The Mediation Mechanism of Cost Efficiency in Translating Diversification Strategies into Bank Profitability

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Abstract:

This study examines the extent to which income diversification and asset diversification influence bank profitability, both directly and indirectly through cost efficiency. Motivated by the increasing complexity of banking activities and the growing emphasis on portfolio and revenue structure optimization, the research investigates whether diversification strategies enhance financial performance by stabilizing income, spreading risk, and improving operational efficiency. Drawing on portfolio theory, the resource-based view, and transaction cost economics, the study positions diversification as a strategic mechanism that can generate differentiated effects depending on the nature of the diversified component. Using a quantitative causal-comparative design, the research analyzes panel data from 32 banks listed on the Indonesia Stock Exchange over the 2018–2024 period. Income diversification and asset diversification serve as exogenous variables, cost efficiency functions as a mediating variable, and profitability—measured through ROA and ROEacts as the endogenous variable. The study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to test direct and mediated pathways, supported by bootstrapping to assess the significance of indirect effects. Data were obtained from audited annual financial reports sourced from the IDX and OJK, ensuring reliability, comparability, and representativeness over time. The results reveal that both income diversification and asset diversification significantly enhance profitability. However, the mediation analysis shows contrasting mechanisms: asset diversification improves profitability directly without contributing to cost efficiency, suggesting that broader asset allocation enhances risk–return balance but does not reduce operational expenses. Conversely, income diversification strengthens profitability both directly and indirectly by improving cost efficiency, indicating that banks benefit from economies of scope and more efficient use of shared infrastructure. Overall, the study concludes that diversification is an effective driver of profitability, but its operational pathways differ. Income diversification delivers dual financial and efficiency gains, whereas asset diversification creates value primarily through strategic portfolio optimization.

Keywords: *Asset Diversification, Cost Efficiency, Income Diversification, Profitability.*

Introduction

The banking sector plays a central role in economic development by facilitating financial intermediation, capital allocation, and liquidity provision. Through its ability to channel funds from surplus to deficit units, the sector supports investment, consumption, and monetary stability. Given its systemic importance, weaknesses within the banking system can rapidly trigger broader financial instability, underscoring the need to ensure both stability and profitability (Balkevičius, 2012).

Profitability is a key indicator of banking performance, reflecting the effectiveness of asset utilization, risk management, and operational strategies. Profitable banks possess stronger buffers against economic shocks, attract greater public trust, and maintain lower funding costs, resulting in a reinforcing cycle between profitability and stability.

In recent years, banks have faced tightening regulatory requirements, heightened competition from fintech and non-bank institutions, and macroeconomic volatility. These pressures have encouraged banks to strengthen operational efficiency and adopt strategic responses such as diversification. Drawing on Modern Portfolio Theory, income diversification reduces reliance on interest income and stabilizes cash flows, especially during periods of narrowing interest margins. Similarly, asset diversification spreads risk across multiple asset classes and aligns with the Resource-Based View, which highlights the strategic value of effective resource deployment (Martynova & Vogel, 2021).

Empirical evidence on the effectiveness of diversification remains mixed. Studies in emerging markets generally report positive effects on profitability, particularly for banks with strong technological and institutional capabilities. Conversely, findings from developed markets suggest that excessive diversification may increase complexity and reduce efficiency, thereby weakening profitability (Zabala Aguayo & Ślusarczyk, 2020). These divergent results highlight the potential mediating influence of cost efficiency.

In Indonesia, recent industry developments including stable profitability, growing non-interest income, improving asset quality, and declining operating costs—illustrate ongoing structural adjustments within the banking sector. However, despite these trends, limited research has examined how income and asset diversification jointly influence profitability through cost efficiency, particularly in the context of listed banks.

This study seeks to address this gap by empirically analyzing the effects of income diversification and asset diversification on profitability, with cost efficiency incorporated as a mediating variable. The findings are expected to contribute to a deeper understanding of diversification strategies in banking and offer insights for practitioners and policymakers seeking to enhance the performance and resilience of the Indonesian banking industry.

Literature Review

2.1 Theoretical Foundations

2.1.1 Profit Maximization Theory

Profit Maximization Theory posits that firms including banks seek to allocate resources and design operational strategies to achieve the highest possible profit. Within the banking context, profitability reflects the success of managerial decisions related to asset allocation, risk-taking, pricing strategies, and operational efficiency. This theory underpins empirical analyses of ROA and ROE, suggesting that banks will pursue initiatives such as diversification and efficiency improvements to enhance returns and strengthen long-term competitiveness.

2.1.2 Transaction Cost Economics (TCE)

Transaction Cost Economics explains how firms structure activities to reduce costs arising from coordination, information asymmetry, and monitoring. In banking, TCE highlights how product expansion, asset reallocation, and technological adoption influence administrative and operational costs. Diversification strategies may lower transaction costs through economies of scope or conversely increase them due to added complexity. TCE is thus central to understanding how income diversification, asset diversification and cost efficiency interact to shape profitability.

2.1.3 Bank Profitability

Bank profitability represents the bank’s ability to generate sustainable and recurring earnings from its core intermediation functions, investment activities, and fee-based services. As a central measure of financial performance, profitability serves not only as an indicator of operational success but also as a signal of institutional soundness and market competitiveness (Idowu & Asaolu, 2017). In academic literature, profitability is most commonly assessed using Return on Assets (ROA) and Return on Equity (ROE), which capture a bank’s efficiency in converting assets and shareholder capital into net earnings. ROA reflects the productivity of total assets in generating returns, while ROE provides insight into how effectively equity capital is deployed to support value creation. These indicators collectively enable researchers and policymakers to evaluate managerial performance, strategic positioning, and overall financial health.

Profitability is determined by a combination of internal and external factors. Internal determinants include capital adequacy, which influences a bank's ability to absorb losses and support asset expansion; operational efficiency, which affects cost structures and the ability to convert revenue into profit; liquidity management, which ensures that obligations can be met without incurring excessive costs. Banks with stronger asset quality, higher capital ratios, and efficient cost structures tend to exhibit more stable profitability over time(Sihotang et al., 2022);(Hosen, 2020).

External determinants of profitability are equally important. Macroeconomic conditions such as inflation, interest rates, GDP growth, and exchange-rate stability significantly influence banking performance.. Interest-rate levels and monetary policy cycles affect net interest margins, which remain a major component of bank earnings in most jurisdictions. Market competition both from traditional banks and emerging fintech providers shapes pricing power and revenue opportunities. Regulatory frameworks involving capital buffers, prudential standards, and risk-weighted asset requirements also impose constraints that influence profitability(Noori & Taghavi, 2012);(Farooq et al., 2021).

Strong profitability plays a critical role in enhancing bank stability and long-term resilience. Profitable banks generate internal capital through retained earnings, improving their ability to meet regulatory capital requirements and absorb losses during periods of economic stress. This internal capital formation reduces reliance on external funding and strengthens the bank's capacity to support credit expansion. Moreover, consistent profitability fosters market confidence, enabling banks to attract deposits and wholesale funding at lower costs. This dynamic creates a positive feedback loop: higher profitability improves stability, and greater stability enhances the bank's ability to maintain profitability through economic cycles.

Beyond resilience, profitability enables strategic investments in technology, digital transformation, and product innovation. Profitable institutions are better positioned to finance these investments without compromising their capital base. Over time, such investments enhance operational efficiency, expand revenue sources, and strengthen competitive advantage, contributing further to profitability.

However, profitability must be interpreted cautiously because high short-term earnings may mask underlying risks. Banks may achieve elevated profits through aggressive lending, excessive risk-taking, or exposure to volatile market segments. Such practices may boost returns temporarily but increase vulnerability to credit deterioration or market shocks. This complexity has prompted researchers to examine the quality of earnings alongside quantity, emphasizing sustainable, risk-adjusted profitability rather than short-term gains. Regulators also pay close attention to profitability trends, as declining or unstable profits may signal emerging risks or structural weaknesses in the financial system.

2.1.4 Income Diversification

Income diversification refers to a bank's strategic shift from reliance on traditional interest-based revenue toward a broader mix of fee-based and non-interest income activities. This transition involves expanding into services such as payments, cash management, remittances, wealth management, insurance distribution, foreign exchange transactions, and trading activities. The underlying rationale is that diversifying income sources reduces dependence on interest margins, which are often highly sensitive to monetary policy cycles, credit market conditions and competitive pressures. As interest margins narrow in many banking markets—particularly in periods of low interest rates or increased competition—non-interest income becomes a crucial stabilizer of overall financial performance.

Beyond risk reduction, income diversification allows banks to capture new market opportunities and generate value from customer relationships(Chen & Yu, 2019). Through cross-selling and bundled service offerings, banks can deepen customer engagement and create recurring revenue streams. For instance, offering wealth management or bancassurance products enables banks to leverage existing customer bases, extract greater value per customer and strengthen long-term customer loyalty. These strategies are especially relevant in increasingly digitalized financial ecosystems, where technology enables banks to deliver financial services more efficiently and at larger scale, thereby expanding fee income potential. In many emerging markets, rising financial inclusion and digital adoption have further amplified demand for non-interest services, making diversification an increasingly important driver of profitability.

Empirical studies across various regions support the argument that income diversification can have a positive impact on profitability. Research in emerging markets such as Indonesia, Kenya, and India shows that banks with a greater share of non-interest income often exhibit stronger earnings resilience, particularly during periods of declining loan growth or economic stress(Uddin, 2021). Fee-based income provides a buffer that helps maintain profitability even when credit conditions deteriorate or regulatory constraints limit lending expansion. Additionally, diversified income streams may enhance bank valuations because investors often perceive non-interest activities as indicators of growth potential and operational sophistication.

However, the benefits of income diversification are not universal, and empirical evidence from advanced economies reveals more mixed outcomes. In some cases, diversification into complex products or trading activities increases income volatility rather than reducing it. This is especially evident when banks expand aggressively into lines of business that require specialized expertise or advanced risk-management capabilities (Raykov & Buston, 2022). Trading income, for instance, may generate high returns in favorable market conditions but can fluctuate sharply during periods of financial market uncertainty. Furthermore, diversification may increase operational complexity, requiring substantial investments in technology, internal controls, compliance systems, and skilled human resources. Without adequate capability to manage this complexity, banks may face higher operational risk, inefficiencies, or even compliance breaches.

Another challenge is the potential misalignment between diversification strategies and the bank's core competencies. Banks that traditionally focus on retail or SME lending may find it difficult to compete effectively in high-skill segments such as investment banking, derivatives trading, or structured finance(Haddou & Boughrara, 2025). Expansion into these areas without sufficient expertise can lead to suboptimal pricing decisions, risk mismanagement, or exposure to unfamiliar market dynamics. These issues contribute to the inconsistent empirical findings across studies, highlighting that the impact of income diversification on profitability is highly context-dependent and shaped by factors such as bank size, regulatory environment, institutional quality, and technological readiness.

2.1.5 Asset Diversification

Asset diversification involves the strategic allocation of bank resources across multiple asset categories, sectors and risk profiles to reduce concentration risk and enhance portfolio stability. In the context of banking, this strategy reflects a deliberate effort to structure the asset side of the balance sheet in a manner that prevents overexposure to a single borrower, industry, or financial instrument. When executed effectively, asset diversification supports the bank's capacity to withstand economic volatility by distributing credit risks across various segments that respond differently to macroeconomic conditions. This approach aligns with the fundamental principles of risk management, which emphasize the importance of balancing risk exposures to minimize potential losses.

Asset diversification has several potential advantages for profitability and financial stability (Frey & Hledik, 2018). First, it reduces concentration risk, which is a major source of credit losses in banking. By allocating credit across sectors with different risk characteristics, banks can stabilize returns and improve risk-adjusted performance. Second, diversification enhances strategic flexibility, enabling banks to shift resources in response to changes in market demand, regulatory restrictions, or macroeconomic conditions. Third, diversified asset portfolios can improve capital efficiency, as lower risk concentrations may reduce required provisions and capital charges under regulatory frameworks such as Basel III. Fourth, asset diversification can create new revenue-generating opportunities by expanding the bank's exposure to higher-yield sectors or instruments that complement existing business lines.

However, despite these benefits, empirical findings on asset diversification remain mixed due to inherent implementation challenges. Excessive diversification can dilute managerial attention and weaken monitoring effectiveness. Lending to a wide variety of sectors requires specialized knowledge and sector-specific risk assessment capabilities. Without sufficient expertise, banks may misjudge borrower quality or fail to detect early signs of credit deterioration. This problem is particularly acute in developing financial systems where banks may lack the resources to maintain specialized credit teams across diverse sectors. Moreover, diversification may introduce higher operational complexity, increasing the need for advanced risk-management systems and more rigorous internal controls (Blickle et al., 2021).

Another challenge arises from the possibility that broader diversification may push banks toward riskier activities in pursuit of higher returns, leading to adverse selection or moral hazard. For instance, expanding into capital market instruments or high-risk corporate segments without adequate risk mitigation tools may increase the volatility of returns (Nafiu et al., 2025). Empirical evidence from developed markets indicates that while moderate diversification can improve bank performance, excessive or unstrategic diversification tends to reduce profitability due to higher monitoring costs, increased default risk, and operational inefficiencies. These findings suggest that the impact of asset diversification is sensitive to institutional capacity, regulatory environments, and the quality of governance mechanisms.

2.1.6Interrelationships between Profitability and Diversification

The relationship between diversification and profitability in the banking sector reflects a balance between risk reduction and operational complexity. From a theoretical standpoint, diversification both in income sources and asset allocation is expected to enhance profitability by reducing exposure to fluctuations in any single revenue stream or credit segment. Guided by Modern Portfolio Theory, banks that diversify their activities can smooth earnings, mitigate sector-specific shocks, and stabilize financial performance over time.

Income diversification, particularly through fee-based services, provides alternative revenue channels that are less sensitive to interest rate cycles, thereby strengthening profitability when traditional net interest margins decline.

Similarly, asset diversification can improve profitability by spreading credit risk across sectors or instruments with differing risk–return characteristics. By reducing concentration risk, banks can lower expected default losses and enhance the stability of returns. Empirical studies in emerging markets consistently show that banks with broader revenue and asset bases tend to exhibit higher and more stable profitability, especially in environments with volatile macroeconomic conditions.

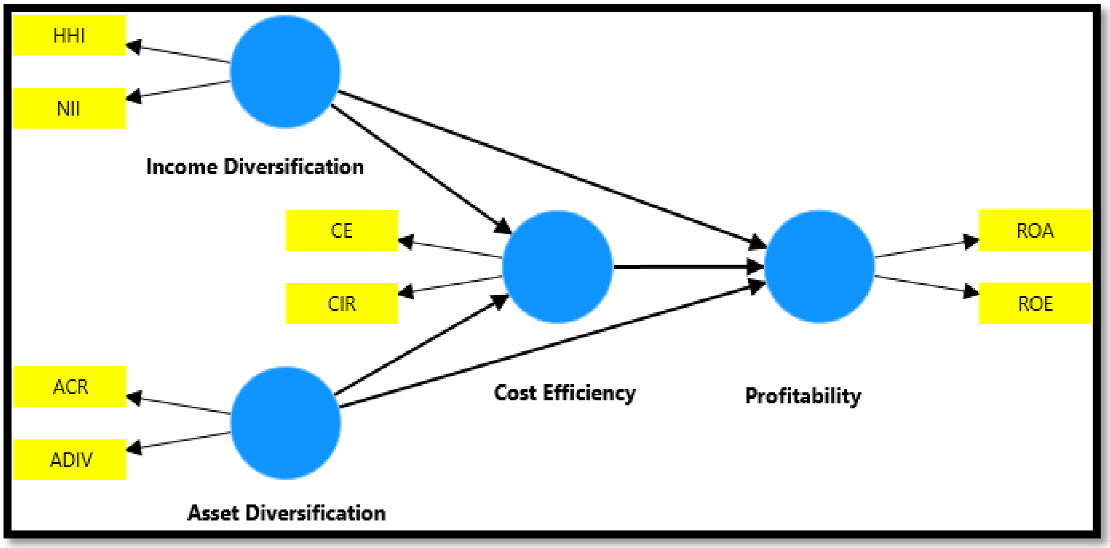
However, the relationship is not universally positive. Diversification may also reduce profitability when expansion occurs beyond managerial expertise or operational capacity. Increased product and asset complexity can raise monitoring costs, impair risk assessment, and dilute strategic focus, potentially offsetting the expected benefits. Evidence from developed financial systems indicates that excessive diversification may lead to diminishing returns due to administrative burden, agency issues, or the erosion of core competencies.

Overall, the interrelationship between profitability and diversification is context-dependent: diversification can enhance profitability when accompanied by sufficient capability, scale, and risk-management capacity, but may decrease profitability when pursued beyond a bank's operational strengths. This duality explains the mixed findings in the literature and underscores the strategic importance of aligning diversification initiatives with institutional readiness and market conditions.

2.2 Conceptual Framework

The conceptual framework for this study is grounded in the intersection of portfolio theory, resource-based perspectives, and operational efficiency logic, which together explain how diversification strategies shape the financial performance of banks. Within this conceptual structure, cost efficiency is positioned as a mediating mechanism that may amplify or modify the financial impact of diversification strategies. Operational efficiency theories, including economies of scope and transaction cost economics, suggest that diversification can either enhance or hinder cost management depending on the nature and complexity of the activities involved.

Figure 1 :Conceptual Framework



Modern Portfolio Theory (MPT) developed by Harry Markowitz (1952), explains how investors can optimize their investment portfolios to achieve an expected return with the lowest possible level of risk or conversely to attain the maximum return for a given level of risk. Its central principle is risk diversification. MPT posits that combining assets with low or negative correlations within a single portfolio can reduce the portfolio's overall risk without diminishing its expected return.

Building on the logic of diversification emphasized in MPT, the relationship between revenue diversification and cost efficiency can also be understood through Transaction Cost Theory. When revenue diversification is carried out in an integrated manner, banks are able to reduce transaction costs arising from external relationships with third parties. Revenues generated from various internal services can complement one another and enhance the efficiency of coordination and monitoring within the organization.

Hypothesis

H1: Asset diversification has a positive and significant effect on bank profitability.

H2: Income diversification has a positive and significant effect on bank profitability.

H3: Cost efficiency mediate the relationship between asset diversification and bank profitability.

H4: Cost efficiency positively mediates the relationship between income diversification and bank profitability.

Methods

This study adopts a quantitative research approach with a causal–comparative design to examine how income diversification and asset diversification influence bank profitability, as well as the mediating role of cost efficiency in these relationships. The analysis employs panel data drawn from Indonesian commercial banks listed on the Indonesia Stock Exchange (IDX) over the 2018–2024 period, enabling the integration of both cross-sectional variation across banks and longitudinal variation over time. Partial Least Squares–Structural Equation Modeling (PLS-SEM) using Smart PLS is utilized to estimate the structural model, given its capacity to handle complex mediation structures, multiple indicators per construct and data that do not conform to strict normality assumptions.

The population of the study consists of 32 listed banks, representing state-owned, private, regional, and Islamic banks. Using purposive sampling, 24 banks that meet specific criteriasuch as complete financial statements, reporting in rupiah, positive profitability, and availability of relevant variablesare selected as the final sample, producing a balanced seven-year panel dataset. The study operationalizes four key constructs: income diversification and asset diversification as exogenous variables, cost efficiency as a mediating variable, and profitability as the endogenous variable.

Data are sourced from audited financial statements available on the IDX official website and complemented by publications from the Indonesia Financial Services Authority (OJK). The analytical procedure begins with descriptive statistics to assess data characteristics, followed by evaluation of the measurement model to confirm validity, reliability and determine the significance of causal pathways, including the mediation effects of cost efficiency in the relationships between income diversification, asset diversification and profitability.

Result

Understanding the pathways through which diversification influences bank performance is essential for explaining how financial institutions adapt to evolving market dynamics. The empirical findings demonstrate that both asset diversification and income diversification have strong and statistically significant direct effects on profitability, reaffirming the premise that wider asset allocation and more varied revenue structures enable banks to generate stronger financial outcomes.

Table 1 :Result of Hypothesis Testing

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Asset Diversification -> Profitability	0.800	0.835	0.138	5.775	0.000
Income Diversification -> Profitability	0.825	0.806	0.161	5.127	0.000
Asset Diversification -> Cost Efficiency -> Profitability	0.138	0.168	0.147	0.942	0.346
Income Diversification -> Cost Efficiency -> Profitability	0.660	0.661	0.111	5.961	0.000

The empirical results indicate that both asset diversification and income diversification exert strong and statistically significant direct effects on bank profitability, reinforcing the argument that broader asset allocation and more varied revenue streams consistently enhance financial performance. However, the mediation analysis through cost efficiency reveals a contrasting pattern: the relationship between asset diversification and profitability is not mediated by improvements in cost efficiency, suggesting that the benefits of asset diversification arise independently of operational efficiencies. In contrast, income diversification demonstrates a clear and significant indirect influence through cost efficiency, indicating that diversifying income sources not only elevates profitability directly but also strengthens the bank's efficiency in managing costs, which further amplifies financial outcomes. Taken together, these findings suggest that while both diversification strategies contribute positively to profitability, income diversification provides a dual advantage improving operational efficiency and profitability simultaneously whereas asset diversification enhances profitability without reshaping the bank's cost structure.

Discussion:

Asset diversification as a driver of profitability

The significant and positive relationship between asset diversification and profitability provides strong empirical support for the long-standing argument that banks benefit from distributing resources across multiple asset classes. From a portfolio theory perspective, spreading risk across various asset types enables banks to stabilize returns and reduce vulnerability to sector-specific shocks, ultimately strengthening profitability. In addition, diversified asset structures allow banks to optimize risk–return trade-offs by leveraging different maturity profiles and risk characteristics in their portfolios (Gonçalves De Lima, 2024). Thus, the evidence suggests that asset diversification is an effective strategy for enhancing profitability, affirming theoretical expectations that balanced and well-managed asset portfolios generate superior financial performance (Tewogbade & Bankole, 2021).

Asset diversification enhances profitability by distributing risk across a wider range of asset classes, enabling the bank to stabilize returns and optimize its risk–return profile. A more balanced asset portfolio reduces exposure to sector-specific shocks and supports stronger financial outcomes, demonstrating that strategic allocation of assets contributes directly to improved profitability.

The effect of income diversification on profitability

The positive and significant effect of income diversification on profitability is consistent with the notion that banks with multiple revenue streams are better positioned to sustain financial performance in volatile market conditions. The shift from interest-based income toward fee-based and transactional revenues allows banks to reduce reliance on traditional lending margins, which are often exposed to cyclical fluctuations in interest rate environments (Nguyen et al., 2021). In line with the resource-based view, expanding the income base reflects the bank's capability to exploit non-traditional financial services, thereby creating value through innovation and service differentiation (Sirakova-Yordanova, 2024). Consequently, the findings confirm that diversification of income sources is not merely a defensive strategy but also a productive approach that enhances profitability through increased revenue stability and market responsiveness.

Income diversification strengthens profitability by reducing reliance on traditional interest-based income and widening the bank's revenue base. When earnings are drawn from multiple sources, such as fees, commissions and service-based activities, revenue becomes more stable and less sensitive to market fluctuations. This broader income structure allows the bank to capture new opportunities and maintain stronger financial performance across varying economic conditions.

Asset diversification contributes to profitability

The absence of a significant mediating effect of cost efficiency in this relationship suggests that asset diversification does not inherently translate into operational efficiencies. This result is theoretically reasonable, as managing a more varied asset portfolio may introduce additional monitoring, risk assessment and administrative complexities that offset potential efficiency gains (Zaimovic et al., 2021). Transaction Cost Economics also implies that broader asset structures may increase coordination and governance costs rather than streamline operations. Therefore, while asset diversification improves profitability directly through risk dispersion and portfolio optimization, it does not operate by enhancing cost efficiency, indicating that profitability gains in this pathway are driven by strategic asset allocation rather than operational improvements (Neukirch, 2008).

The relationship between asset diversification, cost efficiency, and profitability suggests that diversifying a bank's asset portfolio does not necessarily lead to more efficient operational performance. Although broader asset allocation may strengthen profitability through improved risk distribution and portfolio stability, it does not appear to reduce operating costs or streamline processes. This indicates that the benefits of asset diversification emerge directly from financial and risk-management advantages rather than from gains in cost efficiency.

Income diversification strengthens profitability

The link between income diversification, cost efficiency, and profitability indicates that expanding revenue sources can enhance both operational performance and financial outcomes. When banks generate income from a broader range of services, they are able to leverage shared infrastructure, technology and personnel, which improves cost efficiency(Oredegbe, 2019). This operational advantage then reinforces profitability, showing that income diversification contributes not only through additional revenue streams but also through more efficient use of resources (Zawadzka & Kurdys-Kujawska, 2018).

The significant mediation effect of cost efficiency in the relationship between income diversification and profitability highlights that expanding into diverse income-generating activities can influence the bank's cost structure in a favorable manner (Majumder et al., 2018). This is theoretically consistent with economies of scope, where offering various financial services enables banks to leverage shared technologies, distribution channels and human resources, thereby reducing average operating costs. Through this mechanism, income diversification improves cost efficiency by allowing banks to extract more value from existing infrastructure, which in turn strengthens profitability. The findings support the proposition that income diversification is not only a source of revenue enhancement but also a catalyst for operational optimization, demonstrating its dual strategic advantage.

Conclusion:

The evidence consistently shows that asset diversification stands as a robust driver of bank profitability, primarily through its influence on risk distribution and portfolio stability. By allocating resources across multiple asset classes, banks are better positioned to absorb sector-specific shocks, stabilize returns and optimize their overall risk–return profile. This outcome aligns strongly with portfolio theory, which emphasizes the benefits of combining assets with different risk characteristics to achieve superior financial performance. The findings therefore support the conclusion that asset diversification is not merely a protective strategy but a deliberate mechanism for enhancing profitability through improved portfolio resilience and strategic asset allocation.

At the same time, the analysis confirms that the profitability gains from asset diversification do not stem from improvements in cost efficiency. Managing a diversified asset base introduces additional monitoring, administrative and coordination requirements, which counteract any potential efficiency gains. The absence of a significant mediating effect of cost efficiency suggests that operational processes do not become inherently more streamlined as asset diversification increases. Instead, the advantages of diversification emerge directly from financial and risk-management mechanisms. Overall, the conclusion is clearasset diversification strengthens profitability not because it reduces costs, but because it enhances financial stability and optimizes the balance between risk and return, making it a strategically valuable component of bank performance.

References:

1. *Balkevičius, A. (2012). Influence of the financial sector on economic development. 2(2), 82–94. www3.mruni.eu*
2. *Blickle, K., Parlatore, C., Parlatore, C., & Saunders, A. (2021). Specialization in banking. Social Science Research Network.*
3. *Farooq, M., Khan, S., Siddiqui, A. A., Khan, M. T., & Khan, M. K. (2021). Determinants of profitability: a case of commercial banks in pakistan. Humanities and Social Sciences, 9(2), 01–13.*

4. *Frey, R., & Hledik, J. (2018). Diversification and Systemic Risk: A Financial Network Perspective. 6(2), 54.*
5. *Gonçalves De Lima, L. (2024). Essentials of risk management in the banking sector. Revista Científica Sistemática, 14(5), 1344–1349.*
6. *Hosen, Md. Z. (2020). Internal Factors Influencing the Profitability of Commercial Banks in Bangladesh. 6(67), 192–200.*
7. *Idowu, H. A. O., & Asaolu, T. O. (2017). Intermediation Efficiency and Profitability Performance: Quantitative Evidence from Nigerian Banking Sector. Research on Humanities and Social Sciences, 7(19), 40–54. iiste.org*
8. *Majumder, Md. T. H., Uddin, M. J., & Akter, A. (2018). Does bank diversification significantly affect profitability? a longitudinal study on bangladesh. Journal of Emerging Technologies and Innovative Research, 5(9), 162–169. www.jetir.org*
9. *Martynova, N., & Vogel, U. (2021). Banks' complexity-risk nexus and the role of regulation. Journal of Banking and Finance, 106120.*
10. *Nafiu, A., Balogun, S. O., Oko-Odion, C., & Odumuwagun, O. O. (2025). Risk management strategies: Navigating volatility in complex financial market environments. World Journal Of Advanced Research and Reviews, 25(1), 236–250.*
11. *Neukirch, T. (2008). Portfolio Optimization with Respect to Risk Diversification. Social Science Research Network.*
12. *Nguyen, T. T., Ho, H. H., Nguyen, D. V., Pham, A. C., & Nguyen, T. T. (2021). The Effects of Business Model on Bank's Stability. International Journal of Financial Studies, 9(3), 46.*
13. *Noori, H., & Taghavi, M. (2012). Investigating internal and external factors influencing profitability of banking industry. Management Science Letters, 2(8), 2723–2730.*
14. *Oredegbe, A. (2019). Cost Efficiency Determinants: Evidence from the Canadian Banking Industry. The International Journal of Business and Management, 15(1), 86.*
15. *Raykov, R., & Silva Buston, C. (2022). Asymmetric Systemic Risk. Social Science Research Network.*
16. *Sihotang, M. K., Hasanah, U., & Hayati, I. (2022). Model of Sharia Bank Profitability Determination Factors by Measuring Internal and Externals Variables. Indonesian Interdisciplinary Journal of Sharia Economics, 5(1), 235–251.*
17. *Sirakova-Yordanova, G. (2024). Banks Go Beyond Banking: The Expansion Towards Non-Banking Services. 18, 391–404.*
18. *Tewogbade, L., & Bankole, F. A. (2021). Capital Allocation Strategies in Asset Management Firms to Maximize Efficiency and Support Growth Objectives.*

International Journal of Multidisciplinary Research and Growth Evaluation, 2(2), 478–495.

19. *Zabala Aguayo, F., & Ślusarczyk, B. (2020). Risks of Banking Services' Digitalization: The Practice of Diversification and Sustainable Development Goals. Sustainability, 12(10), 4040.*
20. *Zaimovic, A., Omanovic, A., & Arnaut-Berilo, A. (2021). How Many Stocks Are Sufficient for Equity Portfolio Diversification? A Review of the Literature. 14(11), 551.*
21. *Zawadzka, D., & Kurdys-Kujawska, A. (2018). Diversification of the development level of multifunctional farms from the central Pomerania region in Poland.*