ACC-FPX5610 Assessment 3

Variance and Management Control Analysis

Flexible-Budget Performance Evaluation at Meridian Medical Devices

Author	Flexpath assignment help
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Educational Sample Notice
This original fictional sample demonstrates a complete analytical approach. Learners should verify their current course instructions, use their own research, and adapt the facts and calculations before submission.

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Executive Summary

Meridian Medical Devices planned to sell and produce 10,000 portable cardiac monitors during the quarter. Actual output and sales were 9,200 units. A direct comparison with the static budget would show a large unfavorable result, but it would mix the effect of lower volume with the effect of operating performance. This report therefore develops a flexible budget at 9,200 units and separates the sales-volume effect from price, usage, rate, efficiency, and overhead variances.

Actual operating income was $30,970, compared with $120,000 in the static budget and $86,400 in the flexible budget. The total unfavorable static-budget variance was $89,030. Of that amount, $33,600 resulted from selling 800 fewer units, while $55,430 resulted from unfavorable operating performance at the actual activity level. A favorable $18,400 sales-price variance partly offset $73,830 of unfavorable manufacturing-cost variances.

The largest controllable issues were higher material prices, excess material use, overtime and labor inefficiency, variable-overhead pressure, and fixed-overhead overspending. Management should not respond by simply demanding cost cuts. The recommended control system assigns each variance to the manager who can influence its cause, requires root-cause evidence, tracks quality and delivery measures beside financial results, and escalates material exceptions through a COSO-aligned review process. The 90-day action plan is expected to recover at least $45,000 per quarter without weakening product quality or regulatory compliance.

Introduction and Decision Context

Variance analysis compares actual performance with a planned or standard amount and then investigates the reason for the difference. It is useful only when the comparison is fair. A static budget prepared for 10,000 units is not a suitable cost benchmark when actual volume is 9,200 units because variable costs should change with activity. A flexible budget restates revenue and variable costs at actual volume and keeps fixed costs unchanged, producing a more meaningful evaluation of operating performance (Franklin et al., 2019).

This analysis uses a fictional single-product manufacturer so that the calculations remain transparent. Meridian makes portable cardiac monitors. The standards represent attainable operating expectations rather than perfect conditions. The purpose is to determine what happened, why it happened, which managers can reasonably influence the causes, and what controls should be changed.

Budget and Actual Data

Item	Static Budget Standard	Actual Result
Units sold and produced	10,000 units	9,200 units
Selling price	$125.00 per unit	$127.00 per unit
Direct materials	4.0 kg at $8.00 per kg	38,000 kg at $8.40 per kg
Direct labor	1.5 hours at $24.00 per hour	14,260 hours at $25.00 per hour
Variable overhead	$10.00 per direct labor hour	$149,730 total
Fixed manufacturing overhead	$300,000 per quarter	$312,000 total

Note. All units produced were sold. Selling and administrative costs are excluded so the analysis can focus on manufacturing control.

Static Budget, Flexible Budget, and Actual Results

Item	Static Budget 10,000 units	Flexible Budget 9,200 units	Actual 9,200 units	Actual vs. Flexible
Sales revenue	$1,250,000	$1,150,000	$1,168,400	$18,400 F
Direct materials	320,000	294,400	319,200	24,800 U
Direct labor	360,000	331,200	356,500	25,300 U
Variable overhead	150,000	138,000	149,730	11,730 U
Fixed manufacturing overhead	300,000	300,000	312,000	12,000 U
Operating income	**$120,000**	**$86,400**	**$30,970**	**$55,430 U**

Note. F = favorable; U = unfavorable. Flexible-budget variable costs equal the standard variable cost per unit multiplied by 9,200 actual units.

The flexible budget isolates operating execution. Meridian earned $18,400 more revenue than expected at the actual sales volume because the average selling price was $2 higher. However, manufacturing costs exceeded the flexible budget by $73,830. The net operating performance variance was therefore $55,430 unfavorable.

Detailed Variance Calculations

Sales Price and Sales Volume

Variance	Calculation	Result
Sales price variance	9,200 x ($127 - $125)	$18,400 F
Revenue volume variance	(9,200 - 10,000) x $125	$100,000 U
Contribution-margin volume variance	(9,200 - 10,000) x $42	$33,600 U

Note. The standard contribution margin is $42 per unit: $125 selling price less $83 variable manufacturing cost.

The price variance is favorable, but the volume loss is strategically important. Management should determine whether the lower volume arose from market demand, delayed shipments, capacity constraints, or quality concerns. The volume variance should not be assigned automatically to the sales team until the cause is verified.

Direct Materials

Variance	Calculation	Result
Price variance	38,000 kg x ($8.40 - $8.00)	$15,200 U
Quantity variance	$8.00 x (38,000 kg - 36,800 kg)	$9,600 U
Total materials variance	$319,200 - $294,400	$24,800 U

The purchasing manager can influence supplier price, contract terms, freight, and order timing. Production can influence scrap and rework. The price and quantity variances must therefore be investigated together. A cheaper material can create a favorable price variance but cause an unfavorable usage variance if quality is poor. Here, both variances are unfavorable, which suggests inflation, rushed purchases, supplier quality issues, or weak process control rather than a simple trade-off.

Direct Labor

Variance	Calculation	Result
Rate variance	14,260 hours x ($25.00 - $24.00)	$14,260 U
Efficiency variance	$24.00 x (14,260 - 13,800 hours)	$11,040 U
Total labor variance	$356,500 - $331,200	$25,300 U

The rate variance may reflect overtime, use of senior technicians, temporary labor, or wage changes that were not included in the standard. The efficiency variance indicates 460 excess labor hours. Possible causes include training gaps, machine downtime, rework, poor scheduling, or difficult materials. A higher rate is not automatically wasteful if experienced employees reduce defects; financial data must be interpreted with quality and throughput measures.

Variable and Fixed Overhead

Variance	Calculation	Result
Variable-overhead spending	14,260 hours x ($10.50 - $10.00)	$7,130 U
Variable-overhead efficiency	$10.00 x (14,260 - 13,800 hours)	$4,600 U
Total variable overhead	$149,730 - $138,000	$11,730 U
Fixed-overhead budget	$312,000 - $300,000	$12,000 U
Fixed-overhead volume	$300,000 - (9,200 x $30)	$24,000 U

Note. The $24,000 fixed-overhead volume variance is a capacity measure. It is not added to the $12,000 budget variance when reconciling actual fixed overhead to the flexible budget.

The variable-overhead efficiency variance follows the same excess labor hours that caused the labor-efficiency variance. This supports a common operational cause such as downtime or rework. The fixed-overhead budget variance requires review of maintenance, utilities, supervision, depreciation, and other committed costs. The volume variance shows that lower output left part of normal capacity unused; it is not proof that the plant manager overspent.

Operating-Income Reconciliation

Reconciliation Item	Amount	
Static-budget operating income		$120,000
Sales-volume effect	(33,600) U	
Flexible-budget operating income		$86,400
Sales-price variance	18,400 F	
Materials variance	(24,800) U	
Labor variance	(25,300) U	
Variable-overhead variance	(11,730) U	
Fixed-overhead budget variance	(12,000) U	
Actual operating income		**$30,970**

Reconciliation Item	Amount

Main finding
Lower volume explains $33,600 of the $89,030 static-budget shortfall. Operating execution at the actual volume explains the remaining $55,430. Management should therefore address both demand and cost control rather than treating the entire shortfall as a production failure.

Root-Cause and Management-Control Evaluation

A variance identifies where results differ; it does not prove why. The Association for Financial Professionals describes variance analysis as a method for determining both what differed from plan and why the difference occurred (Association for Financial Professionals, 2026). Meridian should require a documented cause, responsible process owner, corrective action, and expected financial effect for every material exception.

Exception	Primary Owner	Evidence Required	Control Response
Unfavorable material price	Purchasing	Supplier quote history, freight invoices, emergency orders	Bid discipline; approved suppliers; price-index clause
Excess material use	Production and quality	Scrap logs, defect codes, rework records	First-pass-yield target; setup checklist; supplier quality review
Labor rate and efficiency	Operations and HR	Overtime report, skill mix, downtime, training records	Cross-training; staffing plan; preventive maintenance
Variable overhead	Operations and facilities	Energy use, indirect supplies, machine hours	Rate review; energy and consumables controls
Fixed overhead	Controller and plant manager	Maintenance contracts, depreciation, supervision	Purchase-order approval; contract review; monthly forecast
Lost sales volume	Sales and operations	Order backlog, cancellations, delivery performance	Demand forecast; capacity plan; customer recovery actions

Controllability and Responsibility Accounting

Managers should be evaluated mainly on factors they can influence. Purchasing cannot fully control global commodity inflation; production cannot control a late engineering change; sales cannot control shipments delayed by quality holds. The controller should split external effects from internal execution and document shared responsibility where causes cross departments. This prevents unfair performance evaluation and reduces the incentive to manipulate timing or classification.

Balanced Performance Measures

OpenStax warns that managing only to standard-cost variances can encourage manipulation and narrow decisions, so performance should be measured through several outcomes (Franklin et al., 2019). Meridian should pair cost measures with first-pass yield, complaint rate, on-time delivery, downtime, employee safety, and regulatory compliance. A favorable cost result is not acceptable when it is achieved by delaying maintenance or using inferior components.

Ethics, Governance, and Internal Control

The IMA Statement of Ethical Professional Practice requires competence, confidentiality, integrity, and credibility and emphasizes honesty, fairness, objectivity, and responsibility (Institute of Management Accountants, n.d.). The controller must present unfavorable information completely and should not move expenses between periods, alter standards after the fact, or suppress quality data to make a manager appear successful.

COSO organizes internal control around the control environment, risk assessment, control activities, information and communication, and monitoring. Meridian should apply those components to budgeting by approving standards, restricting master-data changes, reconciling source systems to the general ledger, reviewing exception reports, and testing corrective actions (Committee of Sponsoring Organizations of the Treadway Commission, 2013). Under the IIA Three Lines Model, operational managers own the risks and controls, finance and compliance provide monitoring and challenge, and internal audit gives independent assurance (Institute of Internal Auditors, 2020).

Corrective Action and Monitoring Plan

Timing	Owner	Action	Measure
0-15 days	Controller	Validate standards, trace all actual costs to source records, and separate external price effects from internal usage effects.	Reconciled variance pack; zero unexplained differences.
0-30 days	Procurement and quality	Review supplier price, freight, emergency orders, incoming defects, and contract terms.	Material price variance below $0.20/kg; incoming defect rate below 1.5%.
0-45 days	Plant manager	Analyze scrap, rework, downtime, overtime, and line balance by shift.	Material use at or below 4.02 kg/unit; labor at or below 1.52 hours/unit.
30-60 days	Sales and operations planning team	Reconcile demand forecast, order backlog, capacity, and promised delivery dates.	Forecast error below 8%; on-time delivery above 96%.
60-90 days	CFO and internal audit	Confirm that actions are operating and test high-risk controls.	At least $45,000 quarterly recovery; no quality or compliance deterioration.

The monthly variance report should use a threshold of the greater of $5,000 or 3 percent of the flexible-budget amount, while any safety, quality, compliance, or suspected-fraud issue should be investigated regardless of dollar size. Forecasts should be updated after approved corrective actions so that management sees the likely year-end outcome rather than only historical variances.

Conclusion

Meridian missed the static-budget operating-income target by $89,030. A fair analysis shows that $33,600 relates to lower sales volume and $55,430 relates to operating performance at actual volume. The unfavorable manufacturing variances are concentrated in materials, labor, overhead, and fixed-cost control, but none should be assigned to a manager before evidence confirms the cause. A flexible-budget system, balanced measures, ethical reporting, and clearly assigned controls will give management a stronger basis for action. The recommended 90-day plan focuses on restoring margin while protecting product quality, employee safety, and regulatory compliance.

References

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Appendix A: Variance Formula Guide

Variance	Formula
Sales price	Actual quantity x (Actual price - Standard price)
Materials price	Actual quantity x (Actual price - Standard price)
Materials quantity	Standard price x (Actual quantity - Standard quantity allowed)
Labor rate	Actual hours x (Actual rate - Standard rate)
Labor efficiency	Standard rate x (Actual hours - Standard hours allowed)
Variable-overhead spending	Actual hours x (Actual overhead rate - Standard overhead rate)
Variable-overhead efficiency	Standard overhead rate x (Actual hours - Standard hours allowed)
Fixed-overhead budget	Actual fixed overhead - Budgeted fixed overhead
Fixed-overhead volume	Budgeted fixed overhead - Fixed overhead applied to actual output

Appendix B: Assessment Coverage Map

Course-Aligned Requirement	Location in Sample
Develop a fair budget-to-actual comparison.	Static Budget, Flexible Budget, and Actual Results
Calculate and interpret revenue and cost variances.	Detailed Variance Calculations
Explain the effect on operating income.	Operating-Income Reconciliation
Evaluate management controls and responsibility.	Root-Cause and Management-Control Evaluation
Address ethics and governance.	Ethics, Governance, and Internal Control
Provide actionable recommendations and measures.	Corrective Action and Monitoring Plan