



The Myth of Startup Intuition: A Mathematical Perspective on Entrepreneurial Success

Nurhikmah¹

¹ Universitas Islam Negeri Alauddin Makassar, Indonesia; hikmahnur192@gmail.com

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ABSTRACT

This study examines the widespread belief that startup success is primarily driven by intuition rather than analytical reasoning. Using a qualitative library research approach, this study draws on a wide range of primary and secondary sources in entrepreneurship, financial management, and decision theory to explore the role of intuition and mathematical thinking in startup decision-making. The analysis aims to critically evaluate whether intuitive judgment alone is sufficient for achieving sustainable business success. The findings reveal that intuition does play a significant role, particularly in the early stages of entrepreneurship where uncertainty is high and information is limited. However, as startups grow and encounter increasing complexity in financial planning, market dynamics, and operational management, reliance solely on intuition becomes inadequate. Mathematical approaches such as financial analysis, probability assessment, and optimization offer a more structured and reliable framework for making informed decisions. Moreover, excessive dependence on intuition may expose entrepreneurs to cognitive biases and flawed reasoning, potentially leading to suboptimal outcomes. Therefore, this study argues that the notion of intuition-driven startup success is largely a myth. Integrating mathematical thinking with entrepreneurial intuition is essential to enhance decision quality and ensure long-term sustainability in a competitive business environment.

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Corresponding Author:

Nurhikmah

Universitas Islam Negeri Alauddin Makassar, Indonesia; hikmahnur192@gmail.com

1. INTRODUCTION

In the development of modern entrepreneurship, a dominant belief has emerged that the success of a startup depends heavily on the entrepreneur's intuition and instincts. This view positions intuition as a natural ability that allows a business founder to quickly identify opportunities without the need for lengthy analysis ¹. In many popular narratives, intuition is portrayed as an "inner compass" that guides entrepreneurs toward the right decisions amidst uncertainty. This belief is not without reason; it is formed from the numerous success stories of startup founders frequently featured in the media and business literature. These stories typically highlight crucial moments when an entrepreneur made a major decision based solely on personal conviction. This narrative then shapes the collective perception that speed and courage in action are more important than in-depth analysis.

One figure often cited as an example is Mark Zuckerberg, who is often associated with the visionary decisions he made in the early stages of Facebook's development. His success story is often interpreted as proof that intuition can overcome limitations of data or experience ². This further reinforces the view that a key factor in startup success is the courage to take significant risks based on personal conviction³. However, upon closer examination, this narrative tends to be selective and biased toward success stories alone. Many unsuccessful startups rarely receive the spotlight, creating the illusion that an intuitive approach always leads to success. This phenomenon is known as survivorship bias, where only successful stories are referenced, while failures are overlooked.

In reality, data shows that the startup failure rate is quite high. Many start-ups fail to survive their first few years of operation. The cause of this failure is generally not a lack of creative ideas or intuition, but rather weak planning, particularly in financial aspects and an inadequate business strategy. Weaknesses in financial management, such as errors in cash flow calculations, uncontrolled expenses, and overly optimistic revenue projections, are often the main factors in failure. This demonstrates that analytical skills, particularly those based on mathematics, play a crucial role in maintaining business continuity. In this context, mathematics serves not only as a calculation tool but also as a basis for rational and measured decision-making. Financial analysis, such as calculating break-even points, profit margins, and investment evaluations, requires a systematic mathematical approach. Without this understanding, business decisions can potentially be based on inaccurate assumptions⁴.

Furthermore, effective budget planning relies heavily on the ability to process numerical data. Entrepreneurs need to be able to project capital needs, allocate resources efficiently, and anticipate various risk scenarios⁵. A mathematical approach enables entrepreneurs to make more objective, data-

¹ Fahmiah Akilah et al., *Kewirausahaan* (Arsy Media, 2025); Suprpto Estede et al., *Kewirausahaan Kreatif: Inovasi Dan Strategi Dalam Bisnis Modern* (PT. Star Digital Publishing, Yogyakarta-Indonesia, 2025).

² Guy Balzam and Noam Yuran, "Assetization And The Logic Of Venture Capital, Or Why Facebook Does Not 'Feel' like A Monopoly To Zuckerberg," *Science as Culture* 31, no. 1 (2022): 107–20, <https://doi.org/https://doi.org/10.1080/09505431.2021.1990874>; Sascha Kraus et al., "Facebook And The Creation Of The Metaverse: Radical Business Model Innovation Or Incremental Transformation?," *International Journal of Entrepreneurial Behavior & Research* 28, no. 9 (2022): 52–77, <https://doi.org/https://doi.org/10.1108/IJEER-12-2021-0984>.

³ Padlun Fauzi and Ryand Daddy Setyawan, "Faktor Keberhasilan Startup Digital Berdasarkan Kepemimpinan Implikasinya Terhadap Ketahanan Pribadi," *REMIK: Riset Dan E-Jurnal Manajemen Informatika Komputer* 7, no. 1 (2023): 610–22, <https://doi.org/https://doi.org/10.33395/remik.v7i1.12105>; Akhmad Supriyanto et al., *Dasar-Dasar Kewirausahaan* (PT. Sonpedia Publishing Indonesia, 2025).

⁴ Wulan Riyadi et al., *Kewirausahaan: Tantangan, Risiko Dan Kegagalan Dalam Usaha* (PT. Sonpedia Publishing Indonesia, 2025).

⁵ Aticus Peterson and Andy Wu, "Entrepreneurial Learning and Strategic Foresight," *Strategic Management Journal* 42, no. 13 (2021): 2357–88, <https://doi.org/https://doi.org/10.1002/smj.3327>; Raphael

driven decisions⁶. Furthermore, approaches from Behavioral Economics provide additional perspectives on the limitations of human intuition. This theory explains that individuals do not always act rationally but are often influenced by cognitive biases and emotions in the decision-making process. Figures like Daniel Kahneman emphasize that humans tend to use heuristics, or mental shortcuts, that can lead to misjudgments. In a business context, this can lead to overconfidence, confirmation bias, and errors in assessing risk, ultimately detrimental to the company.

This situation is becoming increasingly relevant in the startup world, which is full of uncertainty and rapidly changing market dynamics. Decisions made without adequate analysis can have significant consequences, ranging from financial losses to total business failure. Therefore, relying solely on intuition without the support of data and analysis is a high-risk approach. Based on this description, this study aims to critically examine the myth of the dominance of intuition in entrepreneurship and examine the important role of mathematics in supporting more rational decision-making. It is hoped that this study will provide a more comprehensive and balanced understanding of the importance of integrating intuition and analysis in achieving startup success.

2. METHODS

This research uses a qualitative approach that aims to understand the phenomenon in depth through interpretation of various relevant information sources⁷. This approach was chosen because it can explore the meanings, concepts, and thought patterns that develop in entrepreneurship studies, particularly regarding the role of intuition and mathematical analysis in decision-making. In contrast to the quantitative approach, which emphasizes numerical measurements, the qualitative approach places more emphasis on contextual and interpretive understanding of the phenomena being studied⁸. The type of research used is library research, a research method that relies on data and information from various existing literature. In this context, the researcher does not collect data directly in the field, but rather examines various written sources related to the research topic. This approach is considered effective for examining theoretical concepts and comparing various views developed in academic literature.

The data in this study were obtained from various sources relevant to the themes of entrepreneurship, decision-making, and the role of mathematics in business. These data sources include literature discussing managerial and financial aspects, as well as analytical approaches in the startup world. By utilizing various references, this study seeks to develop a comprehensive and in-depth framework. The data sources in this study are divided into two categories: primary and secondary sources. Primary sources consist of scientific works that directly address the topics of entrepreneurship and finance, such as research journal articles, research reports, and high-authority academic publications. Meanwhile, secondary sources include textbooks, supporting scientific journals,

Amit, Lawrence Glosten, and Eitan Muller, "Entrepreneurial Ability, Venture Investments, and Risk Sharing," in *Venture Capital* (Routledge, 2022), 135–48.

⁶ Made Suci Ariantini et al., *Sistem Pendukung Keputusan: Konsep, Metode, Dan Implementasi* (PT. Sonpedia Publishing Indonesia, 2023).

⁷ M Fathun Niam et al., "Metode Penelitian Kualitatif," 2024; Nur Intifada Zahroh et al., "Strategi Pengumpulan Data Dalam Penelitian Kualitatif: Teknik, Tantangan Dan Solusinya," *Tarbiyatul Ilmu: Jurnal Kajian Pendidikan* 3, no. 6 (2025): 107–18, <http://languar.net/index.php/TARBIYATULILMU/article/view/256>; Nurhayati Nurhayati et al., *Metodologi Penelitian Kualitatif: Teori Dan Praktik* (PT. Sonpedia Publishing Indonesia, 2024).

⁸ Nurhayati et al., *Metodologi Penelitian Kualitatif: Teori Dan Praktik*; Zahroh et al., "Strategi Pengumpulan Data Dalam Penelitian Kualitatif: Teknik, Tantangan Dan Solusinya."

and various other publications that provide additional explanations or broader perspectives on the topics studied.

Data collection techniques were conducted through documentation studies, namely by identifying, collecting, and reviewing various relevant written documents. This process involves critical reading, noting important information, and grouping data based on specific themes. With this technique, researchers can obtain systematic and structured data to support the analysis conducted. Data analysis in this study used the content analysis method, which aims to systematically interpret the meaning of the text content. The analysis process was carried out through several stages, namely data reduction, data presentation, and drawing conclusions. In the data reduction stage, researchers filtered information relevant to the research focus. Next, the data was presented in a structured narrative form for easy understanding. The final stage was drawing conclusions, where researchers formulated findings based on patterns and relationships found in the data. With this stage, it is hoped that the research results have sufficient validity and analytical depth.

3. FINDINGS AND DISCUSSION

FINDINGS

In the dynamic, uncertain world of startups, this study provides a more comprehensive picture of the factors influencing the success or failure of a startup. Intuition has often been viewed as a key element in business decision-making, especially in situations that demand speed and courage. However, through a review of various academic literature and business practices, this study demonstrates that the reality on the ground is far more complex. Effective business decisions rely not only on instinct but also require a strong and measurable analytical foundation.

Intuition has a limited role in startup success.

The role of intuition in startup success demonstrates that intuition does have a place in the decision-making process, but its contribution is not dominant. Intuition is often understood as the ability to "feel" the right decision without going through a lengthy analysis process⁹. In practice, intuition is widely used by entrepreneurs in the early stages of starting a business, especially when available information is limited or poorly structured. Conceptually, intuition does not emerge suddenly, but rather results from accumulated experience, learning, and exposure to similar situations. Entrepreneurs who have been involved in a field for a long time tend to have sharper intuition than beginners. This is due to their ability to recognize certain patterns quickly, even without realizing it. Thus, intuition is actually a form of information processing that occurs implicitly in the mind.

However, intuition's advantage in speed is often accompanied by its weakness in accuracy. Intuition is subjective and heavily influenced by an individual's psychological state, such as emotions, self-confidence, and past experiences¹⁰. In many cases, intuition can be misleading if it is based on

⁹ Magfirah Ramadanti, Cici Patda Sary, and Suarni Suarni, "Psikologi Kognitif (Suatu Kajian Proses Mental Dan Pikiran Manusia)," *Al-Din: Jurnal Dakwah Dan Sosial Keagamaan* 8, no. 1 (2022): 56–69, <https://doi.org/https://doi.org/10.30863/ajdsk.v8i1.3205>; Ahsanul Ridho, "Proses Pengambilan Keputusan Dan Solusi Dalam Manajemen Pendidikan Islam," *Salam Institute Islamic Studies* 1, no. 1 (2024): 40–49, <https://elsalima.org/>.

¹⁰ Fatimah Tuzaroh, "Kepercayaan Diri Dalam Perspektif Psikologi Umum Dan Islam: Kajian Pemikiran Peter Lauster Dan Malik Badri," *Jurnal Kajian Islam Interdisipliner* 10, no. 2 (2025): 71–88, <https://doi.org/https://doi.org/10.14421/jkii.v10i2.1438>; Nur Fatwkiningsih, *Teori Psikologi Kepribadian Manusia* (Penerbit Andi, 2020); Defara Islamiach, "Kognisi Dan Trauma: Kajian Psikologi Kognitif Terhadap Tokoh Clara Dalam Cerpen Hujan Berujung Tangisan," *Jurnal Ilmiah Buana Bastra: Bahasa,*

erroneous perceptions or irrelevant experiences. Therefore, decisions based solely on intuition are high-risk, especially in business contexts that demand precision and careful calculation. The limitations of intuition can also be explained through a Behavioral Economics perspective, which highlights the presence of cognitive biases in the human decision-making process¹¹. Biases such as overconfidence, anchoring, and confirmation bias can influence how individuals assess a situation. As a result, decisions made based on intuition are not always rational but are instead influenced by unconscious perceptual distortions.

In the context of startups with high levels of uncertainty, the limitations of intuition become even more significant. Dynamic markets, rapid technological change, and intense competition demand decision-making that is not only quick but also accurate. Relying solely on intuition without the support of data and analysis can lead to strategic errors, such as incorrectly targeting the market, setting inappropriate prices, or expanding prematurely. Therefore, it can be concluded that intuition has a limited role in startup success. Intuition remains a useful tool in the decision-making process, especially during the exploration and idea initiation stages. However, to ensure long-term success, intuition needs to be complemented by a data-driven analytical approach and systematic calculations. This way, entrepreneurs can minimize the risk of error while improving the quality of their decisions.

Many startup failures are caused by a lack of mathematical analysis.

The numerous startup failures caused by a lack of mathematical analysis demonstrate the gap between creativity and rational business management skills. Many startups begin with innovative ideas and promising market potential, but lack the ability to perform accurate calculations. As a result, decisions often lack sound foundation, making them vulnerable to errors that significantly impact business sustainability. One of the most common weaknesses is in financial management. Many startups fail due to the inability to accurately calculate operational costs, including production, marketing, distribution, and other fixed costs. These errors in estimation can result in expenses exceeding revenue, leading to early losses. Without adequate mathematical analysis, this condition often goes undetected¹².

Furthermore, unrealistic revenue projections are also a major factor in failure. Many entrepreneurs tend to be overly optimistic in estimating sales growth without considering important variables such as market conditions, competition, and consumer purchasing power. These undata-driven projections lead to inaccurate business planning, resulting in strategies that don't align with reality. Weaknesses in cash flow analysis are also a crucial issue that is often overlooked. Many startups, despite having good products and high market demand, still fail due to inability to manage cash flow effectively. An imbalance between income and expenses in the short term can lead to a company running out of liquidity, even though the business has the potential to be profitable overall¹³.

Susastra, Dan Pengajarannya 12, no. 2 (2025): 214–26, <https://doi.org/https://doi.org/10.36456/bastra.vol12.no2.a10333>.

¹¹ Aldo Karinda and Shapely Ambalao, "Neuroekonomi Dan Pengambilan Keputusan Finansial Oleh Generasi Z," *Paradoks: Jurnal Ilmu Ekonomi* 8, no. 2 (2025): 1580–87, <https://doi.org/https://doi.org/10.57178/paradoks.v8i2.1598>; Ananta Rahma Alifya et al., "Pengaruh Cognitive Bias Dalam Pengambilan Keputusan Terhadap Dunia Bisnis," *Jurnal Humaniora Dan Sosial Sains* 1, no. 3 (2024): 329–35, <https://humaniorasains.id/jhss/article/view/43>.

¹² Scherly Hansopaheluwakan et al., *Kewirausahaan: Berpikir Kreatif Untuk Menciptakan Peluang Bisnis Yang Inovatif* (PT. Green Pustaka Indonesia, 2025); Riyadi et al., *Kewirausahaan: Tantangan, Risiko Dan Kegagalan Dalam Usaha*.

¹³ Almaira Aura Zahra, Anggi Khoiriyah Putri, and Zhika Nur Cahyani, "Business Plan Sebagai Cermin Kognisi Dan Perilaku Wirausaha: Pendekatan Psikologis Dalam Perencanaan Bisnis," *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial* 2, no. 12 (2025): 773–82,

A lack of mathematical analysis also leads to inappropriate strategic decision-making. For example, decisions to expand, add employees, or increase production capacity are often made without careful consideration. Without an analysis that considers costs, benefits, and risks, these decisions can become financial burdens that can accelerate business failure. Therefore, it can be concluded that the lack of mathematical analysis is one of the main causes of startup failure. Without a data-driven approach and systematic calculations, entrepreneurs tend to make decisions based solely on assumptions and intuition. Therefore, strengthening analytical skills, particularly in financial aspects and strategic planning, is crucial to increasing a startup's chances of long-term success.

Mathematical approaches improve the quality of business decisions.

A mathematical approach to business decision-making is a crucial foundation that enables companies to operate more purposefully and rationally. In the increasingly complex context of modern business, decisions can no longer rely solely on intuition or experience; they require measurable data support. A mathematical approach provides a systematic framework for thinking, allowing each decision to be analyzed logically and based on clear evidence. One of the main advantages of a mathematical approach is its ability to transform various business phenomena into quantitative forms that can be measured and compared. Through quantitative analysis, entrepreneurs can evaluate various decision alternatives using objective indicators, such as costs, profits, risks, and efficiency. This allows for a more transparent decision-making process that is less reliant on subjective perceptions¹⁴.

Furthermore, a mathematical approach plays a crucial role in identifying and managing business risks more systematically. By using specific calculation models, entrepreneurs can estimate the likelihood of losses and their impact on the company. This approach helps develop more effective risk mitigation strategies, enabling companies to anticipate various possibilities that could disrupt operational stability. In terms of planning, a mathematical approach enables the development of more realistic and measurable business strategies. For example, through financial projection calculations, break-even analysis, and budget planning, companies can determine the most efficient steps to achieve their desired goals. Thus, every strategic decision made has a clear and accountable basis¹⁵.

A mathematical approach also improves the quality of business performance evaluations. With structured numerical data, companies can measure achieved results and compare them to established targets. This evaluation process is more objective because it is based on clear indicators, making it easier to identify weaknesses and opportunities for future improvement. Ultimately, applying a mathematical approach to business decision-making not only increases accuracy but also strengthens the credibility of those decisions. Decisions based on clear data and analysis tend to be more readily accepted by various parties, both internal and external to the company. Thus, a mathematical approach serves not only as an analytical tool but also as a means to build trust and sustainability in business management.

The integration of intuition and mathematics results in more optimal decisions.

The integration of intuition and mathematical approaches is increasingly relevant in modern business decision-making. In practice, these two approaches are often viewed as contradictory, with intuition associated with subjectivity and mathematics synonymous with objectivity. However, in the context of entrepreneurship, the two can complement each other, producing more comprehensive and effective decisions.

<https://doi.org/https://ojs.daarulhuda.or.id/index.php/Socius/article/view/1844>; Nada Sausan Adha Fili, Adelia Natasya, and Restu Agung Syahputra, "Overview Studi Kelayakan Bisnis," *Jurnal Ilmiah Ekonomi Dan Manajemen* 3, no. 2 (2025): 382–89, <https://doi.org/https://doi.org/10.61722/jiem.v3i2.3858>.

¹⁴ Ahmad Syamil et al., *Matematika Ekonomi Dan Bisnis* (PT. Sonpedia Publishing Indonesia, 2026).

¹⁵ Mohamad Yusak Anshori and Teguh Herlambang, *Manamatik Mengelola Bisnis Dengan Logika Angka Dan Strategi* (Deepublish, 2025).

Intuition plays a crucial role in the early stages of the decision-making process, especially in uncertain situations or when available data is limited. At this stage, intuition helps entrepreneurs identify opportunities, quickly read market trends, and respond more flexibly to changes in the business environment. This ability is crucial in the startup world, which demands high speed and adaptability to market dynamics¹⁶.

On the other hand, a mathematical approach serves as a tool to test and validate decisions generated through intuition. Once an idea or initial decision is formed, mathematical analysis is used to assess feasibility, calculate risks, and estimate potential financial impacts. This ensures that decisions are not based solely on subjective beliefs but are also supported by data and rational calculations.

The integration of these two approaches allows for a more balanced decision-making process. Intuition provides direction and inspiration, while mathematics provides structure and certainty. This combination helps entrepreneurs avoid two extremes: overly speculative decisions due to intuition domination, or overly rigid decisions due to over-reliance on numbers without considering context.

Furthermore, the integration of intuition and mathematics also enhances adaptability in the face of change. In situations where historical data is not entirely relevant, intuition can help fill the gaps. Conversely, when intuition is potentially biased, mathematical analysis can serve as a corrective tool. Thus, the two work synergistically to improve decision quality under various conditions.

Ultimately, the integration of intuition and mathematical approaches results in more optimal business decisions because it combines the advantages of each approach. The resulting decisions are not only fast and responsive, but also accurate and accountable. This approach is key to startup success in navigating complexity and uncertainty, while ensuring long-term business sustainability.

DISCUSSION

The research findings indicate that intuition plays a role in startup decision-making, particularly in the early stages when information is limited. This finding aligns with previous studies that suggest that under conditions of high uncertainty, entrepreneurs tend to rely on intuition as an adaptive mechanism to respond quickly to opportunities¹⁷. In the entrepreneurship literature, intuition is often associated with experience and the ability to recognize implicit patterns. Previous research indicates that experienced entrepreneurs are more effective at using intuition than novices. This supports the study's findings that intuition is not simply a spontaneous response but rather the result of internalizing knowledge formed through learning and experience. However, the effectiveness of intuition remains dependent on the context and quality of an individual's experience.

On the other hand, this study also confirms that excessive reliance on intuition can lead to cognitive biases that negatively impact decision quality. This finding is consistent with the theory proposed by Daniel Kahneman within the framework of Behavioral Economics, which states that individuals tend to use heuristics in decision-making¹⁸. These heuristics, while efficient, often produce

¹⁶ Evo Sampetua Hariandja, *Pemasaran Strategik: Analisis Pelanggan, Pesaing, Pasar, Dan Lingkungan* (Penerbit Nem, 2025).

¹⁷ Sri Winarsih, "Pengalaman Wirausaha UMKM Di Bekasi Dalam Menghadapi Tantangan Ketidakpastian Ekonomi: Studi Fenomenologi," *RIGGS: Journal of Artificial Intelligence and Digital Business* 4, no. 3 (2025): 3000–3005, <https://doi.org/https://doi.org/10.31004/riggs.v4i3.2425>.

¹⁸ W J Wouter Botzen, Louison D Thepaut, and Sanchayan Banerjee, "Kahneman's Insights for Climate Risks: Lessons from Bounded Rationality, Heuristics and Biases," *Environmental and Resource Economics* 88, no. 10 (2025): 2663–88, <https://doi.org/https://link.springer.com/article/10.1007/s10640-025-00980-4>; Massimo Egidi, "The Cognitive Explanation Of Economic Behavior: From Simon To Kahneman," in *Handbook of Knowledge and Economics* (Edward Elgar Publishing, 2012), <https://doi.org/https://doi.org/10.4337/9781781001028.00016>; Daniel Kahneman and Vernon Smith,

systematic biases such as overconfidence and confirmation bias, which can lead to misjudgments. Furthermore, the results of this study indicate that the financial aspects and business strategy of startups require a more in-depth analytical approach. This finding is supported by various previous studies that emphasize the importance of financial literacy and quantitative analysis skills for business success. These studies indicate that business failure is often caused by errors in financial planning, cash flow management, and unrealistic revenue projections.

The mathematical approach in this study is seen as an important tool for improving the quality of decision-making. This is in line with financial management literature, which emphasizes the use of quantitative analysis in evaluating decision alternatives¹⁹. With this approach, entrepreneurs can measure risks, estimate outcomes, and determine the most efficient strategy based on available data. Previous research also shows that the use of mathematical models can increase accuracy and objectivity in the decision-making process. Furthermore, the use of mathematical models in business planning allows for more systematic and structured strategy development. These findings are consistent with previous research showing that data-driven planning has a positive correlation with business performance. Startups that implement thorough planning tend to have a higher success rate than those that rely solely on an intuitive approach.

In the context of increasingly complex business competition, the ability to integrate intuition and mathematical analysis is becoming increasingly important. Previous research has shown that effective decision-making relies not solely on a single approach, but rather on a combination of intuitive and analytical thinking²⁰. This supports the findings of this study, which emphasizes the importance of a balance between the two approaches. Integrating intuition and mathematics allows entrepreneurs to leverage the strengths of each approach. Intuition plays a role in the exploration and innovation stages, while mathematics serves as a validation and evaluation tool. This approach is also supported by the dual-process theory in cognitive psychology, which explains the existence of two systems of thinking – a fast (intuitive) system and a slow (analytical) system – that work complementary. Furthermore, this study strengthens the argument that optimal business decisions are the result of the interaction between creativity and rationality. Previous research has shown that successful innovation depends not only on creative ideas but also on the ability to implement those ideas in a measurable and sustainable manner. Thus, the integration of intuition and mathematics is key to creating added value for companies.

Overall, this discussion demonstrates that the research findings are consistent with various theories and previous research findings. Intuition remains crucial, but it must be balanced with a systematic mathematical approach. By combining these two approaches, entrepreneurs can improve decision-making quality, reduce risk, and increase the chances of success in a competitive and dynamic

“Foundations Of Behavioral and Experimental Economic,” *Nobel Prize in Economics Documents* 1, no. 7 (2002): 1–25.

¹⁹ Chalid Imran Musa, “Integrasi Manajemen Perilaku Dan Keputusan Keuangan Dalam Perusahaan: Analisis Literatur Strategi Manajemen,” *Jurnal Ilmu Manajemen, Bisnis Dan Ekonomi (JIMBE)* 3, no. 2 (2025): 173–80, <https://doi.org/https://doi.org/10.59971/jimbe.v3i2.555>; Arini Fitria Permana et al., “Analisis Proses Pengambilan Keputusan Investasi Dalam Penganggaran Modal,” *RIGGS: Journal of Artificial Intelligence and Digital Business* 4, no. 4 (2026): 13897–903, <https://doi.org/https://doi.org/10.31004/riggs.v4i4.5828>; Fery Hadi Yuda Bhaskoro and Handayani Tri Wijayanti, “Optimalisasi Pengelolaan Keuangan Melalui Peran Akuntansi Manajerial: Tinjauan Literatur Dan Implikasinya Terhadap Efektivitas Keputusan Keuangan,” *Economics and Digital Business Review* 6, no. 2 (2025): 955–63, <https://doi.org/https://doi.org/10.37531/ecotal.v6i2.2377>.

²⁰ Bambang Septiawan and Aris Sunandes, “Implementasi Intuisi Dalam Manajemen Bisnis (Sebuah Studi Literatur),” *Jurnal Penelitian Manajemen Terapan (Penataran)* 9, no. 2 (2024): 199–209, <https://journal.stieken.ac.id/index.php/penataran/article/view/906>.

business environment. Thus, the primary contribution of this research lies in confirming that startup success is determined not only by intuitive abilities but also by strong analytical capacity. These findings offer practical implications for entrepreneurs, encouraging them to develop skills in data analysis and mathematical-based planning rather than relying solely on instinct. This is expected to serve as a foundation for developing more effective and sustainable business strategies in the future.

4. CONCLUSION

This research confirms that the assumption that intuition dominates as the primary determinant of startup success is a simplification that does not fully align with empirical reality. Intuition does contribute, particularly in early stages characterized by limited information and high uncertainty. However, this research shows that startup success is more determined by the ability to combine various approaches, particularly intuition and rational analysis. Therefore, intuition should be positioned as a complement, rather than the primary foundation, for business decision-making. Furthermore, mathematical approaches have been shown to play a crucial role in improving the quality of business decisions. Through the use of quantitative analysis, entrepreneurs can objectively evaluate strategic alternatives, systematically manage risks, and develop more accurate financial plans. This approach not only improves decision accuracy but also strengthens long-term business sustainability. Therefore, mathematical analytical skills are an essential competency for startups to navigate the complexities of the modern business environment.

However, this study does not position mathematics as the sole solution for decision-making. Intuition still has strategic value, particularly in driving innovation, quickly identifying opportunities, and responding to market dynamics that cannot always be predicted through data. Therefore, integrating intuition and mathematics is the most optimal approach. The synergy between the two enables decisions that are not only fast and adaptive, but also accurate and rationally accountable. As a recommendation for further research, more in-depth empirical studies are needed to directly test the relationship between mathematical ability and startup success. Such research can involve quantitative or mixed methods approaches to obtain a more comprehensive picture. Furthermore, an interdisciplinary approach that combines perspectives from management, psychology, and behavioral economics is highly recommended to enrich understanding of the decision-making process in entrepreneurship. Thus, future research is expected to provide stronger theoretical and practical contributions to the development of entrepreneurship science.

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