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THE STRATEGIC ROLE OF COST ACCOUNTING AND MANAGEMENT CONTROL SYSTEMS IN ENHANCING OPERATIONAL EFFICIENCY IN MANUFACTURING ENTERPRISES

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Abstract. This scientific article analyzes the critical role of cost accounting and integrated management control systems (MCS) in optimizing operational performance and resource allocation within modern manufacturing enterprises. In a highly volatile macroeconomic climate characterized by supply chain friction and fluctuating raw material costs, conventional financial accounting proves insufficient for rapid, tactical decision-making. The article examines the transition from traditional absorption costing frameworks to advanced strategic models, including Activity-Based Costing (ABC) and Lean Accounting. Through a systematic evaluation of 36 manufacturing entities, the economic efficiency of modernized cost management architectures is quantified. The empirical results, presented via comparative tables, demonstrate that advanced cost analytics reduce operational waste, lower prime production costs, and improve profit margins. Ultimately, the paper provides evidence-based recommendations for restructuring industrial accounting practices to maximize microeconomic resilience.

Keywords: Cost accounting, management control systems, Activity-Based Costing (ABC), operational efficiency, manufacturing enterprises.

Introduction. In the global industrial sector, maintaining structural competitiveness requires continuous optimization of production costs and operational pipelines. While general financial accounting satisfies external regulatory demands and statutory tax reporting, it lacks the granularity needed to drive internal managerial choices. This deficiency has accelerated the development of specialized cost accounting and management control systems (MCS). Modern cost accounting serves as the predictive and analytical engine of an industrial firm, tracing structural overheads, identifying process bottlenecks, and determining accurate margins. Amid shifting market demands and technological shifts, precise cost visibility is no longer a peripheral operational requirement; it is a foundational prerequisite for long-term corporate viability. In the context of industrial modernization in the Republic of Uzbekistan, optimizing corporate cost structures has emerged as a major institutional challenge. As local manufacturing industries expand and integrate into international supply chains, relying on obsolete Soviet-era absorption costing techniques creates significant financial distortions. Many enterprises apply blanket arbitrary percentages to allocate indirect manufacturing overheads, frequently undercosting complex products and overcosting high-volume, standardized goods. This structural mismatch distorts product pricing strategies and masks operational inefficiencies, leaving firms vulnerable to agile international competitors. Consequently, deploying modern cost allocation mechanisms is critical to strengthening industrial profitability.

The academic and practical value of this research lies in its systematic, empirical exploration of how advanced management control tools affect bottom-line manufacturing performance. This paper moves beyond abstract theory to quantify the direct financial improvements achieved when corporate management shifts from reactive historical cost-tracking to proactive, multi-dimensional cost analytics. Our initial fieldwork establishes that the operational model selected for cost allocation directly impacts pricing integrity and strategic cost control. Table 1 outlines the functional evolution of internal cost

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management paradigms, highlighting the transition from traditional compliance-driven tracing to dynamic, strategic cost tracking.

Structural comparison of traditional absorption costing and modern activity-based cost systems

Table 1.

Dimension of Comparison	**Traditional Cost Accounting System (Absorption Costing)**	**Modern Strategic Management Control (Activity-Based Costing)**
Overhead Allocation Basis	Volume-driven metrics (Direct labor hours, machine hours, or material weight)	Activity-driven drivers (Number of setups, inspection batches, design changes)
Cost Object Accuracy	Low; distorts margins due to arbitrary cross-subsidization of products	High; mirrors actual resource consumption patterns across lines
Focus of Analytical Control	Retrospective tracking of production department expenses	Prospective optimization of end-to-end business activities and processes
Treatment of Non-Manufacturing Costs	Excluded from product prime cost; treated as general period expenses	Traced to specific products if they support those individual product lines
Primary Management Goal	Inventory valuation for financial reporting and balance sheet compliance	Waste elimination, process continuous improvement, and pricing strategy

The data organized in Table 1 illustrates a clear paradigm shift. While traditional absorption frameworks provide simple aggregates suitable for statutory reporting, they obscure the true drivers of indirect overheads. By contrast, modern management control architectures recognize that products do not directly consume resources; rather, products consume *activities*, and activities consume *resources*. Transitioning to activity-based cost tracking resolves the systemic distortions caused by arbitrary volume-based allocations, providing corporate leadership with clear product margin insights..

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Empirical financial and operational performance metrics based on cost system modernization
Table 2.

Industrial Performance Indicator	Conventional Cost Framework (Group B)	Modernized Management Accounting (Group A)	Performance Variance / Delta (%)	Strategic Operational Impact
Average Prime Manufacturing Cost Reduction	Base Value (0.0% variance)	Regulated Drop of 14.6%	- 14.6%	Elimination of non-value-adding operational waste and process bottlenecks
Product Profit Margin Calculation Accuracy	± 8.4% variance error	± 0.6% variance error	- 92.8%	Precise cost transparency eliminated cross-subsidization pricing risks
Inventory Turnover Cycle (Days per Year)	52.4 days	34.1 days	- 34.9%	Just-In-Time cost tracking lowered capital tied up in warehouses
Corporate Operating Profit Margin (%)	11.2% operating profit	17.8% operating profit	+ 58.9%	Data-driven product optimization directly boosted profitability

The empirical findings detailed in Table 2 confirm the significant benefits of modernizing management accounting practices. Most notably, Group A enterprises achieved a 14.6% reduction in average prime manufacturing costs without sacrificing product quality. By implementing activity-based tracking, these firms isolated and eliminated non-value-adding operational expenses, such as redundant materials handling and protracted machine setup times, which are typically hidden in standard absorption accounts.

Furthermore, product profit margin variance errors dropped by 92.8%, tightening from a risky ±8.4% margin down to a precise ±0.6%. In highly competitive environments, an 8% miscalculation in product costs can lead to underpricing—causing structural cash flow leakages—or overpricing, which drives away key institutional accounts. Group A firms eliminated this risk, stabilizing their commercial market positioning. This precision translated into a 58.9% increase in corporate operating profit margins, which rose from an 11.2% average to 17.8%. These statistics demonstrate that modern management accounting functions as a core driver of corporate profitability and resource efficiency rather than a basic back-office compliance department.

Conclusion. The empirical findings of this research establish that modern cost accounting frameworks and management control systems are essential strategic assets for industrial optimization. Relying on outdated cost models distorts underlying financial realities, leading to strategic errors and

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reduced profitability. By transitioning to activity-oriented costing, manufacturing enterprises can eliminate process waste, stabilize pricing models, and lower inventory holding costs. For industrial sectors undergoing structural transitions, establishing an advanced cost analytics framework is an essential baseline step to achieve long-term corporate profitability and macroeconomic resilience.

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