

INTERNAL CONTROL ANALYSIS OF MOTORCYCLE AFTER-SALES SERVICE TRANSACTION RECORDING: A CASE STUDY OF PT ALFA SCORPII BILAL MEDAN

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Abstract:

Motorcycle after-sales service stations represent high-volume retail environments where operational velocity and spare parts inventory turnover intersect directly with financial accounting accuracy. This empirical case study critically analyzes the design, implementation, and operational efficacy of internal control systems governing motorcycle maintenance transaction recording at PT Alfa Scorpii Bilal—an authorized primary Yamaha sales, service, and spare parts (3S) dealership in Medan, North Sumatra. Employing a qualitative descriptive field study design, primary empirical evidence was gathered through direct participant observation, comprehensive documentary review of service accounting artifacts (Work Orders [SPK], manual Service Invoices [Faktur Service], physical inventory requisition slips, and cash receipts), and in-depth semi-structured interviews with key operational personnel, comprising the Workshop Head (Kepala Bengkel), Service Administrator (Admin Service), Workshop Mechanic, and Dealership Cashier. Data evaluation was structured around the COSO Internal Control-Integrated Framework (control environment, risk assessment, control activities, information and communication, and monitoring) analyzed through the Miles and Huberman interactive qualitative model (data reduction, data display, and conclusion verification). Research findings demonstrate that while fundamental structural controls are established—such as formal organizational segregation of operational roles, basic computerized point-of-sale logging, and supervisory presence—critical internal control deficiencies persist in day-to-day operations. Notably, transaction recording remains heavily dependent on semi-manual paper service invoices that lack automated validation mechanisms. During peak operating hours (processing 600 to 1,200 motorcycle services monthly), high administrative workloads induce human error, resulting in mechanical input mistakes, transactional delays, and communication disconnects between mechanics and administrative personnel. Consequently, tangible discrepancies

emerge: spare parts installed on customer motorcycles differ from items invoiced, official retail catalog price lists diverge from invoiced amounts (e.g., clutch plates priced at IDR 125,000 billed at IDR 100,000), and unbilled spare parts cause inventory shrinkage. These systemic recording errors undermine financial reporting reliability by distorting service revenue, miscalculating Cost of Goods Sold (COGS), generating cash register variances, and creating book-to-physical inventory gaps. In conclusion, internal controls at PT Alfa Scorpii Bilal operate functionally but sub-optimally. To ensure financial data integrity and mitigate fraud risks, the dealership must implement an end-to-end Enterprise Resource Planning (ERP) database with mandatory double-check validation protocols, barcode scanning for spare parts requisition, daily multi-tiered cash-inventory reconciliations, and structured supervisory monitoring.

1. INTRODUCTION

The automotive two-wheeler industry in Indonesia represents one of the most robust, dynamically expanding manufacturing and retail sectors across Southeast Asia. Driven by urban population density, public transit infrastructure deficits, and high consumer utility, motorcycles serve as the indispensable primary mode of daily personal transportation across archipelagic metropolitan centers. In urban centers characterized by dense traffic conditions, such as Medan City in North Sumatra, two-wheelers provide unmatched economic viability, maneuverability, and cost efficiency. Consequently, continuous expansion in vehicle ownership has catalyzed a parallel surge in post-purchase demand for authorized automotive maintenance, periodic mechanical servicing, warranty fulfillment, and genuine replacement parts distribution.

In the commercial automotive retail ecosystem, authorized brand dealers operating under the integrated Sales, Service, and Spare Parts (3S) dealership framework rely heavily on after-sales service operations to sustain ongoing corporate viability. While new vehicle sales generate significant top-line gross revenues, after-sales workshops deliver recurring, high-margin cash inflows through labor service billings and genuine spare parts retailing. Maintaining high customer satisfaction and brand loyalty requires authorized service stations to execute prompt, high-quality mechanical repairs. However, behind the physical repair floor lies a complex web of daily financial transactions: service order registrations, technical diagnostic evaluations, physical spare parts requisitions from warehouse stock, dynamic mechanic job time tracking, customer invoice generation, and multi-channel cash or electronic payment collection.

In accounting and corporate governance theory, the integrity and financial health of service-oriented enterprises depend fundamentally on the rigor of their Internal Control Systems (COSO, 2013; Mulyadi, 2016). Internal control is not merely a defensive administrative checklist; it is an integrated corporate process designed to ensure that

transactional data are recorded accurately, completely, and timely, thereby safeguarding organizational assets against theft or misappropriation and producing reliable financial statements (Hery, 2017). In workshop environments handling dozens of customer vehicles daily, internal control mechanisms—such as strict segregation of duties between operational mechanics, billing clerks, and cashiers; sequential document pre-numbering; and supervisory reconciliations—are paramount to prevent revenue leakage, inventory distortion, and financial reporting misstatements (Dasuki & Yudawati, 2022; Sumekar et al., 2025).

PT Alfa Scorpil is an authorized main dealer for Yamaha motorcycles operating across northern Sumatra, overseeing an extensive network of 3S dealerships. PT Alfa Scorpil Bilal Branch (situated on Jl. Bilal Ujung No. 96, Medan) represents a strategic service hub serving commercial corridors and dense residential neighborhoods. Operating under high operational velocity, the Bilal workshop processes hundreds of customer motorcycles each month across light periodic maintenance (service ringan), comprehensive engine overhauls (service berat), and warranty service coupon maintenance (Kartu Service Gratis / KSG). An empirical overview of motorcycle service volume processed at PT Alfa Scorpil Bilal throughout the 2025 operating year is presented in Table 1.

Table 1. Monthly Motorcycle Service Volume Breakdown at PT Alfa Scorpil Bilal (Operating Year 2025)

Operating Month (2025)	Light Maintenance (Service Ringan)	Heavy Repairs (Service Berat)	Warranty Service (Service KSG)	Total Units Serviced	Operational Workload Category
January	456 units	198 units	246 units	900 units	Moderate Flow
February	400 units	250 units	338 units	988 units	Moderate Flow
March	750 units	300 units	150 units	1,200 units	Peak Operating Month
April	250 units	400 units	350 units	1,000 units	High Volume
May	200 units	155 units	245 units	600 units	Trough / Low Volume
June	250 units	315 units	400 units	965 units	Moderate Flow
July	350 units	250 units	400 units	1,000 units	High Volume
August	256 units	250 units	259 units	765 units	Moderate Flow

September	811 units	250 units	250 units	1,311 units	All-Time Peak
October	300 units	288 units	300 units	888 units	Moderate Flow
November	385 units	300 units	313 units	998 units	High Volume
December	400 units	200 units	500 units	1,100 units	Year-End Surge
Annual Aggregate	4,808 units	3,156 units	3,771 units	11,735 units	Heavy Annual Workload

As compiled in Table 1, PT Alfa Scorpii Bilal processed an aggregate of 11,735 motorcycle service transactions throughout 2025, averaging nearly 1,000 units per month, with major volume surges occurring in March (1,200 units), September (1,311 units), and December (1,100 units). Despite this robust operational output, preliminary field investigations revealed systemic accounting vulnerabilities in how transactions are administered. The workshop's transaction recording framework operates in a semi-manual structure: mechanics verbally report parts replacements or jot them on loose Work Orders (Surat Perintah Kerja / SPK), which are subsequently hand-keyed by a single Service Administrator into manual billing invoices (Faktur Service).

During operational rush hours, high vehicle turnaround times lead to administrative bottlenecks. Field audits uncovered frequent pricing and inventory discrepancies: clerical input errors in service fees, delays in billing finalization, mismatch between installed parts and invoiced items (e.g., roller sets of different product part codes), unauthorized pricing discounts diverging from official Yamaha price catalogs, and unrecorded parts withdrawals. These recording inaccuracies directly compromise financial reporting integrity by distorting workshop revenues, miscalculating Cost of Goods Sold (COGS), producing daily cash register imbalances, and causing significant book-to-physical inventory variances. While prior empirical studies have evaluated internal controls in automotive workshops (Rahmawati, 2021; Siregar, 2022; Herdian, 2020), few have provided a comprehensive qualitative accounting analysis dissecting the specific points of failure between physical floor mechanics, administrative invoicing, and financial statement accuracy. Therefore, this study conducts an in-depth qualitative evaluation of the internal control system governing motorcycle service transaction recording at PT Alfa Scorpii Bilal.

2. RESEARCH METHOD

2.1 Research Design and Site Selection

This study utilized a qualitative descriptive case study methodology (Sugiyono, 2019; Sujarweni, 2019) to examine real-world internal control phenomena within their natural

organizational setting. The research site was PT Alfa Scorpii Bilal, located at Jl. Bilal Ujung No. 96, Medan, North Sumatra. The research was executed over an eight-month period spanning October 2025 to May 2026, comprising preliminary reconnaissance, formal field observation, key-informant interviews, documentary audit, and triangulation verification.

Table 2. Key Research Informants and Functional Roles

Informant Role	Organizational Position	Primary Responsibilities	Operational	Subject Investigated	Matter
Informant 1 (KB)	Workshop Head (Kepala Bengkel / Service Head)	Supervises technical operations, mechanics' workflows, service quality control, and periodic inventory audits		Control environment, supervisory monitoring, risk assessment, and escalation of operational variances	
Informant 2 (AS)	Service Administrator (Admin Service Counter)	Handles customer intake, creates Work Orders (SPK), keys billing data, prices parts, and compiles daily sales summaries		Control activities, clerical input workflows, billing software navigation, parts catalog matching, and backlog causes	
Informant 3 (MK)	Senior Workshop Mechanic	Executes vehicle inspections, performs mechanical repairs, replaces parts, and communicates parts usage to billing		Floor-level execution, communication of extra parts used, mechanical diagnostics, and parts retrieval protocols	
Informant 4 (KS)	Dealership Cashier	Collects customer payments (cash and digital), issues official receipts, matches cash drawers with billings		Cash segregation, payment matching against invoices, daily cash reconciliation, and detection of billing errors	

2.2 Data Collection and Triangulation Strategy

Data were gathered using three complementary qualitative techniques: (1) Direct Participant Observation of the entire service lifecycle—from vehicle reception, mechanical servicing, and parts retrieval to invoice creation and cash collection; (2) In-Depth Semi-Structured Interviews with four key informants (Table 2); and (3) Documentary Audit of accounting artifacts, including official Yamaha Faktur Service invoices, manual Work Orders (SPK), spare parts price catalogs, warehouse stock cards, and daily cash log sheets. Data trustworthiness was established through source triangulation (cross-verifying accounts across administrative, mechanical, and supervisory tiers), technique triangulation (cross-checking observational notes against interview transcripts and physical documents), and member checks with the Workshop Head.

2.3 Qualitative Data Analysis Model

Data were analyzed using the interactive qualitative analysis model developed by Miles, Huberman, & Saldaña (2014), operating through three concurrent flows: (1) Data Reduction—editing, segmenting, and coding field notes and interview transcripts into thematic categories aligned with COSO components; (2) Data Display—organizing reduced data into descriptive matrices, operational flowcharts, and comparative tables; and (3) Conclusion Drawing and Verification—synthesizing empirical findings, testing emerging propositions against theoretical frameworks, and verifying audit trails.

3. DISCUSSION

3.1 Human Factors and Administrative Capacity in Automotive Retail

The empirical findings highlight the acute tension between operational turnaround velocity and accounting documentation accuracy in high-throughput automotive dealerships. In retail service environments processing 40 to 50 motorcycles per day, customer satisfaction depends heavily on minimal wait times. Under pressure to discharge vehicles quickly, personnel prioritize mechanical throughput over clerical precision. This aligns with behavioral findings in organizational management: when single administrative operators face cognitive overload, error rates in multi-digit part codes and numerical pricing rise exponentially.

This dynamic confirms conclusions by Rahmawati (2021) and Lestari (2023), who observed that small-to-medium automotive service stations frequently experience internal control breakdowns due to excessive reliance on manual administrative handoffs. Segregating cash collection from invoice creation—while vital—is insufficient if the upstream invoice generation process itself is prone to unverified clerical errors.

3.2 Systemic Consequences of Manual Invoicing vs. Barcode Integration

The documented discrepancies between official parts catalog prices (e.g., IDR 125,000) and hand-keyed invoice amounts (e.g., IDR 100,000), as well as part code substitutions, illustrate the inherent failure modes of disconnected inventory systems. When a workshop allows manual text entry or price overrides without automated validation against a centralized Master Price List, clerical errors become inevitable. Furthermore, manual systems create moral hazard risks, opening avenues for intentional price manipulation or unrecorded parts theft.

In contrast, modern dealership management systems (DMS) enforce closed-loop inventory governance: spare parts storage is physically segregated, and components can only be dispensed when the storekeeper scans the part's barcode directly against an active, digitally approved Work Order (SPK). Integrating barcode scanning eliminates manual part code errors, synchronizes perpetual inventory ledgers in real time, and ensures that every dispensed component is billed automatically to the customer invoice at authorized catalog prices (Herdian, 2020; Hutabarat, 2022).

3.3 Enhancing Accounting Integrity and Governance

The empirical evidence underscores that internal control is an indispensable prerequisite for faithful accounting representation. Inaccurate workshop records cascade directly into management's financial statements: distorted gross margins deceive leadership regarding true departmental profitability, while inventory discrepancies trigger painful year-end write-downs. By implementing structured daily reconciliations—where the Workshop Head compares daily dispatched parts slips against closed invoices and matched cash receipts—the dealership can identify recording variances immediately, transforming internal control from a passive post-mortem audit into a proactive operational governance system (Sumekar et al., 2025).

4. CONCLUSION

Based on the comprehensive qualitative investigation of internal control systems governing motorcycle service transaction recording at PT Alfa Scorpii Bilal, the study concludes:

1. Operational Status: The internal control system operates functionally in maintaining formal segregation of duties between operational mechanics, administrative billing, and cash collection, utilizing pre-numbered service invoices and supervisory oversight under standard Yamaha 3S guidelines.

2. Systemic Deficiencies: Significant control gaps exist in control activities and information flows. Transaction recording remains vulnerable to human data-entry errors, unrecorded parts usage, catalog price discrepancies, part code mismatches, and delayed billing, particularly during peak volume periods (processing over 1,000 units monthly).

3. Accounting Impacts: These clerical and procedural errors distort the faithful representation of financial statements, misstating service revenues, Cost of Goods Sold (COGS), daily cash register balances, and perpetual inventory sub-ledgers.

4. Governance Constraints: Monitoring activities operate reactively on monthly cycles rather than through structured daily multi-tiered reconciliations, preventing immediate detection and correction of operational variances.

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