2026 Volume: 02 Issue: 02 www.ijrpa.com ISSN 2456-9995 Research Article

International Journal Research Publication Analysis

Page: 01-27

DYNAMICS OF EARNINGS PERSISTENCE AND QUALITY IN VIETNAM'S LISTED FISHERIES SECTOR: A PLS-SEM PREDICTIVE APPROACH

Le Bao Toan*

College of Economics and Law, Tra Vinh University.

Article Received: 17 January 2026
Article Revised: 07 February 2026
Published on: 26 February 2026

***Corresponding Author: Le Bao Toan**
College of Economics and Law, Tra Vinh University.

DOI: https://doi-doi.org/101555/ijrpa.6527

ABSTRACT

This study examines the determinants of earnings persistence and quality within the Vietnamese fisheries sector by quantifying the impacts of lagged net income (NIt-1) and operating cash flows (NCFO) on current net income (NIt). Utilizing a panel dataset of 139 observations from 2019 to 2024, the research employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze these complex structural relationships. The results demonstrate a high explanatory power with an R^2 of 0.658, indicating that the integrated model effectively captures the sector's earnings dynamics. Empirical findings reveal that both NIt-1 (beta = 0.492, $p < 0.001$) and NCFOt (beta = 0.363, $p < 0.001$) are significant positive predictors of current earnings, with lagged income exhibiting the most substantial effect through the earnings stickiness mechanism. Furthermore, a significant mediation effect confirms that prior profitability sustains current earnings by enhancing contemporaneous cash flow generation, aligning with the Free Cash Flow Theory. Conversely, lagged cash flow (NCFOt-1) is found to be statistically insignificant, suggesting that the predictive value of cash flow is contemporaneous rather than delayed. The inclusion of firm size as a control variable further highlights its role as a strategic resilience factor in maintaining earnings stability. These findings validate the information content of cash flows and provide a robust framework for investors and managers to assess earnings sustainability in emerging markets.

KEYWORDS: Earnings Quality, Earnings Persistence, Earnings Stickiness, Operating Cash Flows, Fisheries Sector, PLS-SEM.

JEL Classification: M41, G32, C33, C38, Q22

1. INTRODUCTION

Net Income (NI) and Net Cash Flow from Operating Activities (NCFO) constitute the dual pillars of corporate financial reporting, offering synergistic yet divergent insights into operational performance. While NI captures economic performance through the lens of accrual accounting, which is often subject to managerial discretion and valuation estimates, NCFO serves as an objective benchmark for a firm's liquidity and cash-generating capacity. This nexus forms the theoretical bedrock of Earnings Quality Theory (Dechow, 1994), which posits that the divergence between these two metrics is critical for evaluating the reliability and persistence of reported profits. In the volatile context of emerging markets, understanding this interplay is essential to disentangle real economic growth from accounting artifacts.

Current literature establishes two primary pillars for earnings prediction, namely Earnings Persistence and the Forecasting Role of Cash Flow. While the persistence hypothesis identifies lagged earnings (NIt-1) as the most significant predictor to confirm the "Earnings Stickiness" phenomenon (Basu, 1997; Kothari, 2001), a substantial gap remains in quantifying the incremental information content of NCFO. Academic debate persists regarding whether the impact of NCFO on NI is contemporaneous (NCFOt) or lagged (NCFOt-1). This ambiguity is further compounded in emerging markets where severe non-normal distributions, characterized by high skewness and kurtosis, often compromise the efficiency of traditional regression models. To address these issues, this section synthesizes the global and domestic empirical landscape to establish the academic rationale for the proposed hypotheses.

Research on earnings predictability is fundamentally rooted in the principle of Earnings Persistence. Early academic discourse focused on validating this persistence through time-series analyses (Kormendi & Lipe, 1987). This attribute later became a cornerstone of accounting-based valuation models (Penman, 2001) and operates on the premise that prior-period Net Income serves as a primary predictor for current earnings (Schipper & Vincent, 2003; Spahn, 2021). However, scholars recognized that the aggregate nature of NI necessitates decomposition to understand its true predictive power, since NI is the summation of NCFO and Accruals, and these two components do not inherently possess equal persistence. Sloan (1996) provided a benchmark framework by showing that accruals exhibit higher reversal rates and lower persistence compared to NCFO. Furthermore, Richardson et al. (2005) clarified that accounting distortions and growth significantly influence accruals and profitability, confirming that isolating NCFO from accruals is an indispensable step in measuring earnings sustainability.

Building upon this, the foundational importance of NCFO was further highlighted by pioneer works establishing the necessity of analyzing NI and NCFO separately (Wilson, 1986; Percy & Stokes, 1992). This perspective is strongly supported by the Free Cash Flow Theory, which identifies NCFO as a critical internal resource for self-financing (Jensen, 1986). As an objective measure, NCFO is widely regarded as a superior indicator of performance due to its relative immunity to discretionary earnings management (Dechow, 1994; Francis et al., 2005). The predictive dominance of NCFO has been validated through integrated forecasting models, where merging accrual and cash data yields the highest explanatory power (Quirin et al., 1999). Scholars have consistently affirmed that NCFO-based models outperform those relying solely on accrual earnings in explaining financial outcomes (Jordan et al., 2007; Lorek & Willinger, 2009; Noury et al., 2020).

Recent global evidence continue to show a prevalent positive link between effective NCFO management and sectoral performance (Soet et al., 2018; Abdul & Raj, 2020; Ebimobowei et al., 2021). The relationship is most pronounced in emerging markets, where early empirical evidence confirmed that NCFO serves as a reliable indicator (Odo & Theophilus, 2021; Ugo & Egbuhuzor, 2022). Building upon previous research, recent studies by Akpan et al. (2025) and Chepkoech & Miroga (2025) demonstrate that effective operating cash flow management acts as a key factor in maintaining competitive advantage. Specifically, Ukpai and Nzubechukwu (2025) further elucidate the importance of cash flow on corporate liquidity, reinforcing the argument that firms must prioritize periodic cash flow evaluation to maintain stability. Furthermore, the latest theoretical synthesis by DeAngelo et al. (2025) reaffirms that cash flow is a strategic reflection of the corporate lifecycle, providing a modern mandate for examining NCFO in specialized sectors.

Parallel to this, the complexity of earnings quality is central to the debate over the impact of lagged cash flows, primarily explained by the Accrual Reversal Theory. Accruals recognized in previous periods inevitably reverse, exerting downward pressure on current earnings (Healy & Wahlen, 1999; Dechow & Dichev, 2002). This mechanism often results in the effect of lagged NCFO (NCFOt-1) being found to be weak or negative, even though current NCFOt remains a strong validator. Recent research emphasizes that this inherent complexity is often mediated by internal monitoring structures (Hermuningsih et al., 2020; Adegboyegun & Igbekoyi, 2022). Furthermore, aggregate Net Income may be more susceptible to transient items compared to Gross Profit, which maintains a more stable link to underlying cash flows (Das, 2019; Abdul-Hamid et al., 2023).

In the Vietnamese context, domestic scholars have increasingly confirmed the significance of this interaction. Nguyen and Nguyen (2020) demonstrated that both accounting earnings and past cash flows possess strong predictive power for future cash flows. Bui and Le (2021) found that governance structures and financial leverage significantly influence earnings management, suggesting that transparency plays a more critical role than firm size alone. Expanding this scope, Lan et al. (2022) concluded that while earnings and cash flows exhibit strong contemporaneous interaction, this inter-year effect tends to diminish over time. Most recently, Dinh et al. (2023) and Le et al. (2024) demonstrated a significant positive relationship between financial reporting quality (FRQ) and investment efficiency.

The Vietnamese fisheries industry provides a compelling case for analysis as it is a key economic sector. Shrimp is a core export product, accounting for approximately 40% of the seafood export value (Le & Bui, 2021). However, evaluating this sector poses several unique accounting challenges, such as long capital cycles and complicated inventory management, which restrict cash flow. Additionally, the export-driven nature of the industry subjects it to substantial exchange rate and international market risks (Le et al., 2025; Sayari & Mugan, 2017).

Despite these advancements, significant gaps persist within the Vietnamese context. Current domestic scholarship has primarily focused on traditional regression techniques which struggle with non-normal sectoral data and tend to prioritize future projections over a comprehensive predictive structure for Net Income. To address these deficiencies, this study advocates for a methodological shift by employing the PLS-SEM methodology. Unlike traditional linear regressions, PLS-SEM is particularly effective for analyzing complex structural relationships and handling idiosyncratic financial data. By integrating firm size, leverage, and liquidity as strategic control variables, this approach ensures a robust estimation within the fisheries sector, which is critical because industry-specific factors can often confound the relationship between cash flow and earnings.

Therefore, the objective of this study is to quantify the structural relationship and evaluate the predictive power of NIt-1, NCFOt, and NCFOt-1 on NIt of listed fisheries companies in Vietnam during the 2019–2024 period. To ensure the robustness of the findings and address potential endogeneity, the model incorporates firm size, financial leverage, and liquidity as control variables. The academic and practical significance of this research is profound. Theoretically, the study contributes strong empirical evidence by reinforcing Earnings Quality Theory in a volatile emerging market context. Methodologically, the research demonstrates the effectiveness of the PLS-SEM technique for analyzing financial panel data

with non-normal characteristics, thereby broadening the application of this methodology in financial accounting. Practically, the results provide a reliable basis for investors and analysts to prioritize using NCFOt as robust evidence of earnings quality when evaluating seafood industry stocks.

The remainder of this paper is structured as follows: Section 2 establishes the theoretical framework, develops the research hypotheses, and details the empirical methodology. Section 3 presents the empirical results and provides a comprehensive discussion of the findings in relation to existing literature. Finally, Section 4 concludes the study by synthesizing its key contributions and suggesting prospective directions for future research.

2. MATERIALS AND METHODS

2.1 Theoretical Framework

This research is grounded in two foundational pillars of financial accounting: Earnings Persistence Theory and Earnings Quality Theory. Furthermore, the study integrates key tenets from Financial Management Theories, specifically Free Cash Flow and Agency theories, to construct a robust predictive framework for the Net Income of fisheries enterprises. This multi-theoretical approach ensures that the model accounts for both accounting-based continuities and the underlying corporate governance dynamics that influence financial performance.

Earnings Persistence Theory: Earnings persistence theory elucidates the role of historical financial performance as a primary determinant of future profitability. Within this framework, lagged earnings (NIt-1) serve as the most critical predictor for current earnings (NIt), providing the empirical basis for various accounting-based valuation models (Penman, 2001).

Autoregressive and Forecasting Mechanism: Earnings persistence is defined as the degree to which a specific unit of current earnings is expected to endure and recur in subsequent periods (Schipper & Vincent, 2003).

The AR(1) Stochastic Process: Empirical literature frequently models earnings as a first-order autoregressive process (AR(1)). In this configuration, current earnings are treated as a linear function of lagged earnings combined with a random error component (Kormendi & Lipe, 1987).

The Persistence Coefficient: The magnitude of the coefficient (b1) quantifies the degree of persistence. As the value approaches unity, the earnings exhibit higher sustainability and

enhanced forecasting reliability (Sloan, 1996). Such persistence is typically attributed to core earnings rather than transitory items (Dechow et al., 2010).

While Persistence Theory focuses on the numerical continuity of profits, it does not account for the reliability of those figures. To bridge this gap, Earnings Quality Theory is introduced to evaluate whether reported persistence is driven by objective cash flows or subjective accounting estimates.

Earnings Quality Theory: Earnings quality theory posits that the intrinsic quality of earnings, characterized by its ability to reflect genuine economic performance and forecast future outcomes, is more significant than its absolute magnitude (Dechow & Dichev, 2002). This theory evaluates quality through the symbiotic relationship between earnings and cash flow.

Earnings Decomposition: Under the accrual accounting framework, Net Income (NIt) is decomposed into two distinct components (Sloan, 1996): $NIt = NCFOt + ACCt$ (1)

where NCFOt *represents the objective monetary component and ACCt denotes the non-monetary accrual component.*

Reliability and Manipulation: While NCFOt is generally less susceptible to managerial manipulation, the accrual component is often subject to earnings management activities (Francis et al., 2005). Consequently, a substantial divergence between these two indicators signifies a higher risk of low-quality accruals, which diminishes the predictive utility of NIt.

Accrual Reversal Theory: This theory suggests that accruals are inherently non-persistent and tend to reverse in subsequent periods, potentially creating a non-sustainable impact on current profitability (Dechow & Dichev, 2002).

The divergence between cash and accruals often stems from managerial discretion, leading to a need for governance-based explanations. Agency Theory and Free Cash Flow Theory provide the necessary lens to understand how managerial incentives and internal resources dictate the quality of financial reports.

Free Cash Flow Theory and Agency Theory: Free Cash Flow Theory (Jensen, 1986) asserts that a robust NCFO is a vital indicator of financial autonomy and health. A strong NCFOt facilitates effective reinvestment without excessive reliance on external financing, thereby reinforcing a firm's capacity to generate stable NIt.

Simultaneously, Agency Theory (Ross & Mitnick, 1973) provides critical insights into the governance structures that influence earnings predictability. The core agency problem arises when the interests of managers diverge from those of shareholders, potentially leading to opportunistic earnings management. In this context, free cash flow is a double-edged sword

that can be utilized for value-destroying projects if not moNItored effectively. Understanding these dynamics is crucial for financial risk management. For instance, Suranta et al. (2023) demonstrated that the interplay between cash flow, leverage, and earnings management is a primary determinant of financial distress. By integrating these theories, the current study establishes that NCFO is not only a predictor of earnings but also a fundamental metric of a company's risk-avoidance capacity and overall financial stability.

2.2 Hypothesis development

This section integrates theoretical principles and empirical findings to justify variable selection and formulate research hypotheses. Including control variables further enhances the robustness of the net income estimation.

2.2.1 Lagged Net Income and Persistence

The inclusion of Lagged Net Income (NIt-1) in current earnings forecasting models is fundamentally rooted in the Persistence of Earnings Theory. The existence of the "Earnings Stickiness" phenomenon, established by foundational works (Basu, 1997; Kothari, 2001), makes NIt-1 an essential factor for controlling the autocorrelation within earnings series. This attribute was further integrated into accounting-based valuation models (Penman, 2001), confirming that earnings originating from core operations tend to exhibit continuity.This continuity serves as a critical basis for analyzing the relevance of accrual and cash flow components (Penman & Zhang, 2002). According to Schipper and Vincent (2003), persistence is a core attribute of earnings quality, reflecting the ability of business results to repeat and sustain over time. Modern forecasting models have further reinforced this perspective, confirming NIt-1 as a superior predictor of future earnings compared to other isolated financial metrics (Larson et al., 2018). Within the multivariate framework of this study, NIt-1 represents the structural continuity of profitability specifically within the seafood sector. Therefore, the following hypothesis is formulated:

H1: Lagged Net Income (NIt-1) has a positive and statistically significant impact on current Net Income (NIt).

2.2.2 Current Net Cash Flow from Operating Activities

The foundational importance of NCFOt in financial forecasting was first established by comparing the predictive power of accrual and cash flow components (Wilson, 1986). Theoretically, robust NCFO is closely linked to the Free Cash Flow Theory, which emphasizes its role in strengthening a firm's reinvestment capacity (Jensen, 1986). This relationship became central to economic decision-making as research moved toward time-series analysis (Kormendi & Lipe, 1987; Gombola & Tsetsekos, 1992). By the 1990s,

empirical evidence demonstrated that NCFO often possesses superior predictive ability for future performance compared to aggregate Net Income (McBeth, 1993).

The necessity of isolating NCFOt arises because Net Income is inherently susceptible to accounting judgments and earnings management, which can compromise its predictability (Healy & Wahlen, 1999; Pfeiffer et al., 1998). While accrual analysis remains necessary for a comprehensive view of profitability (Penman & Zhang, 2002), NCFOt serves as the essential benchmark for validating earnings quality due to its relative immunity to managerial estimates (Barton & Simko, 2002). This distinction is further elucidated by the Accrual Reversal Theory, which posits that accruals are non-persistent and subject to reversal, potentially distorting current earnings (Dechow & Dichev, 2002). Consequently, as a verified monetary component, NCFOt is regarded as a more objective and reliable indicator of fundamental economic performance (Francis et al., 2005; Lorek & Willinger, 2009; Dechow et al., 2010). Based on this persistent role in validating current earnings, the following hypothesis is formulated:

H2: Current Net Cash Flow from Operating Activities (NCFOt) has a positive and statistically significant impact on current Net Income (NIt).

2.2.3 Lagged Net Cash Flow from Operating Activities

Theoretical analysis of the impact of lagged cash flows (NCFOt-1) on current earnings (NIt) is built upon time-series foundations that established the predictive power of prior-period income (Kormendi & Lipe, 1987). This structural approach was refined through the lens of earnings management and economic repeatability, suggesting that earnings persistence requires detailed decomposition of its components (Healy & Wahlen, 1999; Fama & French, 2000). While integrating prior cash flows into multivariate frameworks is complex (Barton & Simko, 2002), scholars emphasize that analyzing accrual components alongside NIt-1 is indispensable for predicting future profitability (Penman & Zhang, 2002).

The pivotal theoretical challenge for NCFOt-1 lies in the Accrual Reversal Theory (Dechow & Dichev, 2002). This theory asserts that accruals are non-persistent and tend to reverse in subsequent periods, exerting downward pressure on current NIt. Specifically, when prior-period accruals, such as uncollected revenue, reverse, they reduce current earnings (Dechow et al., 2010). Because NCFOt-1 is often highly correlated with NIt-1 and its potential effect is frequently dominated by this reversal mechanism, its independent statistical significance is often diminished in comprehensive predictive models. Based on this theoretical complexity, the following hypothesis is formulated:

H3: Lagged Net Cash Flow from Operating Activities (NCFOt-1) has no statistically significant impact on current Net Income (NIt).

2.2.4 Firm Size and Profitability

Firm size serves as a vital proxy for competitive advantage and operational stability, being theoretically linked to enhanced financial performance through Economies of Scale. In the fisheries sector, larger enterprises optimize production costs and leverage superior bargaining power with suppliers and international distribution channels (Niresh et al., 2014). For Vietnam's listed seafood companies, larger scale often translates into robust internal controls and diversified portfolios, which spanning shrimp, pangasius, and value-added products, which provide a buffer against sector-specific shocks and raw material price volatility.

Empirical evidence from emerging markets consistently identifies firm size as a significant determinant of net income, as larger firms effectively spread fixed costs over higher sales volumes. Furthermore, a substantial asset base facilitates easier access to external funding (Lukman & Tanuwijaya, 2021) and strengthens market positioning. From a solvency perspective, larger total assets enhance a firm's capacity for debt repayment, thereby improving overall financial health (Dirman, 2020). Consequently, this study utilizes the natural logarithm of total assets (Indrawan & Damayanthi, 2020) as a control variable to isolate the impact of size on NIt. Therefore, the following hypothesis is formulated:

H4: Firm Size (LnTS) has a positive and statistically significant impact on current Net Income (NIt).

2.2.5 The Mediating Role of Operating Cash Flow

This study proposes a structural mechanism wherein contemporaneous operating cash flow (NCFOt) serves as a critical mediator between prior and current profitability. Grounded in the Free Cash Flow Theory (Jensen, 1986), it is posited that superior prior earnings (NIt-1) augment a firm's internal financing capacity, which in turn bolsters its current operating inflows (NCFOt). Subsequently, aligned with the Earnings Quality Theory (Dechow & Dichev, 2002), these cash flows act as a fundamental driver for current net income (NIt), ensuring that reported profits are substantiated by realized liquidity rather than transitory, non-persistent accruals.

By integrating these theoretical frameworks, the proposed model identifies an indirect pathway where NIt-1 exerts influence on NIt through the enhancement of current cash-generating efficiency. This mediating effect is essential for elucidating the transition from historical performance to long-term earnings sustainability, particularly within capital-

intensive and high-risk sectors such as fisheries. Consequently, the following hypothesis is formulated:

H5: Current Net Cash Flow from Operating Activities (NCFOt) significantly mediates the relationship between Lagged Net Income (NIt-1) and Current Net Income (NIt).

2.3. Research methodology

This study employs a quantitative research design using the PLS-SEM approach. PLS-SEM is a variance-based technique particularly robust for predictive modeling and handling complex structural relationships without requiring strict distributional assumptions.

2.3.1 Data collection and Sample

The dataset comprises panel data collected from the audited financial statements of 29 fisheries companies listed on the Vietnamese stock exchange from 2019 to 2024. Due to the inclusion of one-period lagged variables, 2019 serves as the base year for lagging. After screening for data completeness, the final sample consists of 139 firm-year observations. This sample size is sufficient for PLS-SEM, exceeding the "ten times rule" for the number of structural paths.

2.3.2 Research model and Variables definition

To address potential omitted variable bias and enhance the model's robustness, the formal structural equation is established as follows:

$$NI_{i,t} = \beta_0 + \beta_1 NI_{i,t-1} + \beta_2 NCFO_{i,t} + \beta_3 NCFO_{i,t-1} + \Sigma\lambda Control_{i,t} + \varepsilon_{i,t} \quad (2)$$

In this model, $Control_{i,t}$ represents the firm-specific characteristic of Firm Size (LnTS), measured by the natural logarithm of total assets. This variable is included to control for economies of scale and mitigate potential omitted variable bias. The detailed definition of all variables is presented in Table 1.

Table 1: Definition and Measurement of Variables.

Variable	Symbol	Role	Definition and Measurement
Current Net Income	NIt	Dependent Variable	Net Income of company i in year t. Represents the core measure of current operational performance.
Lagged Net Income	NIt-1	Independent/Mediated	Net Income in year t-1. Included to account for earnings persistence and autocorrelation (Earnings Stickiness).
Current NCFO	NCFOt	Independent/Mediator	Net Cash Flow from Operating Activities in year t. Used as a benchmark for earnings quality and liquidity.
Lagged NCFO	NCFOt-1	Independent Variable	Net Cash Flow from Operating Activities in year t-1. Used to test the accrual reversal effect.

Firm Size	SIZE (LnTS)	Control Variable	The natural logarithm of the Total Assets of company i in year t. Controls for economies of scale and firm capacity.

(*Source: Compiled by the author)*

All variables are collected directly from the Income Statement and Cash Flow Statement of the sample companies.

2.3.3 PLS-SEM data analysis method

This study employs PLS-SEM to analyze the panel data. PLS-SEM is prioritized for its robust predictive power and efficiency in handling complex structural relationships. The analytical process follows a two-stage approach: measurement model validation and structural model assessment.

Measurement Model Assessment: The initial phase ensures the reliability and validity of the constructs. Internal consistency is evaluated using Composite Reliability (CR) with a minimum threshold of 0.70. Convergent validity is confirmed through the Average Variance Extracted (AVE), requiring a value of at least 0.50. Lastly, discriminant validity is verified via the Heterotrait-Monotrait Ratio (HTMT), where values must remain below 0.90 to guarantee that each variable represents a distinct conceptual construct.

Structural Model Assessment: The second stage focuses on testing the hypothesized causal relationships and the model's overall predictive capacity. The study utilizes the Bootstrapping algorithm (5,000 resamples) to estimate path coefficients (beta), T-statistics, and P-values, thereby determining the statistical significance of Hypotheses H1 through H5. Furthermore, the model's explanatory power is assessed using the Coefficient of Determination (R^2). The relative importance of each predictor is evaluated through the Effect Size (f^2), which measures the incremental contribution of each independent and control variable to the variance explained in NIt.

3. RESULTS AND DISCUSSION

3.1. Descriptive statistics analysis

The descriptive statistics summary table (Table 2) outlines the basic characteristics of the research variables across all 139 observations.

Table 2: Descriptive Statistics of Research Variables.

Variable	Mean	Median	Min	Max	Std. Dev.	Skewness
NIt	187,991	37,136	-42,446	2,012,920	338,946	2.833
NIt-1	190,508	45,917	-46,433	2,012,920	315,808	2.684
NCFOt	128,788	36,427	-602,012	2,073,015	343,262	2.595
NCFOt-1	127,295	29,379	-602,012	1,604,104	341,749	2.161
LnTS	14.114	14.120	11.930	16.320	1.199	-0.018

(Source: Author's calculation from audited financial statements)

According to the descriptive results in Table 2, several key observations regarding the fisheries sector's profitability and cash flow can be made

Profitability and Cash Flow Dynamics (NI and NCFO): The data reveals a significant disparity in financial performance within the sector. While the mean NIt is approximately 187,991 million VND, the median is substantially lower at 37,135 million VND. This gap, combined with high skewness (2.833) and excess kurtosis (9.320), confirms a right-skewed distribution where profits are concentrated among a few industry leaders.

Notably, the minimum NIt of -42,446 million VND reflects inherent risks such as fluctuating material costs and export barriers. Similarly, NCFOt exhibits high volatility with a standard deviation (343,262) nearly triple its mean (128,788). The negative minimum NCFOt of -602,012 million VND indicates that some firms faced severe liquidity pressures because operating outflows exceeded inflows. These findings underscore the importance of NCFO as a validator of earnings quality, as positive NI coupled with negative NCFO may signal sustainability risks.

Persistence Indicators (NIt-1 and NCFOt-1): The mean values for lagged variables (NIt-1: 190,508; NCFOt-1: 127,295) are closely aligned with their current-period counterparts. This stability in means suggests a general continuity in the sector's financial structure over the study period. However, the wide range between minimum and maximum values for both lagged and current periods confirms that the industry's performance is highly sensitive to firm-specific capabilities and external market cycles.

Operational Scale: The Firm Size, measured by the natural logarithm of total assets, exhibits a much more stable distribution. The mean (14.114) and median (14.120) are nearly identical, with a low Skewness (-0.018) and Std. Dev. (1.199). This indicates that once the absolute asset values are normalized using logarithms, the sample follows a near-normal distribution. This normalization is crucial for PLS-SEM analysis as it mitigates the influence of extreme

outliers in firm size, ensuring that the estimated impact of LnTS on NIt is robust and statistically reliable.

3.2. Measurement Model Assessment

Since all variables in this study (NI, NCFO, and LnTS) are single-item manifest variables obtained directly from audited financial statements, traditional reliability and validity tests such as Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) are not applicable. According to Hair et al. (2019), for single-item constructs, the indicator loading and reliability are assumed to be 1.00. Therefore, the assessment focuses on the internal consistency through the Collinearity Statistics (VIF).

3.3. Discriminant Validity Assessment

Table 3 presents the discriminant validity results. In the context of single-item constructs derived from financial data, the Fornell-Larcker diagonal values and HTMT ratios provide consistent evidence of the model's conceptual integrity.

Table 3: Discriminant Validity Results. (Fornell-Larcker and HTMT)

Variable	LnTS	NCFOt	NCFOt−1	NIt	NIt−1
LnTS	1.000				
NCFOt	0.363	1.000			
NCFOt-1	0.338	0.186	1.000		
NIt	0.577	0.639	0.404	1.000	
NIt-1	0.621	0.465	0.680	0.723	1.000

(Source: Author's analysis via SmartPLS 3)

According to the results in Table 3, the model meets the requirements for discriminant validity based on two criteria:

Fornell-Larcker Criterion: The diagonal elements represent the square root of the AVE, which is 1.000 for single-item variables. All off-diagonal correlations are significantly lower than these diagonal values, satisfying the requirement that a construct shares more variance with its own indicators than with other constructs.

HTMT Ratio: All values in the table are below the conservative threshold of 0.85 (and the more liberal threshold of 0.90) (Henseler et al., 2015). The highest ratio is 0.723 (between NIt and NIt-1), which is well within the acceptable range. This confirms that there is no issue of conceptual overlap between the variables, and each construct is statistically distinct.

3.4. Collinearity Assessment

Before evaluating the structural relationships, the model was tested for potential multicollinearity using the Variance Inflation Factor (VIF) to ensure the path coefficients

remain unbiased. According to Hair et al. (2019), VIF values should ideally remain below 3.3 in strict financial contexts, with a threshold of 5.0 indicating the absence of significant collinearity issues. The empirical results show that all inner VIF values range from 1.000 to 3.164, falling well within acceptable limits. Specifically, the VIF for LnTS is 1.672, NCFOt is 1.338, and NCFOt-1 is 1.972. Even the highest value, recorded for NIt-1 at 3.164, remains below the critical threshold. These results confirm that multicollinearity is not a concern, ensuring that the estimated impacts of earnings persistence and cash flows on current net income are statistically robust.

3.5. Hypotheses Testing Results

To evaluate the proposed hypotheses, a bootstrapping procedure with 5,000 resamples was conducted. The results, including path coefficients (beta), Mean, Standard Deviation (STDEV), *t*-values, and *p*-values, are summarized in Table 4.

Table 4: Path Coefficients and Hypotheses Testing Results.

Relationship	Path	β (O)	Mean	S.D.	*t*	*p*	Result
NIt-1 → NIt	(H1)	0.492	0.494	0.113	4.341	0.000	Supported
NCFOt → NIt	(H2)	0.363	0.356	0.084	4.327	0.000	Supported
NCFOt-1 → NIt	(H3)	-0.052	-0.047	0.075	0.688	0.492	Not Supported
LnTS → NIt	(H4)	0.157	0.161	0.058	2.719	0.007	Supported
NIt-1 → NCFOt → NIt	(H5)	0.169	0.170	0.066	2.546	0.011	Supported

(Source: Author's analysis via SmartPLS 3)

Figure 1 illustrates the structural model results, displaying path coefficients (beta) and *p*-values derived from the bootstrapping algorithm.

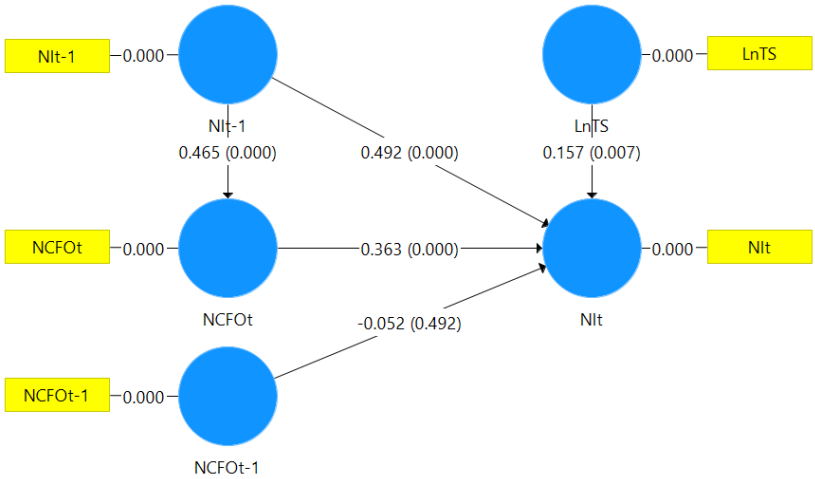

Figure 1: PLS-SEM Structural Model Results.

(Source: Author's analysis via SmartPLS 3)

According to the results in Table 4, the structural model provides several significant insights into the earnings dynamics of the fisheries sector:

Direct Relationships: The findings strongly support H1 and H2 with $p < 0.001$. Specifically, lagged net income (NIt-1) and current operating cash flow (NCFOt) are powerful predictors of current profitability. In contrast, H3 is rejected ($p = 0.492$), indicating that lagged cash flow does not exert a direct or significant influence on current earnings within this sample.

The Control Variable: Firm size (H4) has a significant positive impact (beta = 0.157, $p = 0.007$), confirming that larger fisheries companies tend to achieve higher net income. potentially due to economies of scale and better resource optimization.

Mediation Effect (H5): The indirect path NIt-1 to NCFOt to NIt is statistically significant (beta = 0.169, $p = 0.011$). This confirms that NCFOt acts as a vital bridge, translating previous performance into current earnings, which substantiates the proposed mediation mechanism.

The estimated structural relationships, based on standardized path coefficients (beta) from the PLS-SEM model, are expressed in the following equation (where the intercept is 0 by convention):

$$NI_{i,t} = 0.492\ NI_{i,t-1} + 0.363\ NCFO_{i,t} - 0.052\ NCFO_{i,t-1} + 0.157\ LnTS_{i,t} + \varepsilon_{i,t}$$

The equation highlights that NIt-1 and NCFOt are the primary drivers of current profitability. Specifically, a one-standard-unit increase in NIt-1 or NCFOt leads to an increase in NIt by 0.492 and 0.363 standard units, respectively. The impact of NCFOt-1 remains statistically negligible.

3.6. Model Explanatory Power and Effect Size

To evaluate the predictive quality of the structural model, the Coefficient of Determination (R^2) and Effect Size (f^2) were analyzed, with the findings summarized in Table 6.

Table 6: Predictive Power (R2) and Effect Size (f2) Results.

Construct	R^2	R^2 Adjusted	Predictor	f^2 (on NIt)	f^2 (on NCFOt)
NIt	0.658	0.647	NCFOt	0.288	-
NCFOt	0.216	0.210	NIt-1	0.224	0.276
			LnTS	0.043	-
			NCFOt-1	0.004	-

(Source: Author's analysis via SmartPLS 3)

The results in Table 6 provide the following insights:

Explanatory Power (R^2): The model achieves an R^2 of 0.658 for Net Income (NIt), indicating that 65.8% of the variance in current profits is explained by the independent and control variables. This is considered a substantial and robust explanatory level in financial research. For the mediator variable (NCFOt), the R^2 is 0.216, showing a moderate predictive power.

Effect Size (f^2): NCFOt (0.288) and NIt-1 (0.224) exert medium to large effects on current income, confirming their critical roles in the model. The control variable LnTS (0.043) shows a small but significant effect, justifying its inclusion to control for firm scale. Notably, NCFOt-1 has an f^2 of only 0.004, aligning with its non-significant P-value and suggesting it has negligible impact on current NIt.

3.7. Discussion and research implications

The structural model analysis yields an R-square (R^2) value of 0.658, indicating that the proposed framework explains 65.8% of the variance in net income. This substantial explanatory power confirms that the integrated theoretical framework combining Earnings Persistence, Earnings Quality, and Agency theories effectively captures the sophisticated financial dynamics of the Vietnamese fisheries sector.

3.7.1 The Cash-Backed Profitability Paradigm (H2, H5)

The empirical evidence strongly supports the critical role of current operating cash flows (NCFOt) as a primary driver of net income (NIt) with beta = 0.363 and $p < 0.001$. This finding provides robust empirical validation for the Earnings Quality Theory and the Information Content of Cash Flows (supporting H2). This result is further reinforced by the modern theoretical synthesis of DeAngelo et al. (2025) and aligns with the domestic findings of Nguyen and Nguyen (2020), who demonstrated the superior predictive power of cash-flow-integrated models in the Vietnamese stock market. In the specific context of the Vietnamese fisheries sector, the significant impact of NCFOt suggests that firms are effectively utilizing contemporaneous cash flows as a tool for optimal capital allocation, thereby validating the quality of reported profits through tangible monetary realization.

Since Net Income is a composite of cash and accruals, these results confirm that for fisheries enterprises, the cash component represents the objective monetary pillar that authenticates reported earnings. In an industry where revenue recognition can be subjective due to long export cycles, a high NCFO to NI linkage signifies low managerial manipulation, thereby reducing the agency risks. This alignment with global trends is consistent with the findings of Ukpai and Nzubechukwu (2025), who emphasize that prioritizing cash flow evaluation is a

core strategy for maintaining financial stability and enhancing liquidity in modern and volatile business environments.

Furthermore, as noted by Dinh et al. (2023), high-quality financial reporting in Vietnam is a key driver of investment efficiency. Consequently, the strong NCFO to NI linkage identified in this study signifies a substantial reduction in information asymmetry and agency costs within the sector.Furthermore, the validation of the mediation effect in H5 (beta = 0.169, p = 0.011) elucidates a virtuous cycle defined by the path from prior income to current cash flow and current income. This finding is consistent with Lan et al. (2022), who observed strong contemporaneous interactions between earnings and cash flows among Vietnamese listed firms, although they cautioned that these effects require consistent management to persist over time. This mechanism aligns with the Free Cash Flow Theory, whereby prior profitability serves as a vital internal resource that provides the financial autonomy and working capital necessary to maintain operational stability. This internal funding allows firms to generate contemporaneous cash flows that underpin current earnings, effectively acting as the transmission bridge that prevents profits from becoming transitory accounting artifacts.

3.7.2 The Anomalous Reversal of Lagged Cash Flow (H3)

A compelling finding of this study is the statistically insignificant impact of lagged operating cash flow (NCFOt-1) on current net income, as evidenced by p = 0.492 (leading to the rejection of H3). While theoretical frameworks often suggest that historical performance serves as a predictor for future outcomes, the Vietnamese fisheries sector exhibits a distinct decoupling in this specific relationship. This phenomenon is primarily explained by the Accrual Reversal Theory, which posits that the temporary nature of accruals leads to their reversal in subsequent periods, thereby neutralizing their long-term predictive utility. This observation is further supported by the Vietnamese manufacturing context described by Le et al. (2024), where the influence of financial strength and cash positions on corporate performance is found to be highly sensitive to real-time operational shifts rather than historical accumulations.Consistent with the established literature, accruals are inherently non-persistent. Once the model controls for prior net income (NIt-1) and contemporaneous cash flow (NCFOt), the incremental information content of NCFOt-1 is effectively diminished by the reversal of prior period accruals. From a transaction cost perspective, the monetary perishability in an inflationary environment implies that lagged cash loses its catalytic power if not immediately reinvested into productive assets. Furthermore, the Bullwhip Effect within global seafood supply chains necessitates immediate liquidity to manage fluctuating demand and supply disruptions. This industry-specific dynamic further

marginalizes historical cash positions in favor of real-time operational agility, supporting the conclusion that the link between cash flow and earnings in the fisheries sector is contemporaneous rather than lagged.

The lack of statistical significance regarding the impact of lagged operating cash flow (NCFOt-1) on current net income reflects the rigorous operational characteristics of the Vietnamese fisheries sector. Unlike manufacturing industries with extended inventory cycles, the Vietnamese fisheries industry is subject to intense pressure from short-term harvesting and export cycles. Fishery raw materials (such as shrimp and pangasius) are highly perishable, necessitating significant cold storage costs and forcing enterprises to maintain extremely high cash turnover rates. Cash flows generated in the prior period (t-1) are typically reinvested immediately into subsequent orders or paid out to linked farming networks to secure raw material supplies for the current period (t). Consequently, the predictive utility of prior-period cash flow is neutralized by the pressure of instantaneous reinvestment and the constant volatility of global export prices. Furthermore, the prevalence of export credit instruments such as Letters of Credit and deferred payment terms facilitates a tight contemporaneous coupling between cash realizations and reported profits within a single operating cycle. This mechanism underscores why current operating cash flow (NCFOt) functions as the primary empirical validator of earnings quality. In the specific context of the Vietnamese market, historical cash flows (NCFOt-1) tend to lose their predictive relevance due to the temporal lag in aligning accrual-based cost structures with actual liquid realizations. Consequently, this makes contemporaneous cash flows the only authentic measure of persistent economic performance

3.7.3 Earnings Persistence and the Strategic Influence of Firm Scale (H1, H4)

The model demonstrates a remarkably high persistence coefficient for lagged net income on current income (H1), with beta = 0.492 and $p < 0.001$. This confirms the AR(1) Stochastic Process where past earnings endure into the current period, indicating that the fundamental economic structures of Vietnamese fisheries firms possess significant stability. This earnings stickiness suggests that reported profits are not merely transitory but reflect recurring operational success, allowing investors to utilize the persistence coefficient as a reliable forecasting tool. Such high persistence is considered a hallmark of quality earnings in emerging markets, as emphasized by Dang et al. (2020), who established a direct link between earnings stability and enhanced firm value within the Vietnamese equity market.

This narrative is further substantiated by the significant impact of firm size (LnTS, H4), evidenced by beta = 0.157 and $p = 0.007$. While Bui and Le (2021) found that firm size might

not directly drive earnings management techniques in certain manufacturing contexts, the results of this study suggest that scale acts as a vital resilience factor specifically within the fisheries industry. From the perspective of Agency Theory, larger firms typically operate under higher transparency and lower information asymmetry due to rigorous scrutiny from international markets and regulatory bodies. Consequently, firm scale functions as a strategic resilience factor rather than a mere control variable.

Substantial asset bases provide a necessary buffer that allows firms to absorb significant negative cash flow shocks without compromising the overall stability of their reported earnings. This reinforces the theoretical stance that integrated, large-scale structures enhance earnings sustainability. Furthermore, these results corroborate the findings of Le et al. (2024) regarding the moderating role of firm size in sustaining corporate performance. This reinforcement supports the argument that integrated, large-scale fisheries firms in Vietnam are better positioned to maintain earnings sustainability and navigate the volatilities inherent in global agricultural supply chains.

3.7.4. Theoretical and Academic Implications

This study contributes to the field of financial accounting and corporate finance through three significant theoretical advancements.

First, the research provides rigorous empirical evidence within the Vietnamese fisheries context by confirming that current operating cash flow (NCFOt) is an indispensable component in explaining and authenticating net income. This finding reinforces the conceptual superiority of the cash flow and earnings decomposition model over traditional frameworks that rely solely on aggregated net income figures. By highlighting the necessity of monetary realization, this study strengthens the theoretical foundation of Earnings Quality as a primary indicator of financial transparency in emerging markets.

Second, the study empirically demonstrates that the two most potent predictors, lagged net income (NIt-1) and current cash flow (NCFOt), impact current net income simultaneously yet independently. This distinction is statistically supported by VIF values well below the critical threshold, confirming the non-overlapping roles of earnings persistence and earnings quality within the forecasting framework. This independence suggests that while prior performance (NIt-1) provides a baseline for earnings stability, contemporaneous cash flow (NCFOt) acts as a distinct quality-control mechanism that mitigates the transitory nature of accounting accruals.

Finally, the research demonstrates the effectiveness of the PLS-SEM methodology for analyzing financial panel data characterized by high skewness and kurtosis. In contrast to

traditional covariance-based approaches, the application of PLS-SEM in this study offers a more robust path to understanding complex structural relationships in volatile industries. By successfully navigating the idiosyncratic distributions of financial data in the fisheries sector, this study expands the methodological application of PLS-SEM in accounting research, offering a valuable reference for future scholarly investigations within emerging economies and high-risk agricultural sectors.

3.7.5. Practical Implications

The research results carry substantial practical implications for investors, financial analysts, and corporate management, particularly within the specific landscape of the Vietnamese fisheries industry.

For Investors and Analysts: When evaluating securities in the fisheries sector, stakeholders should prioritize a dual-analysis approach that integrates lagged net income with current operating cash flow. This analytical combination offers high explanatory reliability for forecasting contemporaneous earnings. Specifically, investors are advised to increase vigilance if a company reports substantial earnings accompanied by low NCFOt. In this context, NCFOt serves as the definitive empirical proof of earnings quality, assisting in the differentiation between cash-backed profitability and earnings potentially influenced by aggressive accrual management. This finding provides direct support for foundational equity valuation models by identifying the most persistent and reliable components of reported income.

For Corporate Management: The clear implication for corporate leadership is the necessity of prioritizing real-time cash flow optimization over the strategic adjustment of accounting accruals. The robust and statistically significant link between NCFOt and NIt suggests that effective cash management is the most sustainable trajectory for enhancing net income. Rigorous corporate governance requires a delicate balance between financial reporting and objective verification, which is best achieved by utilizing cash flow data to validate reported profits.

Furthermore, the rejection of Hypothesis H3 regarding the impact of lagged cash flow serves as a crucial warning against the reliance on discretionary accounting entries. The lack of predictive power from prior-period cash flow implies that non-cash earnings generated in the past are inherently non-persistent and susceptible to reversal. Consequently, management must focus on the quality of accruals, ensuring that these non-cash components are legitimate and intrinsically tied to future cash realization rather than being utilized for short-term

earnings smoothing. This strategic shift towards transparency is essential for maintaining investor confidence and ensuring long-term financial stability in volatile global markets.

4. CONCLUSION

4.1. Research Summary and Strategic Implications

This study successfully evaluates the financial determinants impacting the net income of listed fisheries companies through the application of PLS-SEM on a comprehensive panel dataset from 2019 to 2024. The structural model demonstrates robust explanatory power with an R^2 of 0.658, confirming that the selected variables are highly effective predictors of profitability. Empirical results substantiate two key hypotheses at the 1% significance level: lagged net income (NIt-1) exerts the most substantial positive influence on current income (NIt), validating the phenomenon of earnings stickiness, while current operating cash flow (NCFOt) provides critical evidence that earnings are largely authenticated by actual monetary realization.

Conversely, the rejection of the hypothesis regarding lagged cash flow (NCFOt-1) underscores the unique operational rigors of the Vietnamese fisheries sector. Unlike industries with extended inventory cycles, fisheries face intense pressure from short-term harvesting and export cycles. The perishability of raw materials and high cold-storage costs necessitate rapid cash turnover, meaning that prior-period cash is immediately reinvested into subsequent cycles, neutralizing its direct predictive utility for current earnings. Furthermore, the prevalence of export credit payments ensures that cash and profits are tightly coupled only within the same business cycle.

Beyond statistical metrics, this study offers vital strategic lessons amidst global volatility. First, the confirmed earnings persistence suggests that fisheries enterprises must build resilient cost structures to protect foundational profits against market shocks. Second, managers must prioritize “cash-backed profitability” as a survival strategy, ensuring a strong linkage between NCFO and NI to maintain liquidity and financial autonomy without over-reliance on external debt in fluctuating interest rate environments. Academically, this research reinforces accounting-based valuation models in an emerging market context, advising participants to prioritize the contemporaneous relationship between earnings and cash flow.

4.2. Limitations and Future Research Directions

An objective acknowledgment of this study's limitations involves the sample size of 139 observations. While this fully satisfies the technical requirements and statistical power of the

PLS-SEM algorithm, it remains modest compared to aggregate stock market studies, potentially limiting the generalizability of the findings to broader or more capital-intensive sectors. However, by focusing specifically on the pivotal fisheries industry, the study compensates for the sample size with precision and depth, capturing sector-specific dynamics that generalized studies might overlook.

Additionally, although firm size is integrated as a strategic control variable, the model could be further refined by incorporating macroeconomic indicators or more complex debt structures to enhance predictive precision. Consequently, future scholarly investigations should aim to expand the dataset by extending the time series or diversifying the sample across multiple economic sectors to strengthen external validity. Simultaneously, integrating a broader spectrum of firm-specific variables will help mitigate potential confounding factors and improve the robustness of path coefficients, thereby advancing the overall reliability of financial forecasting models in emerging economies.

ACKNOWLEDGEMENTS

The author would like to express sincere gratitude to the experts and colleagues who provided invaluable insights and feedback throughout the development of this research. Special thanks are extended to the listed fisheries companies in Vietnam for the availability of their financial data, which made this empirical analysis possible. We also acknowledge the support of Tra Vinh University for providing the necessary resources and an academic environment conducive to this study

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