The analysis was conducted using sophisticated statistical methods to ensure the validity and reliability of the findings. In addition, this research also compares the results of various studies to clarify the consistency and generalizability of the findings in different contexts. With this approach, it is hoped that research can provide deep citations. It is highly recommended to use a reference manager such as Mendeley. Add citations from journal articles and comprehensive insights into the role of game theory and economics skills and the factors contributing to their improvement. Data analysis was carried out in stages simultaneously, namely data collection, data reduction, data presentation and drawing conclusions.

Results and Discussion

Results

Theory Game

Game theory helps us understand situations where decision-makers interact. It provides a solution or a set of optimal decision-making strategies in a group; it is used in many fields, including economics, political science, biology, business, wireless networks, computer science, and many other sciences (Nie et al., 2014; Halpern, 2007).

A game means a competitive activity and a strategic situation where players interact with each other according to a series of rules. Game theory tries to model the mathematical behavior of a strategic situation. This situation arises when the success of one side of the game depends on the other side's choice of strategy. The purpose of game theory and business applications is to show how game theory can be used to model and analyze business decisions. All of these programs include competitive decision settings. In company financial matters, game theory helps a lot in choosing the optimal decision. (Lashgari et al., 2022; Lashgari, Bahiraie, and Eshaghi Gordji, 2022; Bahiraie, Azhar, and Ibrahim, 2011).

Game theory provides a compelling guide to analyzing business decisions and strategies (Chatterjee and Samuelson, 2001). In a paper published in 2018 (Nagurney et al., 2018), a game theory model was developed, for transportation service providers to maximize their expected utility by competing for business by senders as well as investing in security. Senders reflect their preferences for shipping service providers through the prices they are willing to pay, depending on the quantities shipped and the security levels invested. In

this study, Nash equilibrium is formulated as a guaranteed variable inequality problem, an article on a game theory model for development strategy in uncertain market environment was published (Mednikov et al., 2017). In this paper, a game theory model for increasing market share under uncertainty was proposed and game theory was found to improve formation of organizational development strategy.

Making the right decision requires individuals or organizations to know what decisions their competitors are likely to make. Assuming their competitors are rational and self-interested, should organizations know how to respond to their actions? One important factor is that the optimal choices of competitors probably depend on what you will do. Their choice depends on their evaluation of your choice. This kind of thinking may make it seem as if the whole problem is completely unsolvable. But this is exactly where game theory is most useful (Brickley, Smith, and Zimmerman, 2000). In 1991, Garth Saloner who studied game theory and strategic management stated that by using game theory models in planning, we can realize the truth of game theory usefulness in strategic management (Saloner, 1991). The basic principle of strategic management is that companies and institutions should seek to develop strategies that take advantage of effective external opportunities and minimize external threats or risks. SWOT Analysis is an important tool for identifying environmental conditions and organizational internal capabilities. The basis of this tool is strategic management and knowledge of the environment around the organization. The SWOT Matrix Weakness Opportunity Strategy $S - O$ Strategy $W - O$ Threat Strategy $S - T$ Strategy $W - T$

- Strategy $S - O$ represents a strategy that seeks to seize opportunities, and these strategies are consistent with the company's ability.
- Strategy $W - O$ represents a strategy based on overcoming weaknesses to take advantage of opportunities.
- Strategy $S - T$ represents a strategy that seeks to identify and examine ways of reducing risk of threats to the company.
- Strategy $W - T$ represents a strategy that is purely defensive and prevents the company from being harmed by external threats because of its weaknesses.

Model Parameters

- Cc cost of implementing strategy efficiency systems in the company
- Pc profit from implementing strategy efficiency systems in the company
- A facilities received from the entrepreneur for implementing the strategic business efficiency improvement system
- B penalty for non-implementation of strategy business efficiency system for the company
- Cg the cost of monitoring and evaluating companies for the entrepreneur
- $C'g$ costs due to non-implementation of strategy efficiency improvement system for entrepreneur

The Payoff Matrix Between Company and entrepreneur

M NM

$$\begin{array}{ll} I & -Cc + Pc + A, -Cg - A \quad -Cc + Pc, 0 \\ NI & -B, -Cg - C'g + B \quad 0, -C'g \end{array}$$

The parameters of the represent the profits of the company and the government when they choose their strategies. The best response diagram of the game the entrepreneur and the company intersect at three points, which are as follows: ($p = 0, q = 0$)

$$-Cg(p = 1, q = 1) - Pc \quad (p = \quad, q = \quad) A + B \quad A + B$$

Economic Skill

The results of data collection collected 86 literatures consisting of e-books, journals, and official website publications of credible institutions both at national and international levels. From the literatures, it was found that the construct of economic proficiency has been implicitly discussed, but it is still scattered, not explicitly discussed but its meaning can be interpreted. Based on the synthesis of online book publications, journals, and official websites, the variables forming the economic proficiency construct can be described as follows complete with indicators.

Figure 1. Theoretical Framework of Economic Skill

1. Financial Literacy is related to financial planning, use of capital expenditure budgets, budget reserve funds and decision making in funding. Therefore, financial literacy is needed for good financial management in businesses which aims to control the cash flow of business finances so that the business runs in accordance with management strategies. Financial literacy is part standard one aspect that must be worked in management. Business, of course, a deep understanding of good finances, how financial management strategies are managed well, regarding financial management, many MSMEs can take their own strategy, MSME players take A smart strategic decision in utilizing Fintech services and accessing very diverse financing has its own advantages and disadvantages. Financial literacy has benefits for MSMEs to understand better management of the unexpected and better strategies for managing financial controls by studying finance and governance by setting them according to needs according to objectives. Financial literacy is learning about things related to financial governance knowledge and strategic skills needed to make wise decisions about finances that are appropriate and effective, such as agenda for budgeting, budgeting, savings management, investment management, short-term and long-term, capital and debt financing, and retirement fund planning. Financial literacy is knowledge about financial management that is very necessary so as not to fall into consumer behavior (Assyfa, 2020).The following are eight variables that are often considered as forming financial literacy:

- a. Basic Financial Knowledge: An understanding of basic financial concepts, such as income, expenditure, savings and investment.

Basic financial knowledge is an understanding of the fundamental concepts that govern money management. Income is all money received, whether from salary, business, or other sources. Expenses include all costs or money spent to fulfil daily needs and wants. Savings is the portion of income that is kept for future use,

providing financial security and enabling investment. Investment is the use of money to buy assets or financial instruments with the expectation of future gains or growth in value (Bolognesi et al., 2020; Huda, 2022).

- b. Debt Management: The ability to manage debt effectively, including an understanding of interest rates, loan terms, and the impact of debt on personal finances.

Effective debt management is an in-depth understanding of the various aspects of debt, including interest rates, loan terms, and the impact of debt on personal finances. While interest rates are the additional fees payable on a loan, they can vary based on the type of debt and the lender's policies. The loan term refers to the period over which the debt must be repaid, which can affect the amount of monthly payments and the total cost of the debt. Managing debt well means organising timely debt repayments to avoid additional costs and maintain good credit. The impact of debt on personal finances can be significant, affecting the ability to save, invest, and achieve long-term financial goals (Gunardi et al., 2017)

- c. Financial Planning: The ability to plan short- and long-term finances, including budgeting and retirement planning.

Financial planning is the ability to strategic financial management for both the short and long term. It involves developing a budget that includes income and expenses to ensure expenses do not exceed income and there are funds allocated for savings and investments. In the short term, financial planning helps manage day-to-day expenses and address immediate needs. In the long term, financial planning includes retirement planning, ensuring that one has enough funds to live comfortably after no longer working. Through good financial planning, one can achieve financial goals, reduce financial stress, and build financial security for the future (Fitriah et al., 2021; Rio et al., 2015; Susdiani, 2017; Yusra, 2020).

- d. Financial Product Understanding: Knowledge of various financial products, such as savings accounts, deposits, stocks, bonds and insurance.

Financial product understanding includes knowledge of the different financial instruments and services available to individuals and businesses. A savings account is a type of account in a bank that allows one to keep money safe while earning interest. A deposit is a form of savings that offers a higher interest rate, but the money must be kept for a certain period. Stocks represent ownership in a company and provide profit potential through rising stock prices and dividends. Bonds are debt instruments where investors lend money to the bond issuer (such as a company or government) in return for a fixed interest rate. Insurance provides financial protection against certain risks, such as accident, illness, or property loss, by paying regular premiums. Understanding these various products allows individuals to make better decisions in managing and growing their wealth (Bucher-Koenen et al., 2021; van Rooij et al., 2011).

- e. Investment Decision Making: The ability to make appropriate investment decisions based on an assessment of risk and potential returns.

Investment decision-making is the ability to choose the right investment considering risk and potential returns. It involves an in-depth analysis of different investment options, such as stocks, bonds, property and mutual funds, and understanding how each can affect the overall portfolio. Risk assessment is an important step in this process, involving the identification and evaluation of factors that could lead to losses or fluctuations in the value of investments. Potential returns, or expected profits, must also be considered, often using financial analysis tools and market projections. By considering risks and returns, as well as personal financial goals, investors can make more thoughtful and balanced decisions. The right investment decisions can help achieve long-term financial goals and gradually increase wealth (Saputro & Lestari, 2019; Siti Halimah et al., 2020; D. K. Wardani & Lestari, 2020).

- f. Risk Management: The ability to identify and manage financial risks, including the use of insurance and investment diversification.

Risk management involves the ability to identify and manage potential risks that may affect financial stability. This includes recognising different types of risks, such as market risk, credit risk, and operational risk, and their impact on personal or business finances. One risk management strategy is the use of insurance, which provides protection against certain risks such as accidents, illness, or property damage, by paying premiums periodically. Investment diversification is another important strategy, which involves spreading investments across different assets or instruments to reduce overall risk and protect a portfolio from large losses if one investment fails. By managing risk effectively, individuals and organisations can protect themselves from potential losses and maintain their financial health (Damayanti & Wicaksana, 2021; Santos & Oliveira Tavares, 2020; Saputro & Lestari, 2019).

- g. Understanding of Taxation: Knowledge of the tax system and how taxes affect personal finances.

An understanding of taxation includes knowledge of the prevailing taxation system and how taxes affect personal finances. It involves understanding the different types of taxes, such as income tax, value-added tax (VAT) and property tax, and how these taxes are levied and calculated. This knowledge also includes how to report taxes correctly, including reporting obligations and deadlines that must be adhered to. In addition, understanding how taxes affect net income, and financial planning helps individuals make better decisions regarding investments, savings and spending. Awareness about taxation enables one to utilise available tax deductions and incentives, as well as avoid legal issues and fines related to tax obligations (Koretskaya-Garmash, 2017; Refia Wiquar et al., 2022).

- h. Awareness of Financial Fraud: The ability to recognise and avoid financial scams and schemes that can be financially detrimental.

Financial fraud awareness is the ability to recognise and avoid financial scams and schemes that can cause financial harm. This includes an understanding of the different types of scams, such as investment fraud, identity fraud and pyramid schemes, as well as the common signs that indicate fraud (Silalahi & Meianti, 2023). It also involves knowing how to protect oneself, such as verifying the credibility of those offering financial products or services and not being easily seduced by promises of unrealistic returns (Jusriadi et al., 2024). Fraud awareness also involves protecting personal and financial information and using trusted resources to obtain information on financial security. By recognising potential fraud and taking preventative measures, individuals can protect themselves from financial loss and keep their personal finances safe (Rochendi et al., 2022; Suyanto et al., 2019).

- 2. Economic Literacy, is an understanding of the economic principles that underlie how markets, policies and global economic factors affect everyday life. It enables individuals to analyse the impact of government policies, market fluctuations and economic trends on their personal and business decisions. By having good economic literacy, one can make more informed and strategic decisions in both personal and professional financial contexts. Here are eight variables that are often considered as shapers of economic literacy:

- a. Basic Knowledge of Economics: Understanding of basic economic concepts such as demand and supply, inflation, deflation, and elasticity.

Basic understanding of economics includes important concepts such as demand and supply, inflation, deflation, and elasticity. Demand refers to the amount of goods or services that consumers want at various price levels, while supply is the amount of goods or services that producers are willing to sell (As'ad & Zulfikar, 2020a; Nizam et al., 2020). Market equilibrium occurs when the amount demanded equals the amount offered at a given price level. Inflation describes a general increase in the prices of goods and services, reducing the purchasing power of money, while deflation is a general decrease in prices that may increase purchasing power but is often associated with a decrease in economic activity (Aviani & Hardinto, 2020). Demand elasticity measures how sensitive the quantity of a good demanded is to changes in price, while supply elasticity measures the sensitivity of the quantity of a good offered to changes in price. Understanding these concepts is important for market analysis and the impact of economic policy on the economy and this knowledge helps in making better economic decisions (Budiwati et al., 2020).

- b. Markets and Prices: Knowledge of how markets work, including how prices are determined by the interaction between demand and supply.

Knowledge of how markets work involves understanding that prices are determined by the interaction between demand and supply. Demand reflects the

willingness of consumers to buy goods or services at various price levels, while supply indicates the willingness of producers to sell at various price levels (Budiwati et al., 2020). Market equilibrium is reached when the amount demanded equals the amount offered, creating a stable price. If demand increases while supply remains fixed, prices tend to rise, and vice versa. This understanding helps in analysing market dynamics and making more informed economic decisions (Alwi, 2023; Pendidikan et al., 2018).

- c. Economic Systems: An understanding of the different types of economic systems such as market economy, planned economy, and mixed economy, and their respective advantages and disadvantages.

An understanding of economic systems includes knowledge of market economies, planned economies, and mixed economies, each with their advantages and disadvantages. In a market economy, decisions are made based on the interaction of supply and demand with prices determined by the market mechanism, offering high efficiency and innovation, but can lead to income inequality (Gaspersz, 2018; Mathews & Greden, 1999). In contrast, planned economies are governed by governments that determine production and distribution, allowing for a more equitable distribution of resources, but are often less efficient and less innovative. Mixed economies combine elements of both free markets and government planning, seeking to optimise the advantages of both systems. This system allows for market flexibility while maintaining social justice through government intervention (Juliana, 2013; Sina, 2012). By understanding the advantages and disadvantages of each system, countries can adjust their economic policies to achieve optimal welfare for society.

- d. Economic Policy: Knowledge of fiscal and monetary policies, as well as how these policies are used to regulate the economy.

Knowing information about the government's economic policies, such as fiscal and monetary policies, is crucial for people for several key reasons. Firstly, this understanding helps individuals make better financial decisions, such as budget planning, investment, and spending, based on the impact of policies on income and cost of living (Ismail et al., 2019). Second, knowledge of economic policies allows people to plan their finances effectively, including deciding when to save or invest based on economic projections affected by government policies (McCowage & Dwyer, 2022). Thirdly, they can be better prepared to adapt to economic changes, such as fluctuations in inflation or unemployment, caused by government policies. In addition, knowledge of economic policies helps people understand how social assistance programmes or public investments can improve their social welfare. An economically educated society can reduce uncertainty and anxiety related to unexpected economic changes. Information about economic policies enables people to respond sensibly to changes in markets and government policies (AS'AD & ZULFIKAR, 2020b; Nizam et al., 2020).

- e. International Trade: An understanding of the concepts and benefits of international trade, including tariffs, quotas, and trade agreements.

People's economic literacy plays a key role in capitalising on the benefits of international trade. A good understanding of the concept of international trade allows people to understand how the exchange of goods and services between countries can improve global efficiency and productivity (Alwi, 2023; Budiwati et al., 2020). With adequate economic literacy, people can better understand how tariffs and quotas affect the price and quantity of imported goods, as well as how trade agreements can reduce barriers and improve market access. This knowledge also helps people to realise the benefits such as increased consumer choice, decreased production costs, and job creation associated with international trade. With economic literacy skills, individuals can analyse and understand the impact of international trade on local and global economies, and actively participate in taking advantage of the resulting economic opportunities (Gaspersz, 2018; Sina, 2012).

- f. Economic Development: Community economic literacy plays an important role in understanding and utilizing factors that influence economic development, such as investment, technology and human resources. With sufficient knowledge, people can better understand how investments in infrastructure, industry, and education impact the country's production capacity and competitiveness, as well as how this affects their own economic. Economic literacy also helps people appreciate the role of technology in driving efficiency and innovation, as well as how technology can increase productivity in various sectors (Ismail et al., 2019; McCowage & Dwyer, 2022). In addition, understanding the importance of skilled and highly educated human resources strengthens awareness of investment in education and training as a key to economic development. An economically educated society can be more active in supporting policies and initiatives that encourage sustainable and inclusive economic development. Economic literacy strengthens the ability of individuals and communities to contribute to and exploit opportunities in the economic development process (AS'AD & ZULFIKAR, 2020b; Martins & Veiga, 2020).

- g. Public Finance: Understanding of government budgets, state revenues, and public expenditures and their impact on the economy. With good economic literacy, the public can understand how the government budget influences resource allocation and policy priorities, as well as how state income from taxes and other sources is used to fund public programs (Ismail et al., 2019)

Semantic Scholar," 2018). This knowledge enables society to critically assess public spending and its impact on social and economic well-being. In addition, economic literacy helps people understand the consequences of fiscal policy, such as budget deficits and state debt, as well as their impact on inflation and economic stability (McCowage & Dwyer, 2022; Nizam et al., 2020). This awareness supports active participation in the democratic process and decision making related to public policy. In this way, economic literacy strengthens society's ability to make better

and informed decisions regarding public financial issues and their impact on the economy (AS'AD & ZULFIKAR, 2020a; Budiwati et al., 2020).

- h. Economic Indicators: Knowledge of various economic indicators such as Gross Domestic Product (GDP), unemployment rate, and consumer price index (CPI), and how they are used to measure economic performance.

People's economic literacy plays an important role in understanding and interpreting economic indicator variables such as Gross Domestic Product (GDP), unemployment rate, and consumer price index (CPI). GDP describes the total value of goods and services produced, and an understanding of economic literacy helps people assess how growth or decline in GDP affects their well-being. The unemployment rate, which indicates the percentage of the workforce that is not working, requires economic literacy to understand its implications for employment opportunities and labor market policies. CPI, which measures changes in prices of goods and services, affects purchasing power; Economic literacy allows people to understand the impact of inflation or deflation on their cost of living (Alwi, 2023; Budiwati et al., 2020; Rahmatullah et al., 2022; Susanti et al., 2022; Tambun & Cahyati, 2023).

- 3. Managerial literacy or managerial skills, includes the knowledge and ability to manage various operational and strategic aspects in an organization. It involves skills in planning, organizing, controlling, and leadership, which enable a manager to achieve organizational goals effectively. With good managerial skills, individuals can lead teams, manage resources efficiently, and make strategic decisions that support long-term growth and success. The following are eight variables that are often considered to form managerial literacy:

- a. Strategic Planning: The ability to plan long-term goals and develop strategic plans to achieve them such as SWOT analysis, establishing a vision and mission, and identifying opportunities and threats (Djuitaningsih & Rahman, 2001; Shaw, 1990). Strategic planning reflects a person's ability to design long-term goals and determine concrete steps to achieve them, demonstrating superior managerial skills. A person skilled in strategic planning demonstrates his capacity to manage resources efficiently and maximize results, confirming his abilities as a competent manager (Ferinia et al., 2023).
- b. Human Resources Management: Knowledge of how to manage employees, including recruitment, training, development, and performance appraisal. Competent managers can identify employee potential, provide appropriate training, and create a work environment that supports development and productivity. Effective human resource management by a manager reflects his ability to build a solid team, motivate employees, and maintain a high level of job satisfaction [72], [73]. Human Resources have made continuous progress in the innovation strategy of adapting paradigms in the era of digitalization, building new patterns of thinking from traditional patterns to modern thinking, which has

changed people's way of life, especially human resources who are able to understand changes in society who make a living as SMEs. Facing the era of globalization which is the advancement of new technology which integrates the physical, digital and biological worlds, there are fundamental changes in people's way of working and living. Human resources are increasingly developing by taking advantage of technological advances that have an impact on various sectors, especially the economic sector. The human resources of a company or business are something that needs to be considered in its development and sustainability. One of the factors that contribute to the sustainability of MSMEs is the human factor, apart from that there is the planet and planning (Istikhoroh et al., 2018). Quality human resources, mastering the business management system, having skills, extensive knowledge and adequate education will contribute to the sustainability of a business. Extensive knowledge can be seen from the financial understanding of MSME players so that they can improve their performance (Gunawan et al., 2023). Even though they have extensive knowledge, the quality of human resources is still vulnerable to developments over time because technological developments are increasingly sophisticated so they must be smart in adapting. MSMEs are businesses owned and managed by households, small businesses, groups or individuals. As a developing country, Indonesia has placed MSMEs at the heart of the regional economy to encourage the potential for independent growth of society, especially in the economic sector. In Indonesia, MSMEs cannot be excluded because their presence greatly facilitates equal distribution of social income (Fadilah et al., 2021). Marketing is one of the most important activities that MSMEs must carry out in order to survive. According to (Fawzi Marissa, 2022), marketing strategy is a form of activity that involves marketing a good or service using strategies and special tricks to increase sales.

- c. **Effective Communication:** Ability to communicate clearly and effectively with a variety of stakeholders, both orally and in writing. This includes presentation and negotiation skills. A competent manager must have strong presentation and negotiation skills, enabling them to persuade, influence, and reach agreements that benefit the organization. Effective communication skills help managers in building good relationships with stakeholders, reducing miscommunication, and increasing collaboration and productivity (Fitriyani, 2022; Sandra et al., 2023).
- d. **Financial Management:** An understanding of the financial principles necessary to manage budgets, financial reports, and analysis of a company's financial performance. With a strong understanding of finance, a manager can make data-driven decisions, optimize the use of resources, and ensure the Company's financial stability and growth (Majid et al., 2020; Purnami Putri & Wirakusuma, 2022). Skills in financial management enable a manager to identify areas of efficiency, develop cost-saving strategies, and increase a company's profitability.

- e. **Operational Management:** Knowledge of how to manage daily operational processes so that they run efficiently and effectively, including supply chain management, production, and quality. A competent manager is able to optimize daily operations, ensuring the supply chain runs smoothly, production is on time, and product quality is maintained, all of which contribute to the company's success. Good operations management reflects a manager's ability to identify and overcome obstacles, implement process improvements, and ensure the entire system functions harmoniously (Penilaian et al., 2023; Rahman & Hirawati, 2022; Tatik et al., 2021).
 - f. **Leadership:** The ability to lead and motivate a team to achieve organizational goals. This includes interpersonal skills, conflict management, and organizational culture development. Effective leadership reflects a manager's ability to make wise decisions, inspire employees, and create a positive and productive work environment (Fourqoniah et al., 2022; Sutarsa, 2023). A manager with strong leadership skills is able to build a solid team, manage conflict, and ensure each team member feels valued and supported in their contributions to the company.
 - g. **Project Management:** Managerial skills include knowledge of project management methods and techniques, which include planning, implementing, monitoring, and closing projects, ensuring projects run on schedule and budget. A manager competent in project management can coordinate various aspects of a project, identify risks, and implement strategies to overcome obstacles, ensuring a successful outcome. Mastery of project management methods and techniques allows a manager to direct the project team effectively, measure performance, and ensure the achievement of project goals in accordance with established quality standards (Damanik et al., 2020; Suprihanto, 2014; Wijayanto, 2012).
4. **Decision Making – Problem Solving**, associated with economic proficiency involves the ability to analyse economic data, evaluate options, and select optimal solutions based on an understanding of economic principles. With economic proficiency, one can assess the impact of decisions on costs, benefits, and risks, as well as consider how global and local economic factors influence desired outcomes. This ability helps in making intelligent and strategic decisions, both in personal and professional contexts, as well as in overcoming challenges and exploiting opportunities in an efficient and sustainable manner. The following are six variables that are often considered to form decision-making literacy:
- a. **Problem Understanding:** The ability to recognize and define a problem or opportunity clearly and comprehensively. This includes identifying the factors that influence the problem. The ability to develop and evaluate various alternative solutions or actions is a crucial skill in effective decision making (Adeoye & Jimoh, 2023; Indrašienė et al., 2021). This process involves an in-depth analysis of the advantages and disadvantages of each alternative, as well as consideration of how each option affects resources and long-term outcomes. In the context of economic

proficiency, this skill is very important because it helps individuals and organizations make optimal decisions by maximizing economic benefits and minimizing costs and risks.

- b. **Data collection and analysis:** The ability to collect relevant and accurate data and information is the foundation for effective economic-based decision making. This process involves the use of trusted data sources and systematic collection methods to ensure the quality of the information obtained (Choudhar et al., 2022; Indrašienė et al., 2021). Furthermore, the ability to analyse data using statistical techniques and other analytical tools enables the identification of crucial patterns, trends and relationships. In the context of economic proficiency, this skill helps in making decisions based on strong evidence and in-depth analysis, thereby maximizing resource efficiency and achieving optimal economic results.
- c. **Alternative Assessment:** The ability to develop and evaluate various alternative solutions or actions that can be taken. It includes an analysis of the advantages and disadvantages of each alternative. The ability to develop and evaluate alternative solutions involves a creative process to generate a variety of possible action options (Bolek et al., 2018; Cekule & Cekuls, 2022). Each alternative is then analysed in depth to assess its advantages and disadvantages, considering factors such as cost, time and risks involved. This process allows better decision making by choosing the most effective solution and in accordance with the goals to be achieved.
- d. **Risk Consideration:** The ability to identify, evaluate, and manage the risks associated with each decision alternative is an important aspect of economic proficiency. This process includes an in-depth analysis of potential risks, including an assessment of the probability of the risk occurring and its impact on the decision outcome. With this approach, economic decisions can be taken considering possible risks and their impacts, enabling appropriate mitigation measures to be taken. This ensures that decisions are not only theoretically optimal but also practical and resilient to uncertainty, thereby increasing economic efficiency and success (Capinzaiki Ottonicar et al., 2021; Fitria, 2022).
- e. **Use of Technology and Decision Aids:** Ability to use technology and decision aids, such as simulation software, decision models, and management information systems to support the decision-making process. The ability to use technology and decision aids involves utilizing simulation software, decision models, and management information systems to increase accuracy and effectiveness in decision making. This includes the ability to analyse data in real-time, model various scenarios, and assess potential outcomes with the help of available technology. By utilizing these tools, the decisionmaking process becomes more informed and structured, enabling faster and more precise decisions (Adeoye & Jimoh, 2023; Indrašienė et al., 2021; Md, 2019).

- f. **Evaluation and Feedback:** The ability to evaluate the results of decisions that have been made and use feedback for future improvements. This includes monitoring the implementation of decisions and assessing their performance. The ability to evaluate the results of decisions that have been taken involves continuous monitoring of the implementation of decisions as well as assessing their performance to determine their effectiveness (Antić & Bogetić, 2024; Bolek et al., 2018; Choudhar et al., 2022). It includes feedback analysis of the results obtained and comparing them with the set goals. Using this information, adjustments and improvements can be made to future strategies or decisions to improve desired results.

Discussion

In this research, the effective application of game theory regarding the relationship between business strategy and entrepreneurs is examined. By using game theory, problems between decision making and business regarding the allocation of facilities and strategies to parties who implement a strategy optimization system that supports entrepreneurial strengths have been resolved. The results show that by using the equilibrium obtained by business strategies for entrepreneurs, they achieve the highest profits at the equilibrium point which is the solution game. By using entrepreneurial numerical values, partners can use the facilities obtained in this article and move towards optimal strategies and maximizing expected utility. Entrepreneur can use the obtained balance points to estimate the costs of implementing energy efficiency improvement systems for entrepreneurs. This can also determine the amount of value of the facility paid to the business if it is implemented so that the benefits obtained can be maximized. The findings of this research help entrepreneurs as managers and planners to have an appropriate strategic planning process and choose more effective strategies by using models based on game theory in conditions of uncertainty. The proposed model helps improve the performance of entrepreneurs, organizations and institutions in a practical and effective way, while the balance obtained using game theory improves executive programs in practice.

Entering the digital era, proficiency in economics is becoming increasingly important for individuals and organizations. The digital era is characterized by rapid technological developments, changing business patterns, and increasing global competition. Strong economic skills enable one to understand market dynamics, anticipate changes, and take appropriate strategic steps. This includes the ability to manage resources, understand global economic trends, and identify new opportunities arising from technological innovation. Economic proficiency not only helps individuals in making wise business decisions, but also in optimizing the use of technology to increase efficiency and productivity. HR has proven that its existence has a big influence on the success of SMEs a good influence relatedness human resources and the performance of MSMEs in line with the following explanation, the sustainability of MSME businesses is of course seen

from the presence of quality human resources. Quality human resources will be a benchmark for business actors in managing a business with the aim of improving business and maintaining business continuity. MSMEs are a type of business that ranges from home-based businesses that are well managed independently to medium-sized businesses who have power in the form of employees. Human qualities in this research contributes to the sustainability of MSME performance in the digital era with intense competition. Its contribution can be seen in indicators such as education, literacy or knowledge, and business management skills. The quality of human resources is the main problem in the sustainability of MSMEs. Increasing human resources is one of the strategies for developing MSMEs to maintain business sustainability (Ariani & Utomo, 2017) The relationship between financial literacy and the performance of MSMEs is very influential so that financial literacy is able to provide education to human resources to ensure good MSME performance. Financial literacy is Knowledge about financial management is very necessary so as not to fall into consumer behavior (Assyfa, 2020).

One of the main variables of economic proficiency is financial literacy. Financial literacy involves understanding money management, investing, and long-term financial planning. In the digital era, financial literacy is increasingly crucial due to the emergence of various new financial instruments and digital investment platforms. Individuals who have good financial literacy can manage personal and business finances more effectively, reduce financial risks, and take advantage of investment opportunities that arise from developments in financial technology (FinTech). Financial technology with its development is able to influence changes in the paradigm of financial transactions globally by understanding the growth of the financial services industry, the development of fintech has influenced changes in financial planning, financial well-being, and economic alignment, from mobile payments to application-based investment platforms and robo-advising. To online banking solutions (Anthony et al: 2021) Fintech is financial management that is useful for the purposes of various digital technology-based financial services supported by modern financial technology for various organizations globally, which is mainly related to improving the quality of financial transaction services that have Information Technology. Digital technology along with the increasing needs of the communications sector, changes in social media have also experienced rapid development as a communication medium, especially for business activity media. The importance of digital transformation among MSMEs provides an in-depth perspective and digital potential in utilizing business technology information through social media. (Hong et al., 2019; Mbama et al., 2018). Major changes have occurred rapidly in recent years after the Covid-19 pandemic, where the digitalization era has brought MSMEs to change their business strategies from traditional to modern thinking with a new era of digital marketing, as well as social media continuing to develop. The development of marketing media and technology requires business actors to continue to adapt so that they can adjust their businesses to the current market. Social media can have an impact on improving MSME businesses in a sustainable manner (Chae et al., 2014). Apart from

financial literacy, economic literacy is also an important component of economic proficiency. Economic literacy includes an understanding of economic principles, government policies, and market dynamics. This knowledge allows individuals to analyse the impact of global economic changes, such as currency fluctuations, trade policies, and labour market shifts. In the digital era, economic literacy helps individuals and organizations to navigate complex and dynamic economic environments and make more informed and strategic decisions.

Managerial ability is also an integral part of economic proficiency. Managerial skills include the ability to manage daily operations, organize human resources, and lead a team towards achieving goals. In the context of the digital era, managerial skills must be expanded to include managing technology, innovation and organizational change. An economically competent manager will be able to integrate digital technologies into business operations, increase efficiency, and drive successful digital transformation. Finally, decision-making ability is an important variable related to economic proficiency. In the digital era, decisions often have to be made quickly and based on complex data. The ability to analyze data, understand economic implications, and consider alternatives is key to making effective decisions. Economic proficiency provides a framework for individuals to critically evaluate information, weigh risks and benefits, and make decisions that can maximize profits and minimize losses in the long term. Thus, proficiency in economics is a necessary foundation to successfully face the challenges and opportunities in the digital era. Economic proficiency, financial literacy, economic literacy, managerial literacy, and decision-making abilities are not only important for entrepreneurs or company managers but are also relevant for various groups of society. For individuals in a family, for example, financial literacy helps in managing the household budget, planning savings, and making wise investment decisions for the future. Economic literacy helps families understand the impact of government policies and economic fluctuations on their living costs, while managerial literacy can be applied in managing daily activities and effective time allocation. Good decisionmaking skills enable families to determine financial and investment priorities, such as children's education, home purchasing, or retirement planning.

For students and students, economics proficiency provides a solid framework of understanding of how the world works, equipping them with the analytical skills necessary to evaluate economic and social issues. Financial literacy helps them manage student loans, plan a monthly budget, and understand the importance of saving early. Economic literacy gives them insight into market mechanisms, economic policies, and the impact of globalization. Additionally, managerial literacy and decision-making skills help students manage study time, academic projects, and extracurricular activities effectively. Thus, proficiency in this field not only supports academic success but also prepares them to become economically intelligent citizens ready to face future challenges. For workers in various sectors, economic proficiency and the relationship between these variables are also very important. Financial literacy allows them to manage their salaries, retirement

benefits, and personal investments wisely. Economic literacy helps them understand the impact of economic trends and policy changes on their industry, so they can adapt better. Managerial literacy is useful for those who manage teams or projects, as well as for those who need to collaborate effectively with colleagues. Good decision-making skills are important for determining a career path, selecting relevant professional training, and planning long-term career development. With proficiency in economics, workers can improve their personal and professional well-being, and contribute more effectively to their organizations and communities.

Conclusion

Conclusion. Based on the results of the literature review, it can be concluded that there are variables that form the construction of game theory and Economic skills and their indicators, namely the financial literacy variable which consists of indicators, namely basic financial knowledge, debt management, financial planning, understanding financial products, investment decision making, risk management, understanding taxation, and awareness of financial fraud, economic literacy variable consisting of indicators, namely basic economic knowledge, markets and prices, economic systems, economic policies, international trade, economic development, public financial indicators, and economics, managerial literacy variable formed by indicators, such as planning strategic, human resource management, effective communication, management finance, operational management, leadership, and project management, and decision-making variables and problem-solving literacy variables consisting of forming indicators, namely problem understanding, data collection and analysis, alternative assessment, risk consideration, use of technology and decision-making aids, and feedback. return evaluation.

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