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The ABC's of SCM
Fundamentals of Supply Chain Management – *Finance*

Green Eyeshades and Balance Sheets

We've elsewhere spoken to the need to couch what we do – and what we hope to do – in supply chain management in the language of the Executive Suite, paying particular attention to the Chief Financial Officer. But, what are the financial ramifications of supply chain performance? Which levers of corporate achievement can we pull? What needles of company performance can we move on the dials?

Two leading thinkers on these topics are FinListics Solutions' Dr. Stephen Timme and the University of North Texas' Dr. Terrance Pohlen. Stephen writes, teaches, and trains extensively in the arena of increasing shareholder value through supply chain management; Terry researches, publishes, and speaks on cost and cost accounting issues in supply chain management.

There is a plethora of techniques available to measure financial performance, and the contributors to it. The least useful are the traditional ones – cost accounting, performance to budget, etc. Shakespeare is often cited for recommending that we should kill the lawyers. We submit that the accountants need to be next in line – certainly the traditional ones, whose specialty seems to be examining the past rather than preparing for the future. An unknown source has suggested that the primary function of the accountant is to arrive after the battle is over in order to bayonet the wounded.

So, this is not about accounting as a function or Accounting as a corporate department, or cost accounting, or the Treasury function, or the transactional aspects of "keeping the books." It's not about balance sheets or profit and loss statements or outside auditors. It is about management accounting, its links to organizational financial performance, and converting data (quantitative financial data) into information, and information into intelligence – intelligence that can be acted upon for the corporate good.

In looking at contemporary alternatives, Activity Based Costing (ABC), the Balanced Scorecard (BSC), and Economic Value Added (EVA) each provide different perspectives on financial performance. Integrating them provides a powerful view of overall performance. And research continually shows that EVA leaders are shareholder value leaders. Going back to the Introduction, we learned that driving shareholder value is an ultimate objective of supply chain management.

Wait A Minute – What's Wrong With Traditional Accounting?

Well, loads, to be frank. And that may be a subject for another day. But, in summary, traditional accounting takes approaches to reporting that can obscure, rather than reveal, what operating managers and executives really need to know to strategize and run the business.

Generally Accepted Accounting Principles (GAAP) provide a framework intended to result in fair and honest presentations of results. In fact, the accountant's job is to be as clever and creative as possible in GAAP application and interpretation, with the objective of presenting income statements and balance sheets that put a company in the best possible light. Whether that light illuminates or distorts underlying reality. And ignoring the ultimate test of performance – from a shareholder perspective – of whether the entity has more or less intrinsic value than it did in the prior period.

Within the details of the income statement, traditional accounting tends to take shortcuts, for – in our opinion – ease of reporting and transactional processing. Accordingly, allocations are often used to simply – and simplistically – spread large-ish cost elements over and among a multitude of transactions, products, and processes. Costing systems may ignore process realities in favor of techniques that have tax benefits and/or ease-of-reporting advantages, e.g., LIFO, FIFO, and variations of average-actual and standard cost bases.

Activity Based Costing (ABC)

When examining the cost side of things, ABC can transform the quality of data and information underlying key operational and strategic decision-making by transforming how costs are calculated and presented. To be honest, it is detailed, and takes a fair amount of work to implement. But, done well, ABC can make for what Dr. Phil calls "a changing day in your life."

Among other things, activity-based costing:

- Can more accurately show how changes in service affect cost – and profitability
- Can link indirect costs/resources with specific customers and supply flows
- Brings focus to high-cost activities and processes, and
- Provides better – more complete, more accurate – visibility to costs and trade-offs

How do you go about setting up and using ABC? Although detailed, demanding, and time-consuming, ABC does not need to raid the NASA talent pool to be useful and successful. The objective of the exercise is to understand which customers (and products) are more, or less, profitable - and why. To understand cost drivers, and to shine a strong light on where cost reduction and value creation need to take place. To know why costs go up or down, and to be able to communicate ABC information throughout the organization – consistently.

In summary, activity-based costing is a technique – a methodology – to accurately associate both direct and indirect costs with those elements that consume an organization's resources – activities, customers, products, and/or individual supply chain flows. It translates and transforms traditional reactive cost reporting into proactive actionable information.

The process begins with a two-stage approach to assigning costs: resource costs assigned to activities, and activity costs assigned to products and customers. Resource costs are assigned to activities based on "drivers," and activity costs are the total of all resources necessary to accomplish the activity. Not only does the activity cost show all the resources, it identifies resources needed - or not needed – when activity volumes change . . . and they will change.

Typically, the level of costing detail must be carefully considered, and generally falls into the range of plus-or-minus thirty in finding the right balance of comprehensiveness and detail. In all cases, costs are assigned on a per-activity basis – per shipment, per unit, etc.

Finally, cost objects are defined – customers, channels, products, and so forth – and a bill of activities, resembling a manufacturing bill of materials, is constructed to incorporate all relevant activities and their costs.

Economic Value Added (EVA)

EVA is a proprietary term popularized by the research, analysis, and consulting firm, Stern Stewart & Co. Like most of what we're discussing, it is considerably simpler than brain surgery. But, it is a powerful tool in corporate performance analysis, positing that nothing we do is important unless it helps create value, and that value – the economic value added - is defined as NOPAT (net operating profit after taxes) minus the Cost of Capital times Total Asset value.

Total Assets are the sum of Current Assets plus Fixed Assets. Current Assets are Inventory, Cash and the like; Fixed Assets consistent of Plant, Equipment, and similar items. Simple, so far.

NOPAT is simply Net Profit minus Taxes, and Net Profit is merely Gross Margin, less Total Expenses. Gross Margin is Sales minus Cost of Goods Sold. No mysteries, yet.

Supply chain management can profoundly impact several elements of the EVA calculation, beginning with Asset Productivity – getting more out of existing plant and equipment assets, building or acquiring right-sized additional assets. By reducing space and equipment. Critically, by managing inventories to the right levels of investment, and the right levels of performance – turns, service levels, customer satisfaction.

We can drive out costs – waste – and manage costs to the optimum when reduction is not in the cards (see Cost Reduction). We can affect sales and market share – top line performance – through superb operational execution in fulfillment and customer service.

Our work in reducing cycle times, improving flexibility, and reducing all forms of waste affects many elements of the EVA equation. And, we can show these impacts in an EVA tree, or in a DuPont model, that builds to a picture of EVA results.

In short, supply chain management – in manufacturing, in procurement, in physical distribution, in planning, in information systems, wherever – can move the EVA needle like nobody else can. And, increasingly, the EVA needle is the most important one of all.

Balanced Scorecard (BSC)

Some good early work in defining and describing the balanced scorecard was produced by David Norton and Robert Kaplan in the early '90's. They outlined four interlinked BSC perspectives:

- The internal business perspective – what must we excel at?
- The customer perspective – how do customers see us?
- The financial perspective – how do we look to shareholders?
- The innovation and learning perspective – can we continue to improve and create value?

The balanced scorecard approach links the cause-and-effect elements of the four perspectives, with innovation and learning driving improved operational performance. Elevated performance, in turn, supports improved positioning with customers, which ultimately translates to increased shareholder value based on a stronger top line, well-managed costs, and net results of a better bottom line and increased asset utilization.

There are variations on the balanced scorecard theme, in which diverse performance metrics – output, quality, human resources - are displayed. That's a good thing in general, but is not as useful as the more rigorous linkage from perspective to perspective. When you can demonstrate how training drives pick accuracy, which supports greater customer satisfaction that, in turn, leads to higher sales, margins, and share value, the story becomes not just interesting, but compelling. And, it is a story that C-level executives want and need to hear.

It is possible, and too easy, to create a diverse scorecard that may be called "balanced," but which is not relevant to real drivers, and how they impact the dependent perspectives that make up how a supply chain succeeds - or fails.

All Together, Now

How powerful is this notion of tying ABC, EVA, and BSC together? Nearly unbelievably so. Imagine managing from reported BSC results, and managing toward BSC objectives. And, what if the financial perspective focused on economic value added – real, after-tax growth in the company's underlying economic value – and its positive impact on share value? Consider adding to that the ability to know – really know – the costs and profits associated with major activities, core products, and key customers.

Does this combination and integration define Utopia? Of course not. Is it practical and real? You bet. Is it easy? Not at all. Is it worth the effort? Contemplate which companies might be making it work. Look for them among the leaders. They're the leaders in cash-to-cash cycle performance; they're the leaders in shareholder value gains. They are outperforming their industries, and they are in the top tier of supply chains, irrespective of industry. Think Dell and Apple. Think Best Buy and Wal-Mart. Think Toyota, Procter & Gamble, and Johnson & Johnson. Think Tesco.

Are they all doing everything perfectly in the ABC/BSC/EVA integration and execution? Probably not, but they're clearly focused on knowing costs, building value, and general supply chain excellence.

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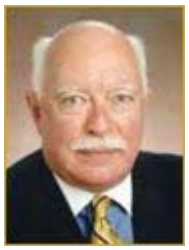

Art is a Partner with The Progress Group, and Chairman of The Supply Chain Group, a global consortium of supply chain consultancies, of which Art was a founding member. With more than 35 years of consulting experience, working with over 150 companies in more than 15 industries, Art has a broad-based track record in the areas of supply chain logistics, productivity, and information systems.

Art is the Co-Producer of Georgia Tech's Supply Chain Short Course for The Progress Group, and has toured Cuba and Vietnam to assess logistics issues in those countries. Art has also been published in Warehousing Forum, Modern Material Handling, Material Handling Engineering and The Journal of Business Logistics. He is often a speaker and track chair at WERC, CSCMP and other industry conferences.