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Russell F. Briner

University of Texas at San Antonio

Michael D. Akers

Marquette University, michael.akers@marquette.edu

James W. Truitt

Martin Industries, Inc.

James D. Wilson

Martin Industries, Inc.

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COPING WITH CHANGE AT MARTIN INDUSTRIES

A new controller and vice president at Martin Industries helped change a limited accounting system into a sophisticated management tool.

BY RUSSELL F. BRINER,
MICHAEL D. AKERS,
JAMES W. TRUITT, AND
JAMES D. WILSON

A newly hired controller at Martin Industries, a heating products manufacturer in Florence, Ala, found that the limited accounting system he had inherited in the early 1970s consisted primarily of a trial balance and a product system that produced a bill of material. He recommended the immediate implementation of variable costing and set in motion a global change in the company's accounting system.

This experience illustrates how a specific company in a specific industry coped with change. It involves a number of factors:

- The recognition of the need for change;
- The support of top management for the change;
- The educational program necessary to implement change;
- Evolution of the change; and
- The use of new accounting reports and statements produced by the new system.

Martin Industries sells wood-burning stoves, gas heaters, fabricated fireplaces, dehumidifiers, utility trailers, and a number of other related products. During the



Martin Industries sells fireplaces and other heating products.

time of the oil shortage, Martin Industries experienced an expanding market.

At the same time, in the late 1960s and early 1970s, the top management at Martin Industries began to change. Those who had been there for several years were being replaced by a younger set of executives.

When the new controller recommended variable costing, it was not a flip decision on his part. The importance of variable costing had been impressed on him while he was in college—the absorption-variable costing issue was being widely debated at that time. The controller's subsequent work experience at a firm with a highly sophisticated cost system had convinced him of the value of variable costing.

SUPPORT OF TOP MANAGEMENT

Management and accounting literature both note that the support of top management is necessary for changes in the accounting system to occur. Because accountants are generally staff rather than line people, they often do not have the authority to initiate such change. Selling variable costing to top management has been identified as one of the major problems of implementing the concept.

The new controller was fortunate in that he immediately received the complete support of the president, who had been sold on the variable costing concept at a seminar that he attended.

EDUCATIONAL PROCESS TO IMPLEMENT CHANGE

Almost all cost and managerial accounting textbooks imply that variable costing is a widely used and understood management accounting technique. While most accountants may understand the concept, the practical application of it may be limited. We have had discussions with chief financial officers and controllers, and it appears that in many cases the rest of the management team is unfamiliar with the variable costing concept.

The introduction of variable costing at Martin Industries meant

The importance of variable costing was impressed on the controller at college.

that the personnel using this information would have to understand the technology and concepts. One educational item distributed to management and appropriate factory personnel was a small, in-house-developed book, *Marginal Income Planning for Profit*. The book gave the advantages and disadvantages of the variable costing concept, definitions, examples of variable costing calculations with an illustration of breakeven analysis, ways in which total profit could be increased through the use of variable costing, decisions that could be made with variable costing information, and a decision check list. Then a consulting firm was hired to conduct seminars to educate the personnel on how to implement and use variable costing.

The educational program at Martin Industries began in the early 1970s, but employee training continues today. Recently the three newest members of the Board of Directors, all with strong managerial and financial backgrounds, asked to be educated about the variable costing concept.

The Board members' unfamiliarity with the concept does not appear to be an isolated case. A research study currently being conducted by two of the authors has revealed that business executives may not be as familiar with the variable costing concept as the textbooks indicate. For example, the study found another major firm that recently worked with its external auditors to develop and distribute an educational book on variable costing. It also conducted seminars to implement the concept.

CONTINUING CHANGE

Since the implementation of variable costing, personnel changes as well as changes to

the management accounting system have continued at Martin Industries. The controller was promoted to his current position of vice president-secretary and treasurer in 1977, and a new controller took his place. The latter had been associated with a firm that had a highly sophisticated cost system, which included the use of variable costing.

The controller and vice president have been able to bring about changes in the management accounting system because their professional experiences prior to coming to Martin Industries were similar and they understood the variable costing concept thoroughly. Also, they had the support of the president who, himself, in his previous position as vice president of manufacturing and engineering, had worked closely with the financial department to set up a database and automate the manufacturing systems.

The controller and vice president-treasurer represent a significant portion of a small executive management staff. They are also responsible for conducting part of the executive management meetings and for providing continuous input to and scrutiny of various marketing and manufacturing plans. The active participation of the financial team demonstrates that they are evolving as the "chief business intelligence officers."

Many significant changes have occurred at Martin Industries since the implementation of variable costing. In 1978 the company acquired an IBM System 3 computer to process accounting data. Before, the data was processed either manually or by a service bureau. The management information system has been upgraded over the past 10 years. Martin Industries now has a user-oriented IBM System 38. In addition, all manufacturing, financial, and reporting systems now are automated.

Martin Industries bought software developed for manufacturing firms from IBM and modified it in-house so effectively that IBM has expressed an interest in marketing the modified software.

Employees use a company-wide personal computer system, primarily on a stand-alone basis. The interface with the corporate database through an emulation device is limited.

TYPES OF REPORTS

As the organization has grown and economic conditions have changed, the content and types of reports that are being generated have changed. The reports now being used for executive meetings include the following:

- Comparative Balance Sheet.
- Comparative Income Statement.
- Goal Status.
- Performance Analysis.
- Composite Revenue, Income, and Cost Comparison.
- Cash Flow Analysis.
- Accounts Receivable Aging Analysis.
- On Order Status.
- Capital Expenditures.
- Inventory Comparison at FIFO.
- Customer Analysis.
- Personnel Cost Analysis.

The management accounting system also includes acquisition analysis, automatic product pricing, link chain LIFO calculations, automatic credit approval for sales, automatic variance forecasting based on historical data, return on variable investment calculations, constant inventory obsolescence analysis, and an automated budgeting system. Most of these features are possible because of the way the corporate database is structured.

Although the changes to the management accounting system have been significant, the financial team realizes that to keep the system dynamic, they must be ready to modify it further if necessary.

Future plans for the system include continued enhancement, with the primary emphasis on creating an interface among subsystems to achieve promptness and integrity of information. Many of the basic management accounting techniques currently being used by Martin Industries, such as variable costing for acquisition analysis, have proved effective, and the financial team believes that such techniques will continue to be effective. The team continually evaluates the design and structure of the database so as to improve operational efficiency.

The most significant anticipated change concerns further development of the interface between personal computers and the corporate database. A training program for



A new cost system had to be forged. Above, forging a furnace at Martin Industries.

personnel will take place prior to actual application. Many organizations overlook development of a coordinated plan that includes such training. Although the interface will enhance the effectiveness and efficiency of the day-to-day operations, the primary benefit will occur in budgeting and manufacturing planning.

KEY INTERNAL REPORTS

Since energy costs have stabilized, during the past few years, Martin's sales have levelled off. Partly because of this revenue stabilization, the company has emphasized internal reporting. The ability to cope with the everchanging market had kept Martin Industries in business and progressing during a time when other companies in the industry were being dissolved or taken over.

Two of the most important financial reports the executives of the company receive are the comparative income statement and the performance analysis reports. Members of top management have noted that Martin Industries would have been hard pressed to cope with changes without the availability of these financial reports.

Table 1 shows a comparative income statement for Martin Industries. Note that deducting variable manufacturing costs from sales gives a manufacturing marginal income (or contribution margin). The full absorption variance then follows and is the change in fixed costs in the beginning and ending inventories for the period. Adding or subtracting this variance places the manufacturing costs on a full absorption basis after the remainder of manufacturing fixed costs are deducted. After the nonmanufactur-

**TABLE 1/MARTIN INDUSTRIES, INC. INCOME STATEMENT
FOR THE EIGHT MONTH PERIOD ENDED AUGUST 29, 1987**

	1987	1986
	\$ XXX	\$ XXX
Net Sales		
Variable Manufacturing		
Cost:		
Materials	\$ XXX	\$ XXX
Labor	XXX	XXX
Overhead	XXX	XXX
Total	\$ XXX	\$ XXX
Manufacturing Marginal		
Income	\$ XXX	\$ XXX
Ratio to Sales	(X.X%)	(X.X%)
Full Absorption Variance	\$ XXX	\$ XXX
Fixed Cost—Manufacturing:		
Shipping & Receiving	XXX	XXX
Fixed Factory	XXX	XXX
Fixed Branch/Expense Proration	XXX	XXX
Total	\$ XXX	\$ XXX
Divisional Contribution	\$ XXX	\$ XXX
Ratio to Sales	(X.X%)	(X.X%)
Other Variable Cost	\$ XXX	\$ XXX
Ratio to Sales	(X.X%)	(X.X%)
Other Fixed Cost	XXX	XXX
Ratio to Sales	(X.X%)	(X.X%)
Other Income & Expense	XXX	XXX
Ratio to Sales	(X.X%)	(X.X%)
Total Other Expenses	\$ XXX	\$ XXX
Profit/Loss Before Taxes	\$ XXX	\$ XXX
Ratio to Sales	(X.X%)	(X.X%)
Provision for Taxes	XXX	XXX
Net Profit/Loss After Taxes	\$ XXX	\$ XXX
Ratio to Sales	(X.X%)	(X.X%)

ing fixed costs directly traceable to divisions are deducted, the divisional contribution is determined. The report identifies other variable, fixed, and miscellaneous items to determine the profit or loss before taxes.

A ratio to sales is shown in Table 1 after several of the subtotals. These ratios are similar to percentages of total sales as illustrated in textbooks. The format of the income statement allows executives to view the separation of the variable and fixed costs with the income figures adhering to full absorption costing in the final sense.

Tables 2 and 3 illustrate performance analysis reports. Table 2 simply provides the budget-to-actual differences of the income position on a monthly basis. This report was included to show that Martin Industries executives keep abreast

of the profit situation on a month-to-month basis. Table 3 is a monthly compilation of variances. Actually, this report usually is combined with the budget-to-actual

comparison of Table 2. The variances are shown separately here for explanatory purposes.

The sales variances are shown first on a product basis in Table 3. The report identifies the effect on budgeted profits caused by price, sales mix, and volume effects. The Memo Non-Budget M.I. is an additional variance based on marginal income differences created by the sale of non-budgeted items related directly to sales that directly offset sales. The total sales variances thus are shown after deduction of these items.

Finally, Table 3 shows the production variances. They are standard cost variances shown by plant location. Miscellaneous variances are added to determine total production variances. Then the grand total of all variances completes the analysis. This grand total variance is reconciled to the gross margin difference between budget and actual in Table 2.

RESPONSIBILITY ACCOUNTING

Two different viewpoints concerning the relevance of classical management accounting techniques such as responsibility accounting exist in accounting literature. One viewpoint states that the traditional techniques currently taught and used do not provide relevant information. The other viewpoint states that these techniques still may be appropriate in some cases.

At Martin Industries, for example, the use of responsibility accounting for travel costs has been and continues to be appropriate and useful. In the mid-1980s travel

**TABLE 2/MARTIN INDUSTRIES, INC. PERFORMANCE ANALYSIS
MONTH TO DATE, AUGUST 29, 1987**

	Budget	Actual	Difference
Net Sales	\$ XXX	\$ XXX	\$ XX
Variable Cost of Sales	XXX	XXX	XX
Gross Margin	\$ XXX	\$ XXX	\$ XX*
Other Variable Costs	\$ XXX	\$ XXX	\$ XX
Selling Expense	XXX	XXX	XX
Divisional Contribution	\$ XXX	\$ XXX	\$ XX
Fixed Costs	XXX	XXX	XX
Net Profit/Loss	\$ XXX	\$ XXX	\$ XX

*This amount is the same as the grand total variance in Table 3.

costs had begun to increase at the organization. To make individuals within the firm aware of increased travel costs, management prepared and distributed a travel report, which documents each person in the firm who has traveled, including the president and upper-level management. The report lists these items on an individual basis and for the company in total:

- Number of trips.
- Days traveled.
- Miles traveled.
- Total cost, and
- Average cost per mile.

The distribution of this report has increased employees' awareness of travel costs and balanced accountability in this area. In the most recent fiscal year, miles traveled have increased 37% while the cost of travel has decreased 55%.

The travel report documents each person in the firm who has traveled, including the president.

COPING WITH CHANGE

The management accounting system of Martin Industries has undergone a drastic change in the last 20 years. This change reflects technological

trends in the industry as well as management changes at Martin. The managers of the system have been able to cope with the change by recognizing the need for it, obtaining the support of top management, and educating and training all levels of management.

The vice president-treasurer and the controller believe Martin Industries now has an efficiently functioning, up-to-date management accounting system, which is adaptable as needed. The ability to cope with change has been a significant factor in the progress of Martin Industries over the last two decades.

Russell F. Briner, CPA, is professor and director of the Division of Accounting and Information Systems at The University of Texas at San Antonio. He received his Ph.D. degree in accounting from Oklahoma State University. He is a national director of the NAA.

Michael D. Akers, CPA, CIA, is an assistant professor of accounting at the College of Business Administration, Marquette University. He holds a Ph.D. from the University of Mississippi.

James W. Truitt is vice president-treasurer and secretary of Martin Industries, Inc. He is a graduate of the Executive Management Program of Harvard University.

James D. Wilson is corporate controller at Martin Industries. He has a B.S. degree from the University of North Alabama and has done graduate work at Washington University in St. Louis.

This article was submitted through Northeast Mississippi Chapter.

**TABLE 3/MARTIN INDUSTRIES, INC. PERFORMANCE ANALYSIS
MONTH-TO-DATE, AUGUST 29, 1987**

	Sales Variance to Budget				Memo Non-Budget M.I.	New Total Sales Variance
	Price	Mix	Volume	Total		
Gas	\$ XX	\$ XX	\$ XX	\$ XX	\$ X	\$ XX
King	XX	XX	XX	XX	X	XX
Fireplace	XX	XX	XX	XX	X	XX
Ashley	XX	XX	XX	XX	X	XX
Dehumidifier	XX	XX	XX	XX	X	XX
Utility Trailers	XX	XX	XX	XX	X	XX
Atlanta Gas	XX	XX	XX	XX	X	XX
Atlanta C&W	XX	XX	XX	XX	X	XX
Total	\$ XX	\$ XX	\$ XX	\$ XX	\$ X	\$ XX
Fab. & Repair				XX		XX
Cash Discounts				XX		XX
Prepaid Freight				XX		XX
Other				\$ XX		\$ XX
Total Sales Variance				\$ XX	\$ X	\$ XX
Production Variance						
	Material		Labor	VOL	Total	
Others	\$ XX		\$ XX	\$ XX	\$ XX	
Huntsville	XX		XX	XX	XX	
Sheffield	XX		XX	XX	XX	
Total	\$ XX		\$ XX	\$ XX	\$ XX	
Budget Product Variance						\$ XX
Standard Inventory Value Change						XX
Other (product Mix, LIFO, etc.)						XX
Total Production Variance						\$ XX
Grant Total Variance						\$ XX*

*This amount is the same as the gross margin amount found in the Difference column of Table 2.

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