

The Influence of Working Capital and Inventory Turnover on Profitability through Operational Efficiency at PT Pixel Detail Indonesia

Hamsah Halim ^{1*} Muhammad Akob Kadir ² Muhammad Tafsir ³ Baharuddin Baharuddin ⁴

^{1*, 2, 3} Sekolah Tinggi Ilmu Ekonomi Makassar Bongaya, Makassar, Indonesia

⁴ Institut Bisnis dan Keuangan Nitro, Makassar, Indonesia

Email: ancaftv@gmail.com

ARTICLE HISTORY

Submitted : June 30, 2026
Reviewed : July 02, 2026
July 10, 2026
Revised : July 23, 2026
Accepted : August 02, 2026
Published : August 02, 2026

Conflict of Interest Statement:

The author(s) declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

ABSTRACT

Purpose: This study examines the effects of working capital turnover and inventory turnover on profitability and tests the mediating role of operational cost efficiency at PT Pixel Detail Indonesia during 2018–2025.

Research Method: A quantitative explanatory-causal longitudinal design was employed using 32 quarterly financial statements. Working capital turnover and inventory turnover were independent variables, BOPO represented operational cost efficiency, and ROA represented profitability. Data were analyzed using multiple linear regression and the Sobel test with SPSS.

Results and Discussion: Working capital turnover had a significant positive effect on profitability, whereas inventory turnover had no significant effect. Working capital turnover significantly affected operational cost efficiency at the one-tailed 5% level, while inventory turnover did not. BOPO negatively and significantly affected profitability, indicating that greater cost efficiency increases ROA. Operational cost efficiency did not mediate either relationship. The profitability and efficiency models explained 97.7% and 13.2% of the respective variances.

Implications: Management should reduce BOPO below 50% and optimize working capital turnover. Future research should examine broader samples and alternative mediation methods.

Originality: This study extends the Resource-Based View to a non-listed creative media company in eastern Indonesia using quarterly financial data.

Keywords: working capital turnover; inventory turnover; operational cost efficiency; profitability; BOPO; resource-based view.

1. Introduction

Indonesia's creative economy grew by 5.4% (year-on-year) in 2024, with the advertising and electronic media subsector serving as a significant contributor to the nation's digital transformation (Kemenparekraf, 2024). However, post-2024 market dynamics present complex liquidity challenges for media intermediary firms, given the volatile cost structure caused by the shift of advertising spending from conventional media to videotron platforms and AI-based digital media. In the context of financial management, optimizing working capital has become a critical determinant, since an inability to manage the cash conversion cycle can lead to financial distress, particularly for firms with high current-asset intensity (Moussa, 2020).



The urgency of this study is reinforced by a phenomenon in the advertising services industry in 2025, in which operational cost efficiency is no longer merely an option but a mechanism that determines the extent to which the turnover of physical inventory, such as videotron components, can be transformed into sustainable profitability (Siahaan & Ginting, 2022). An imbalance between receivables management and inventory procurement frequently squeezes net profit margins, requiring an integrative strategy that links working capital policy with cost control to maintain financial stability amid global economic uncertainty (Zimon *et al.*, 2021). Theoretically, the relationship between working capital, inventory turnover, and profitability can be explained through the Resource-Based View (RBV), which holds that a firm's ability to manage its internal resources in a unique way is the primary foundation for sustainable competitive advantage (Barney, 1991; Wernerfelt, 1984; Hamzah, 2025).

Although stable working capital management should theoretically move in tandem with rising profit, the empirical reality at PT. Pixel Detail Indonesia reveals a significant gap between operational targets and actual financial performance. Based on internal data for the 2024–2025 period, several financial anomalies were identified, as presented in Table 1.

Table 1. Internal Financial Statement Data of PT. Pixel Detail Indonesia

Item	2024 (IDR)	2025 (IDR)
Cash and Cash Equivalents	970.197.718	1.115.727.375
Inventory	1.011.687.300	1.112.856.030
Working Capital	2.287.275.189	2.340.981.943
Revenue	6.759.000.000	7.526.000.000
Videotron Maintenance Cost	536.000.000	600.320.000
Third-Party Coordination Cost	365.000.000	408.800.000
Loan Interest Expense	24.112.500	20.495.625
Operating Cost	3.663.000.000	3.824.000.000
Gross Profit	2.195.000.000	6.587.000.000
Operating Profit	2.058.233.450	2.763.000.000
Net Profit	1.627.296.760	667.830.617

Source: Financial Statement Data of PT. Pixel Detail Indonesia

Table 1 reveals a growth paradox: revenue grew by 11.3% (from IDR 6,759,000,000 to IDR 7,526,000,000) and gross profit rose sharply, yet net profit contracted by 58.9% (from IDR 1,627,296,760 to IDR 667,830,617). Average inventory value also increased, indicating an accumulation of videotron components that locked working capital into less productive assets, while videotron maintenance and third-party coordination costs grew faster than revenue. This condition confirms that rising revenue and operating profit are not automatically followed by rising net profit, making an in-depth examination of how working capital and inventory turnover affect profitability through operational cost efficiency the central concern of this study.

Several research gaps were identified to position the novelty of this study. Theoretically, prior studies such as (Wikantha *et al.*, 2023; Sebastian & Jusuf, 2024) have relied on a single, general theoretical lens without a specific framework explaining how financial resources are transformed into superior performance through organizational capability. Empirically, prior findings are sharply inconsistent: (Putri & Ritonga, 2024) and (Widianto *et al.*, 2024) found a significant positive effect of working capital turnover on profitability, while (Sebastian & Jusuf, 2024) found a negative effect, and (Dzakiroh *et al.*, 2023) as well as (Alhidayatullah & Antony, 2021) found no significant effect. A similar inconsistency exists for inventory turnover. Methodologically, most previous studies used multiple linear

regression or panel data regression that tests only direct effects, without uncovering mediation effects. From a population and practical perspective, no prior study has specifically examined this phenomenon in the advertising and creative media services industry, which has unique characteristics such as high videotron asset intensity, contract-based project cycles, and a volatile operational cost structure.

Based on this mapping of gaps, the novelty of this study lies in testing a mediation model that positions operational cost efficiency as an intervening variable in the relationship between working capital and inventory turnover on the one hand, and profitability on the other, tested empirically using a stepwise (causal-steps) regression approach and the Sobel test in a previously unexplored context — an advertising and creative media services company (PT. Pixel Detail Indonesia) during the 2018–2025 period.

The remainder of this paper is organized as follows: Section 2 presents the literature review and hypothesis development; Section 3 describes the research method; Section 4 presents the results and discussion; and Section 5 offers concluding remarks and recommendations.

2. Literature Review and Hypothesis Development

2.1 Literature Review

2.1 Resource-Based View (RBV)

The Resource-Based View (RBV) is a perspective in strategic management that emphasizes the importance of a firm's internal resources as the primary determinant of sustainable competitive advantage. The idea originated with Wernerfelt and was later developed systematically by Barney through the VRIO framework (Valuable, Rare, Inimitable, Organized): competitive advantage can only be achieved if a firm is able to manage resources that are valuable, rare, difficult to imitate, and effectively organized (Aslamiyah *et al.*, 2024; Hamzah, 2025). Firm resources are classified into tangible resources, such as financial capital and inventory, and intangible resources, such as managerial capability and internal control systems.

This study argues that working capital and inventory turnover are tangible resources owned by PT. Pixel Detail Indonesia, but these resources do not automatically generate profitability. Organizational capability — in this case operational cost efficiency — is required to configure these resources into superior performance (Ferreira *et al.*, 2022; Bich *et al.*, 2025). Operational cost efficiency is viewed as an organizational capability that is rare and difficult to imitate because it is formed through an established cost-management system and a long process of organizational learning (Civelek, 2024). RBV provides the theoretical foundation for understanding why working capital and inventory turnover must be configured through organizational capability in order to produce sustainable competitive advantage in the form of profitability.

2.2 Hypothesis Development

2.2.1 Working Capital and Profitability

Working capital is a firm's investment in current assets used to finance day-to-day operations, consisting of cash, receivables, inventory, and other current assets (Kasmir, 2019; Setiawan *et al.*, 2021). In this study, working capital is measured using the Working Capital Turnover ratio: Working Capital Turnover = Net Sales / (Current Assets – Current Liabilities). The higher this ratio, the more efficiently the firm

uses working capital to generate sales. (Wikantha *et al.*, 2023), (Putri & Ritonga, 2024), and (Widianto *et al.*, 2024) found that working capital turnover has a significant positive effect on profitability, whereas (Sebastian & Jusuf, 2024) found a negative effect, and (Dzakiroh *et al.*, 2023) as well as (Alhidayatullah & Antony, 2021) found no significant effect. From an RBV perspective, effectively managed working capital enables a firm to run its operations smoothly and respond quickly to market opportunities (Hamzah, 2025; Aisyah *et al.*, 2022). Based on this discussion, the first hypothesis is formulated as follows:

H1: *Working capital has a positive and significant effect on profitability.*

2.2.2 Inventory Turnover and Profitability

Inventory turnover measures how quickly a firm sells and replaces its inventory within a given period. In this study, inventory turnover is measured as: $\text{Inventory Turnover} = \text{Cost of Goods Sold} / \text{Average Inventory}$. (Viyanis *et al.*, 2023) and (Akmalia & Pambudi, 2020) found a positive effect of inventory turnover on profitability, while (Dzakiroh *et al.*, 2023) in the plastics and packaging sector and (Alhidayatullah & Antony, 2021) in the cement industry found no significant effect. Within the RBV framework, resources must meet the VRIO criteria to generate competitive advantage (Hamzah, 2025). Based on this discussion, the second hypothesis is formulated as follows:

H2: *Inventory turnover has a positive and significant effect on profitability.*

2.2.3 Working Capital and Operational Cost Efficiency

Operational cost efficiency reflects a firm's ability to minimize operational costs while generating optimal revenue (Mahmudi, 2019; Mage *et al.*, 2025), measured with the BOPO ratio = $(\text{Total Operating Cost} / \text{Total Operating Revenue}) \times 100\%$. The lower the BOPO, the more efficient the firm (Rohyana & Wulandari, 2023). Within the RBV framework, sound working capital management — such as optimized cash, receivables, and inventory management — should reduce unnecessary operational costs by accelerating the cash conversion cycle and reducing idle assets (Prasetyo & Hidayat, 2024). Based on this discussion, the third hypothesis is formulated as follows:

H3: *Working capital has a positive and significant effect on operational cost efficiency.*

2.2.4 Inventory Turnover and Operational Cost Efficiency

High inventory turnover indicates that inventory does not accumulate in the warehouse, so storage costs, maintenance costs, and the risk of obsolescence can be reduced. In the operations of PT. Pixel Detail Indonesia, videotron components accumulating in the warehouse could generate significant technical maintenance costs, so faster inventory turnover is expected to contribute to operational cost efficiency (Naseem *et al.*, 2021). Based on this discussion, the fourth hypothesis is formulated as follows:

H4: *Inventory turnover has a positive and significant effect on operational cost efficiency.*

2.2.5 Operational Cost Efficiency and Profitability

The relationship between operational cost efficiency and profitability is one of the most fundamental relationships in financial management. (Mustika *et al.*, 2023) and (Mage *et al.*, 2025) found that BOPO has a significant negative effect on profitability: the lower the BOPO (the more efficient the firm), the higher the profitability. This is consistent with the RBV premise that organizational capability in efficiently managing costs is a source of sustainable competitive advantage (Hamzah, 2025; Aslamiyah *et al.*, 2024). Based on this discussion, the fifth hypothesis is formulated as follows:

H5: Operational cost efficiency has a positive and significant effect on profitability.

2.2.6 The Mediating Role of Operational Cost Efficiency

The core novelty of this study lies in testing the mediating role of operational cost efficiency. This study argues that the effect of working capital and inventory turnover on profitability is not always direct, but may be transmitted through operational cost efficiency as an intervening variable. (Naseem *et al.*, 2021) found that operational efficiency mediates the relationship between working capital management and corporate profitability, while (Lestari & Santoso, 2023) confirmed the role of operational efficiency as a catalyst that converts asset turnover into sustainable profit, although (Prastowo & Ardiansyah, 2023) found that this mediating role is not always significant and depends on industry characteristics. Based on this discussion, the sixth and seventh hypotheses are formulated as follows:

H6: Operational cost efficiency mediates the effect of working capital on profitability.

Efficient working capital management is expected to first reduce unnecessary operational costs (lowering BOPO), which then transmits a positive impact on the company's profitability (ROA); this mediating mechanism is tested through the causal-steps regression approach and the Sobel test.

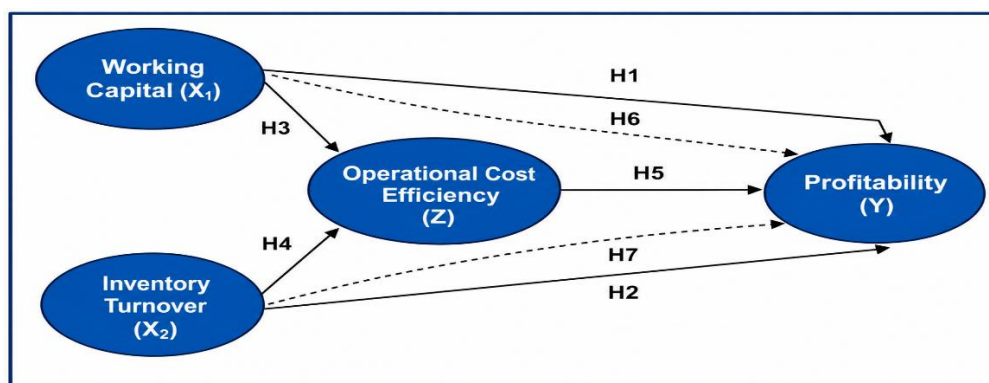
H7: Operational cost efficiency mediates the effect of inventory turnover on profitability.

Faster turnover of videotron components is expected to reduce storage and maintenance costs (lowering BOPO), so that the positive effect of inventory turnover on profitability is channeled through operational cost efficiency as an intervening variable, whose significance is tested through the causal-steps regression approach and the Sobel test.

2.3 Conceptual Framework

Based on the literature review and hypothesis development above, the conceptual framework of this study depicts the causal relationships among the variables as follows: Working Capital (X_1) and Inventory Turnover (X_2) directly affect Profitability (Y) and directly affect Operational Cost Efficiency (Z); Operational Cost Efficiency (Z) in turn directly affects Profitability (Y). In addition, there is an indirect effect of Working Capital and Inventory Turnover on Profitability through Operational Cost Efficiency as a mediating variable, tested through a stepwise (causal-steps) regression approach and the Sobel test.

Figure 1. Conceptual Framework



Note: Working Capital (X_1) and Inventory Turnover (X_2) $\rightarrow$ Operational Cost Efficiency (Z) $\rightarrow$ Profitability (Y), with direct paths from X_1 and X_2 to Y .

3. Research Method

This study employs a quantitative approach with an explanatory causal research design that is longitudinal (time-series) in nature. The research object is PT. Pixel Detail Indonesia, an advertising and creative media services company based in Makassar, South Sulawesi, engaged in procuring videotron units, electronic media, and event-support services. The population consists of the quarterly financial statements of PT. Pixel Detail Indonesia for the 2018–2025 period. The sampling technique used is purposive sampling with the following criteria: (1) quarterly financial statements for the 2018–2025 period; and (2) complete data to calculate all research variables. The sample comprises 32 observations (4 quarters × 8 years), so this study effectively applies a census approach to the entire available population. The data used are secondary data sourced from the company's internal financial statements.

The data analysis technique used is multiple linear regression with two equation models: Model 1: $Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_1$ (testing H3 and H4), and Model 2: $Y = \beta_0 + \beta_3 X_1 + \beta_4 X_2 + \beta_5 Z + \varepsilon_2$ (testing H1, H2, and H5). Prior to regression testing, classical assumption tests were conducted, comprising the normality test (Kolmogorov-Smirnov), multicollinearity test (Tolerance and VIF), heteroscedasticity test (Glejser test), and autocorrelation test (Durbin-Watson). The mediation hypotheses (H6 and H7) were tested using the causal-steps approach of Baron & Kenny (1986), supplemented by the Sobel test, with the formula $z = (a \times b) / \sqrt{(b^2 SE_a^2 + a^2 SE_b^2)}$. The mediation effect is declared significant if the Sobel z -value exceeds 1.96 at $\alpha = 0.05$, and all hypotheses were tested using a one-tailed test because the hypothesized direction of effect is positive. All analyses were performed using SPSS software (Ghozali, 2021; Hair *et al.*, 2022; Hayes, 2022).

Table 2. Operational Definition of Research Variables

Variable	Type	Measurement Indicator	Reference
Working Capital (X_1)	Independent	$WCT = \text{Net Sales} / (\text{Current Assets} - \text{Current Liabilities})$	(Kasmir, 2019); (Setiawan <i>et al.</i> , 2021)
Inventory Turnover (X_2)	Independent	$IT = \text{COGS} / \text{Average Inventory}$	Kasmir (2019); Wikantha <i>et al.</i> , (2023)
Operational Cost Efficiency (Z)	Intervening (Mediator)	$BOPO = \text{Total Operating Cost} / \text{Total Operating Revenue} \times 100\%$	Mustika <i>et al.</i> , (2023); Mage <i>et al.</i> , (2025)
Profitability (Y)	Dependent	$ROA = \text{Net Profit} / \text{Total Assets} \times 100\%$	Kasmir (2019); Wikantha <i>et al.</i> , (2023)

Source: Various references compiled by the authors (2026)

4. Results and Discussion

4.1 Analysis Results

4.1.1 Descriptive Statistics

Descriptive statistical analysis provides an overview of the data characteristics across 32 quarterly observations for the 2018–2025 period. Working Capital Turnover (X_1) has a mean of 1.0081 times with a standard deviation of 0.13328, indicating that the efficiency of the firm's working capital use is at a moderate level and relatively homogeneous across periods. Inventory Turnover (X_2) has a mean of 0.2403 times with a very low standard deviation (0.01492), signaling minimal variation and a fairly

constant pattern, consistent with a project-based (make-to-order) business model. Operational Cost Efficiency (Z), proxied by BOPO, has a mean of 64.9625%, still within the efficient category according to Wahyu & Agustina (2020, BOPO of 50–85% = efficient), with a range of 46.86%–82.35% indicating fairly substantial variation in efficiency across periods. Profitability (Y), proxied by ROA, has a mean of 9.6916%, reflecting a healthy level of profitability (above the 5% benchmark; (Alimah & Sihono, 2024), yet a high standard deviation (7.57421%) and a range from -3.78% to 24.41% indicate substantial performance volatility, including loss-making periods.

Table 3. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Working Capital Turnover (X_1)	32	0.64	1.19	1.0081	0.13328
Inventory Turnover (X_2)	32	0.20	0.26	0.2403	0.01492
Operational Cost Efficiency – BOPO (Z)	32	46.86	82.35	64.9625	9.34655
Profitability – ROA (Y)	32	-3.78	24.41	9.6916	7.57421

Source: Secondary data processed using SPSS

4.1.2 Classical Assumption Tests

The Kolmogorov-Smirnov normality test produced a Z value of 0.123 with an Asymp. Sig. (2-tailed) of 0.200 (> 0.05), so the regression residuals are normally distributed. The multicollinearity test shows that all independent variables in Model 1 have a Tolerance of 0.858 and a VIF of 1.165, while in Model 2 Tolerance values range from 0.771 to 0.861 with VIF from 1.161 to 1.298, all comfortably within the required thresholds (Tolerance > 0.10 ; VIF < 10), so no multicollinearity is present. The Glejser heteroscedasticity test shows that the significance values for all independent variables exceed 0.05 (Working Capital 0.807; Inventory Turnover 0.663; Operational Cost Efficiency 0.132), so the model is free of heteroscedasticity. The Durbin-Watson autocorrelation test produced a DW value of 1.788, within the ideal range of 1.5–2.5, so no autocorrelation is present. With all four classical assumptions satisfied, the regression model is declared fit (BLUE) for hypothesis testing.

4.1.3 Multiple Regression Analysis

Model 1 tests the effect of Working Capital (X_1) and Inventory Turnover (X_2) on Operational Cost Efficiency (Z), producing the equation $Z = 29.691 + 23.663X_1 + 47.507X_2$.

Table 4. Partial Test Results of Model 1 (Dependent Variable: Operational Cost Efficiency/BOPO)

Variable	B	Std. Error	Beta	t	Sig.	Remark
(Constant)	29.691	26.126	-	1.136	0.265	-
Working Capital (X_1)	23.663	13.045	0.337	1.814	0.080*	Significant (one-tailed)
Inventory Turnover (X_2)	47.507	116.568	0.076	0.408	0.687	Not Significant

$R^2 = 0.132$; Adjusted $R^2 = 0.072$; $F = 2.199$; Sig. $F = 0.129$. *one-tailed significance = 0.040 (t -table = 1.699; $df = 29$).

Source: Secondary data processed using SPSS

The R^2 of Model 1 (0.132) indicates that Working Capital and Inventory Turnover jointly explain only 13.2% of the variance in Operational Cost Efficiency, with the remaining 86.8% explained by factors outside the model. Working Capital has a significant positive effect at the one-tailed level ($t = 1.814 >$

t-table 1.699; one-tailed Sig. = 0.040 < 0.05), whereas Inventory Turnover has no significant effect ($t = 0.408 < 1.699$).

Model 2 tests the effect of Working Capital (X_1), Inventory Turnover (X_2), and Operational Cost Efficiency (Z) on Profitability (Y), producing the equation $Y = 59.841 + 9.504X_1 - 23.011X_2 - 0.834Z$.

Table 5. Partial Test Results of Model 2 (Dependent Variable: Profitability/ROA)

Variable	B	Std. Error	Beta	t	Sig.	Remark
(Constant)	59.841	3.581	-	16.712	0.000	-
Working Capital (X_1)	9.504	1.846	0.167	5.149	0.000	Significant Positive
Inventory Turnover (X_2)	-23.011	15.676	-0.045	-1.468	0.153	Not Significant
Operational Cost Efficiency (Z)	-0.834	0.025	-1.030	-33.506	0.000	Significant Negative

$R^2 = 0.977$; Adjusted $R^2 = 0.975$; $F = 417.075$; Sig. $F = 0.000$ (one-tailed t-table = 1.701; $df = 28$).

Source: Secondary data processed using SPSS

The R^2 of Model 2 (0.977) shows that Working Capital, Inventory Turnover, and Operational Cost Efficiency jointly explain 97.7% of the variance in Profitability, a very strong value far exceeding Model 1. Working Capital has a significant positive effect on Profitability ($t = 5.149 > 1.701$; Sig. = 0.000), so H1 is accepted. Inventory Turnover has no significant effect ($t = -1.468 < 1.701$; Sig. = 0.153; the negative direction also contradicts the hypothesis), so H2 is rejected. Operational Cost Efficiency has a significant effect on Profitability ($t = -33.506$; Sig. = 0.000) but in a negative direction, which substantively means that the lower the BOPO (the more efficient), the higher the ROA.

Table 6. F-Test (Simultaneous) Results

Model	Dependent Variable	F-value	Sig. F	F-table	Remark
Model 1	Operational Cost Efficiency (Z)	2.339	0.114	3.33 ($df_1=2$, $df_2=29$)	Not Significant
Model 2	Profitability (Y)	400.631	0.000	2.95 ($df_1=3$, $df_2=28$)	Significant

Source: Secondary data processed using SPSS

The F-test for Model 1 shows that Working Capital and Inventory Turnover jointly have no significant effect on Operational Cost Efficiency (Sig. $F = 0.114 > 0.05$), whereas the F-test for Model 2 shows that Working Capital, Inventory Turnover, and Operational Cost Efficiency jointly have a highly significant effect on Profitability (Sig. $F = 0.000 < 0.05$). This sharp contrast confirms that adding Operational Cost Efficiency to the model dramatically improves the model's predictive power for Profitability.

4.1.4 Mediation Test using the Causal-Steps Approach and Sobel Test

The Sobel z-value for the H6 path is 2.150, statistically greater than 1.96. However, according to the Baron & Kenny (1986) criteria, because the total effect coefficient (c) is not significant ($p = 0.212$), the initial condition for mediation is not met. Thus, although the Sobel test is significant, conceptually Operational Cost Efficiency does not mediate the effect of Working Capital on Profitability, so H6 is

rejected. Working Capital affects Profitability directly, not through the operational cost efficiency mechanism.

Table 7. Mediation Test Results for H6 (Working Capital → Operational Cost Efficiency → Profitability)

Step	Regression	Coefficient	B	Std. Error	t	Sig.
1	$Y = f(X_1)$	c (Total Effect)	-12.881	10.105	-1.275	0.212
2	$Z = f(X_1)$	a (Path a)	25.666	11.915	2.154	0.039
3	$Y = f(X_1, Z)$	c' (Direct Effect)	8.604	1.776	4.846	0.000
3		b (Path b)	-0.837	0.025	-33.061	0.000

Sobel z = 2.150.

Source: Secondary data processed using SPSS

Table 8. Mediation Test Results for H7 (Inventory Turnover → Operational Cost Efficiency → Profitability)

Step	Regression	Coefficient	B	Std. Error	t	Sig.
1	$Y = f(X_2)$	c (Total Effect)	-97.119	91.000	-1.067	0.294
2	$Z = f(X_2)$	a (Path a)	127.170	112.024	1.135	0.265
3	$Y = f(X_2, Z)$	c' (Direct Effect)	3.780	20.273	0.186	0.853
3		b (Path b)	-0.793	0.032	-24.524	0.000

Sobel z = 1.134.

Source: Secondary data processed using SPSS

The Sobel z-value for the H7 path is 1.134, smaller than 1.96, so the mediation effect is statistically not significant. In addition, coefficient a ($p = 0.265$) and total effect c ($p = 0.294$) are also not significant, so the mediation criteria of Baron & Kenny (1986) are not met. Thus, H7 is rejected; Operational Cost Efficiency does not mediate the effect of Inventory Turnover on Profitability.

Table 9. Summary of All Hypothesis Testing Results

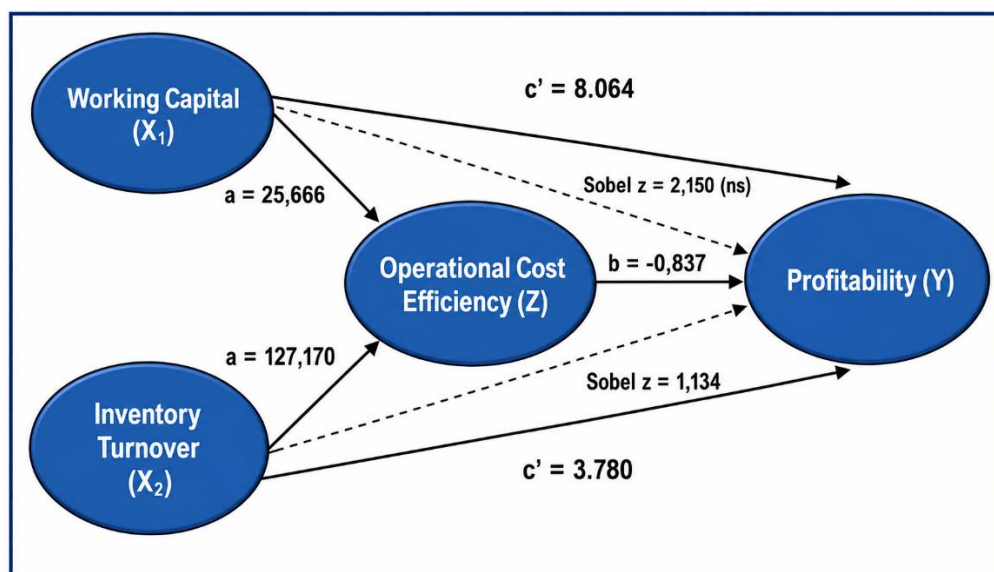
H	Hypothesis Statement	Coefficient	Sig./Sobel z	Decision
H1	Working Capital (+) → Profitability	B = 9.504	$p = 0.000$	Accepted
H2	Inventory Turnover (+) → Profitability	B = -23.011	$p = 0.153$	Rejected
H3	Working Capital (+) → Operational Cost Efficiency	B = 23.663	one-tailed $p = 0.040$	Accepted
H4	Inventory Turnover (+) → Operational Cost Efficiency	B = 47.507	$p = 0.687$	Rejected
H5	Operational Cost Efficiency (+) → Profitability [actual direction negative]	B = -0.834	$p = 0.000$	Formally rejected / substantively accepted
H6	Working Capital → Operational Cost Efficiency → Profitability (Mediation)	Indirect = -21.482	Sobel z = 2.150; c not significant	Rejected (No Mediation)
H7	Inventory Turnover → Operational Cost Efficiency → Profitability (Mediation)	Indirect = -100.807	Sobel z = 1.134	Rejected (No Mediation)

Source: Secondary data processed using SPSS and Sobel test

The path diagram of the research results shows that of the four direct-effect paths tested, three are statistically significant: Working Capital → Operational Cost Efficiency (H3, $B = 23.663$; one-tailed $p = 0.040$), Operational Cost Efficiency → Profitability (H5, $B = -0.834$; $p = 0.000$), and Working Capital → Profitability (H1, $B = 9.504$; $p = 0.000$). The paths Inventory Turnover → Operational Cost Efficiency (H4)

and Inventory Turnover $\rightarrow$ Profitability (H2) are not significant. Both mediation paths (H6 and H7) are also not significant based on the Sobel test. Overall, of the seven hypotheses proposed, only two are accepted (H1 and H3), while the remaining five are rejected (H2, H4, H5 formally, H6, and H7). Working Capital is confirmed as the most dominant variable affecting Profitability, both directly and through the independent Operational Cost Efficiency pathway, whereas Inventory Turnover is not a strategic variable in the context of the advertising and creative media services industry.

Figure 2. Path Diagram of Hypothesis Testing Results: The Effect of Working Capital and Inventory Turnover on Profitability through Operational Cost Efficiency



Source: SPSS data output (causal-steps regression and Sobel test), 2026

4.2 Discussion

4.2.1 Effect of Working Capital on Profitability (H1: Accepted)

The results confirm that working capital has a positive and significant effect on the profitability of PT. Pixel Detail Indonesia ($B = 9.504$; $t = 5.149$; $p = 0.000$). This finding indicates that any increase in working capital turnover efficiency is followed by an increase in the company's Return on Assets (ROA). From the RBV perspective, working capital is a valuable tangible resource because it enables the firm to run its operations smoothly and respond quickly to market opportunities (Hamzah, 2025; Aisyah *et al.*, 2022). In practical terms, an advertising services firm with a fast cash conversion cycle can immediately reinvest available funds into new projects without waiting for receivables from previous projects to be collected. This result is consistent with (Wikantha *et al.*, 2023; Putri & Ritonga, 2024; Widiyanto *et al.*, 2024).

4.2.2 Effect of Inventory Turnover on Profitability (H2: Rejected)

Inventory turnover has no significant effect on profitability ($B = -23.011$; $t = -1.468$; $p = 0.153$). This finding is explained by the project-based nature of PT. Pixel Detail Indonesia's business, in which videotron components are typically procured on a make-to-order basis to fulfill specific contracts rather than stored in large quantities as warehouse inventory. As a result, the storage costs and obsolescence

risk that typically link inventory turnover to profitability are not material. This finding is consistent with (Dzakiroh *et al.*, 2023; Alhidayatullah & Antony, 2021).

4.5.3 Effect of Working Capital on Operational Cost Efficiency (H3: Accepted)

Working capital has a significant positive effect on operational cost efficiency at the one-tailed level ($B = 23.663$; $t = 1.814$; one-tailed $p = 0.040$). From the RBV perspective, operational cost efficiency is understood as an organizational capability that enables the firm to coordinate resources to achieve strategic objectives (Ferreira *et al.*, 2022; Bich *et al.*, 2025). Sound working capital management — such as faster receivables collection and efficient inventory control — reduces unnecessary operational costs, such as storage costs and the cost of idle funds. This result reinforces the findings of Prasetyo & Hidayat (2024).

4.5.4 Effect of Inventory Turnover on Operational Cost Efficiency (H4: Rejected)

Inventory turnover has no significant effect on operational cost efficiency ($B = 47.507$; $t = 0.408$; $p = 0.687$). The very low variation in inventory turnover across periods (a standard deviation of only 0.01492 around a mean of 0.2403) means that this variable lacks sufficient discriminating power to affect other variables. This finding is consistent with (Dzakiroh *et al.*, 2023; Alhidayatullah & Antony, 2021).

4.5.5 Effect of Operational Cost Efficiency on Profitability (H5: Formally Rejected, Substantively Accepted)

Operational cost efficiency has a significant effect on profitability ($t = -33.506$; $p = 0.000$), but in a negative direction ($B = -0.834$). Because BOPO is an inverse indicator (the lower the BOPO, the more efficient the firm), this negative coefficient should be interpreted as: every 1% decrease in BOPO (an increase in efficiency) is followed by a 0.834% increase in ROA. This is the most important finding of the study and substantively demonstrates that operational cost efficiency is the dominant determinant of profitability at PT. Pixel Detail Indonesia, as reflected in the jump in R^2 from 0.132 (Model 1) to 0.977 (Model 2) once Operational Cost Efficiency is included in the model. This result is consistent with (Mustika *et al.*, 2023; Mage *et al.*, 2025), and reaffirms the RBV concept that organizational capability that is valuable, rare, difficult to imitate, and well organized is the primary determinant of sustainable profitability.

4.5.6 The Mediating Role of Operational Cost Efficiency (H6 and H7: Both Rejected – No Mediation)

Operational cost efficiency does not mediate the effect of working capital on profitability (indirect effect = -21.482; Sobel $z = 2.150$, but the total effect c is not significant, $p = 0.212$), so H6 is rejected. Working Capital and Operational Cost Efficiency are two relatively independent pathways affecting Profitability: Working Capital contributes through a faster cash cycle and the ability to fund new projects, while Operational Cost Efficiency contributes through savings in operational expenditure. Operational cost efficiency also does not mediate the effect of inventory turnover on profitability (indirect effect = -100.807; Sobel $z = 1.134 < 1.96$), so H7 is rejected, a logical consequence of the rejection of H2 and H4. This finding carries an important managerial implication: the firm can increase profitability through two strategies that can be pursued in parallel, namely (1) increasing working capital turnover, and (2) directly reducing operational costs, without needing to wait for working capital efficiency to first generate cost

savings. This finding is consistent with Lestari & Santoso (2023) and Prastowo & Ardiansyah (2023), who found that the mediating role of operational efficiency depends on industry characteristics.

5. Concluding Remarks and Recommendation

This study examined the effect of working capital and inventory turnover on profitability through operational cost efficiency as an intervening variable at PT. Pixel Detail Indonesia for the 2018–2025 period, using multiple linear regression and the Sobel test on 32 quarterly observations. Based on the testing of seven hypotheses, it can be concluded that: (1) working capital has a significant positive effect on profitability ($B = 9.504$; $p = 0.000$), H1 accepted; (2) inventory turnover has no significant effect on profitability ($p = 0.153$), H2 rejected; (3) working capital has a significant positive effect on operational cost efficiency at the one-tailed level (one-tailed $p = 0.040$), H3 accepted; (4) inventory turnover has no significant effect on operational cost efficiency ($p = 0.687$), H4 rejected; (5) operational cost efficiency has a significant effect on profitability in a negative direction ($B = -0.834$; $p = 0.000$) — formally rejected, but the strongest finding confirming operational cost efficiency as the dominant determinant of profitability; and (6–7) operational cost efficiency does not mediate the effect of working capital or inventory turnover on profitability (H6 and H7 rejected).

Theoretically, this study reinforces and extends the application of the Resource-Based View (RBV) to the advertising and creative media services industry, showing that working capital and operational cost efficiency are two independent pathways affecting profitability rather than a causally linked, mediated pathway. A structural model that explains 97.7% of the variance in profitability ($R^2 = 0.977$) confirms the theoretical relevance of the selected variables. Practically, this study reveals a growth paradox at PT. Pixel Detail Indonesia, in which rising revenue is not followed by rising net profit due to uncontrolled operational costs, and provides empirical evidence that controlling operational costs — rather than revenue growth alone — is the key to sustainable profitability.

Based on these findings, several strategic recommendations are offered. For the management of PT. Pixel Detail Indonesia: (1) conduct a quarterly operational cost audit with a target BOPO ratio below 50% within the next six months; (2) accelerate receivables collection to a maximum of 30 days after contract completion and implement a 30–50% down-payment policy for large-scale projects; (3) adopt a just-in-time (JIT) policy in procuring videotron components to reduce inventory value by 20–30% within the first year; and (4) implement a budgeting system and balanced scorecard that makes cost efficiency a key performance indicator (KPI). For future researchers: (1) extend the observation period to 10–15 years or use monthly data, and conduct comparative studies across similar companies (at least 30–50 firms) to improve generalizability; (2) add control variables such as sales growth, capital structure, firm size, and receivables turnover, given the still-low R^2 of Model 1 (0.132); (3) use a mixed-method approach with in-depth interviews with financial and operational managers; and (4) use the bootstrap method (PROCESS Macro) for more accurate mediation testing, and re-test the model by positioning operational cost efficiency as a moderating variable. For the Ministry of Tourism and Creative Economy and advertising industry associations, incentives or subsidies should be tied to the achievement of operational cost efficiency targets (e.g., a BOPO ratio below 60%) rather than revenue growth alone, in order to prevent the growth paradox from recurring across the national creative industry.

Statement of Use of Generative AI

During the preparation of this work, the authors used artificial intelligence (AI) assistance to help improve the clarity and readability of the text. The authors have reviewed and edited the resulting output and take full responsibility for the content of this publication. Grammarly was used to check grammar, refine writing style, and improve clarity in scientific writing. All interpretations, analyses, and conclusions presented in this study are the sole responsibility of the author.

References

- Aisyah, H. ... Elizamiharti, E. (2022). Resource-based view: Strategi UMKM di Sumatera Barat untuk mencapai keunggulan kompetitif. *JMD: Jurnal Riset Manajemen & Bisnis Dewantara*, 5(2), 109–120. <https://doi.org/10.26533/jmd.v5i2.1029>
- Akmalia, A., & Pambudi, K. A. (2020). Pengaruh perputaran kas, perputaran persediaan, perputaran piutang, dan perputaran aset terhadap kinerja keuangan perusahaan. *OPTIMAL: Jurnal Ekonomi Dan Kewirausahaan*, 17(1), 1–22.
- Alhidayatullah, & Antony. (2021). Efektivitas dan efisiensi modal kerja dalam mempengaruhi perolehan return on asset pada perusahaan semen yang terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, 5(1), 1–16.
- Alimah, A., & Sihono, A. (2024). Pengaruh perputaran kas, perputaran total aset, ukuran perusahaan dan likuiditas terhadap profitabilitas. *Jurnal Ekonomi Dan Bisnis*, 12(1), 1–10.
- Aslamiyah, F. ... Sanjaya, V. F. (2024). Pendekatan resource-based view (RBV) dalam manajemen bisnis: Strategi untuk keunggulan kompetitif yang berkelanjutan. *Al-A'Mal: Jurnal Manajemen Bisnis Syariah*, 1(2), 176–183.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Bich, N. ... Dang, V. T. (2025). The mechanism of sustainability orientation towards SME innovation and performance: The role of organizational capabilities and co-innovation. *Knowledge and Process Management*. <https://doi.org/10.1002/kpm.70007>
- Civelek, M. (2024). The importance of resource-based view related abilities and financial performance of SMEs for their sustainable practices. *Mehmet Akif Ersoy Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*. <https://doi.org/10.30798/makuiibf.1510554>
- Dzakiroh, A. ... Sriyanti, E. (2023). Pengaruh perputaran modal kerja dan perputaran persediaan terhadap profitabilitas pada perusahaan plastik dan kemasan periode 2018-2021 yang terdaftar di Bursa Efek Indonesia (BEI). *Jurnal Publikasi Sistem Informasi Dan Manajemen Bisnis (JUPSIM)*, 2(1), 92–101. <https://doi.org/10.55606/jupsim.v2i1.796>
- Ferreira, J. J. ... Ferreira, F. A. (2022). What makes organizations unique? Looking inside the box. *Journal of Business Research*, 139, 664–674. <https://doi.org/10.1016/j.jbusres.2021.10.017>
- Ghozali, I. (2021). *Aplikasi analisis multivariat dengan program IBM SPSS 26* (Edisi 10). Badan Penerbit Universitas Diponegoro.
- Hair, J. F. ... Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- Hamzah, A. (2025). The role of internal capabilities in driving the financial sustainability of SMEs: A resource-based view perspective. *Jurnal Ilmu Keuangan Dan Perbankan (JIKA)*, 14(2), 1–16.
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (Third edit). The Guilford Press.
- Kasmir. (2019). *Analisis laporan keuangan* (12th ed.). Raja Grafindo Persada.
- Lestari, D. P., & Santoso, A. (2023). Peran Efisiensi Operasional dalam Memediasi Pengaruh Modal Kerja Terhadap Profitabilitas Perusahaan Manufaktur dan Jasa. *Jurnal Akuntansi Dan Keuangan Indonesia (JAKI)*, 20(2),

- 145–162. <https://doi.org/10.21002/jaki.2023.08>
- Mage, A. A. P. B. ... Jumarding, A. (2025). Efektivitas efisiensi biaya operasional terhadap profitabilitas perusahaan pengolahan rumput laut. *Jurnal Ekonomi Dan Bisnis*, 12(1), 336–346.
- Mahmudi. (2019). *Buku analisis laporan keuangan pemerintah daerah*. STIM YKPN.
- Moussa, A. A. (2020). The Determinants of Working Capital Management and Its Impact on Profitability: Evidence from Egypt. *Journal of African Business*, 21(3), 434–451. <https://doi.org/10.1080/15228916.2019.1643303>
- Mustika, S. N. ... Djuwarsa, T. (2023). Analisis pengaruh penerapan green banking dan efisiensi biaya operasional terhadap profitabilitas bank umum syariah di Indonesia. *Journal of Applied Islamic Economics and Finance*, 3(2), 436–443.
- Naseem, T. ... Ahmad, I. (2021). Working Capital Management and Corporate Profitability: The Mediating Role of Operational Efficiency. *Frontiers in Psychology*, 12, 715486. <https://doi.org/10.3389/fpsyg.2021.715486>
- Prasetyo, B., & Hidayat, R. (2024). Resource-Based View (RBV) dalam Analisis Efisiensi Modal Kerja terhadap Kinerja Keuangan Sektor Kreatif. *Jurnal Manajemen Teori Dan Terapan*, 17(1), 45–59. <https://doi.org/10.20473/jmtt.v17i1.51203>
- Prastowo, A., & Ardiansyah, M. (2023). Analisis Jalur Efisiensi Biaya Operasional sebagai Mediasi Hubungan Manajemen Modal Kerja Terhadap Profitabilitas Perusahaan Jasa. *Jurnal Akuntansi Dan Keuangan Indonesia*, 20(1), 45–62. <https://doi.org/10.21002/jaki.2023.03>
- Putri, D. A., & Ritonga, F. (2024). Pengaruh perputaran modal kerja dan perputaran persediaan terhadap profitabilitas. *Jurnal Rimba: Riset Ilmu Manajemen Bisnis Dan Akuntansi*, 2(4), 1–14.
- Sebastian, N., & Jusuf, A. A. (2024). Pengaruh perputaran modal kerja, persediaan, dan total aset terhadap profitabilitas pada perusahaan makanan dan minuman di BEI (2017–2022). *Prosiding SNITER VIII 2024, E04*, 1–10.
- Setiawan, M. R. ... Nugraha, N. M. (2021). Pengaruh struktur modal, perputaran modal kerja, dan ukuran perusahaan terhadap nilai perusahaan. *Owner: Riset & Jurnal Akuntansi*, 5(1), 208–218.
- Siahaan, H. P., & Ginting, R. (2022). The Effect of Inventory Turnover and Working Capital on Profitability in Creative Industry Sector. *Journal of Applied Accounting and Taxation*, 7(2), 158–167. <https://doi.org/10.30871/jaat.v7i2.4211>
- Viyanis, D. S. ... Yulaeli, T. (2023). Faktor-faktor yang mempengaruhi profitabilitas perusahaan: Perputaran modal kerja, perputaran kas, perputaran persediaan, perputaran aset tetap dan perputaran piutang. *Jurnal Riset Ekonomi Dan Akuntansi (JREA)*, 1(3), 124–143.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. <https://doi.org/10.1002/smj.4250050207>
- Widianto, A. ... Rifai, D. F. (2024). Pengaruh perputaran modal kerja dan perputaran persediaan terhadap profitabilitas. *Jurnal Bina Bangsa Ekonomika*, 17(1), 950–961. <https://doi.org/10.46306/jbbe.v17i1.538>
- Wikantha, N. P. ... Ekayani, N. N. S. (2023). Pengaruh perputaran kas, perputaran piutang, perputaran persediaan, perputaran modal kerja dan likuiditas terhadap profitabilitas. *Jurnal Riset Akuntansi Warmadewa*, 4(2), 37–42.
- Zimon, G. ... Siyanbola, T. T. (2021). The Impact of Working Capital Management Ltd on Corporate Profitability: Evidence from Listed Companies in Poland. *Journal of Risk and Financial Management*, 14(4), 169.

Corresponding author

Hamsah Halim can be contacted at: ancaftv@gmail.com

