

# Making a Difference at Air Products & Chemicals

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By Duncan H. Meldrum\*

*The guiding principle for the business economist is to focus on the profit creation process. To determine whether the economist is adding to profitability, logging requests and their results, surveys, benchmarks and continuing education are important. More successful applications are economic forecasts, company-specific models, productivity measures and analysis, conducting internal training programs, country risk analysis, customer relations support, and price and cost support. Building relationships can be accomplished through verbal and written communications, team participation and electronic information sharing. Suggestions for success of a business economist are honesty, helpfulness, humor, and humility without hubris.*

**A S I SIT HERE** trying to determine factors that help business economics functions succeed, I have to admit that I do not know any typical business economics functions. Neither benchmarking exercises nor extensive informal networking has ever turned up another function that quite matches my current one. Perhaps no typical function exists. The application of economics is probably too dependent upon a company's culture and upon the specific skills and training of its economic practitioner. What may be a path to distinction at one company could well be a path to extinction at another.

The principles, performance assessment methods, applications, and characteristics discussed below have worked for me in my almost twenty years as a business

economist. I spent most of those years in a variety of economics functions at Air Products and Chemicals, Inc., an industrial gas and intermediate chemical producer. My current title is corporate economist, and I report to the vice president of corporate planning. The company sells its products in more than thirty countries on every major continent. Key industrial gases cannot be transported over long distances, so we maintain plants in almost all the countries in which we operate. Some of our products are sold, and inputs purchased, under long-term contracts. The nature of our business shapes much of what I do on a daily basis, so keep these characteristics in mind as you read the following.

## GUIDING PRINCIPLES

Profit drives business in capitalist economies, so business economists more than any other economists need to focus on the profit creation process. The key to any success my career has had rests on that very simple principle. Every task the economics function undertakes must provide some demonstrable value added to the company.

The great thing about economics is that it can add value in many ways. Most economists (myself included) like to analyze challenging and complex problems that tax our skills and knowledge. A good business economist, however, must avoid the temptation to concentrate on challenging and interesting problems that do not impact the company's bottom line. Sometimes the greatest contributions a business economist can make come from a very mundane application of a very simple economic principle or statistic. While an academic economist might not find some of the work I do all that challenging or interesting, I get a lot of satisfaction from making a contribution to the company's profitability.

Repeating myself in simple terms, because I think it bears repeating: if an economics-related task adds to the company's bottom line, I do it. If asked to do work that does not increase profitability, I minimize my effort or do not do it.

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The economics groups I worked in when I left my line job in the Navy in 1978 did many activities typical of economics functions of the day. This work included macroeconometric modeling used in forecasting and policy analysis, public relations, massive document preparation, etc. The groups operated in relative isolation from the rest of their organizations and received relatively limited feedback.

As technology changed and businesses began to question the value of economics functions, it became pretty obvious the old style economics function could not last. With limited feedback, we had very little ability to determine if we were adding anything to the company's profitability. To get better feedback, I put in place a number of mechanisms I still use today.

*Log.* My old Navy habit of keeping logs gave me what I consider my most valuable assessment tool. Since the mid 1980s, I have logged every request for presentations, analysis or assistance I have received. I log them by category (macro, industry, data, international, modeling), requester's department, and include a terse synopsis (one line) of the request and response given by the economics group. I note how economics added value. I also note "failures" where we could not help, gave bad advice, or otherwise missed an opportunity to improve the bottom line. The log has helped determine work loads, analytical emphasis, training needs, etc. It also helps demonstrate where, when and by how much economics has made a difference in company performance.

*Surveys.* I infrequently survey users of economic work within the company to make sure we continue to provide appropriate and timely information. Surveys tend to become burdensome if repeated too often, so I provide information request forms with widely distributed forecast summary documents as a form of informal survey. I also provide evaluation forms after every training course I give.

*Benchmarks.* Upon taking over the economics function in 1989, I benchmarked as many economics functions as I could using personal contacts and the *Business Economics* "Business Economist at Work" columns. I also devoured Walter Hoadley's book, *Looking Behind the Crystal Ball*, which I consider must reading for anyone practicing business economics. Periodic benchmarking identifies potential applications, and helps determine existing applications that are replaceable by outside services. It also keeps management informed about how my economics function compares to others.

*Continuing Education.* In order to continue to add value to a corporation, I believe business economists must continue to stay on top of the advances in the academic side of our profession. I earned my Ph.D. part time from 1983 to 1992. The length of the process

let me experience some of the changes that are going on in the academic side of our field. I found ways to apply course work in rational expectations, econometrics, international economics and, most recently, the many new advances in growth theory. Post-doctorate courses in country risk analysis and the NABE econometrics training program led to internal applications. I also rely on the National Bureau of Economic Research *Working Papers* to stay abreast of the latest theory developments that may be important to my company.

#### APPLICATIONS

As I noted above, our economics function used to provide a lot of information now widely and inexpensively available from consulting firms, business publications and the Internet. As economics information became increasingly available, our economics function began to stop duplicating information readily available from outside sources. We focused instead on the application of economic principles to specific company problems. The applications described below remain among the more successful still done at my company:

*Economic Forecasts.* Yes, we still provide macro and micro economic forecasts. The forecasts provide the external backdrop for a three-year budget and ten-year strategic plan for forty-eight countries. The goal is to provide a *consistent and reasonable economic outlook for measures important to company performance*, not a "perfect" forecast of the world economy. I adjust a forecast from one of the major economics consulting firms by results from small supply-side growth models that focus on sectors important to the company's products. The adjustments tend to be minimal; I do not waste a lot of time on areas that have little bearing on company performance. The value added to the company comes from two sources: consistency in cross-business area comparisons of budgets and plans (information cost savings), and company-specific market and inflation forecasts that reduce information gathering needs for individual group planners (economies of scale).

*Company-specific Models.* The economic forecasts feed a few company-specific models that tie company profits to the economy through demand and supply equations. The models give senior managers an understanding of the impact of the economy on expected performance exclusive of any specific actions we take. The model effort has been successful because it provides a perspective senior management otherwise does not receive. I present the model as an informational tool, not as a forecast and not as a competitive outlook to the "official" group forecasts. The value added comes from providing an independent view of performance that helps identify budget inconsisten-

cies, challenges arising from the external environment that might otherwise have been overlooked, and a relatively easy way to assess “what if” economic scenarios.

*Productivity Measurement and Analysis.* In my experience, the typical business person tends to think of productivity in a single dimension (labor productivity is usually the most common single-dimension). Economics provides all-encompassing ways to measure productivity of combined inputs (multifactor productivity as measured by the BLS, for example) that more accurately assess an organization’s true productivity. My economics function has provided guidance in the development of meaningful productivity measures, developed productivity measurements of other companies, and obtained measures of industries or sectors to which the company compares itself. Because a poorly designed productivity measurement can lead to unprofitable behavior (a “headcount” measure could lead to substituting unmeasured but more expensive outside services for employees, for example), the value added of an economics approach to productivity can be enormous.

*Index and Data Measurement Training.* The conversion of the National Income Accounts to chained Fisher-ideal indexes caused a major reevaluation of many indexing schemes inside my company. The economics function taught index methods to financial and business area people, then acted as an internal consultant in the development of numerous internal indexing systems. I do not know many academic economists who consider index creation that important or interesting (were you taught the nuances of Paasche, Laspeyres or Fisher-ideal index methods in any math econ class?). Accurate internal measurements directly comparable to external measures of the economy, however, can improve company performance monitoring and decisionmaking. Internal systems that consistently measure concepts across the company also let managers accurately make cross-business comparisons of, for example, volume changes through time or productivity.

*Country Risk Analysis.* While a number of external country risk systems exist, the company’s international investments have certain characteristics that require different emphasis on traditional risk factors. In addition, the time horizon for most risk systems is not long enough for our strategic planning needs. We created our own system based loosely on a traditional country risk analysis, then added some fuzzy-logic components of the system to incorporate longer term, nonquantitative factors specific to our businesses.

*Customer Relations Support.* We assist sales efforts by providing analysis of customer markets for selected major company clients. This effort helps with capacity expansion decisions, marketing efforts and

pricing decisions. As companies work to become ever closer to both customers and suppliers, economics can provide a platform for discussing shared objectives and views.

*Escalation Clause Training.* Economics supports escalation clauses in a large number of selling and purchasing contracts through the provision of data. This effort provides an excellent vehicle to discuss pricing trends with the middle management of the company. I also teach an internal training course that describes government price index systems, index methodologies, and their application to contracting.

*Price and Cost Support.* Over the years, economics has built a number of price data systems used by purchasers, contract managers, and marketers. These data systems allow purchasers to estimate supplier costs using government price indexes, contract managers to escalate long term contract prices easily in accordance with established clauses, and the sales force to justify price increases. Economics gives the company a central point for data acquisition and distribution, providing economies of scale as well as expertise in data application to all business functional areas. This is a true nuts and bolts application that requires extensive knowledge of both government data systems and company functions. There is not much visibility in this function but value added can be extremely significant because the correct application of data brings benefits on both the sales and cost side of the income statement.

#### MAKING AN IMPACT

These applications all grew out of contacts between the economists and individuals throughout the company. Economists must build extensive relationships to make a broad impact. Below I have listed a few of the key routes I have found for building relationships:

*Presentations.* While lots of “free” information exists, not many business people have the time or skills to interpret easily an economic event’s meaning for the company. Economics teaches us to think of multiple relationships in a constantly shifting world. Well-prepared presentations that simplify and interpret that world’s impact on the bottom line provide excellent vehicles for building relationships. I try to average three to four presentations a month to small internal audiences.

*Written Communications.* As did many economics functions, we used to produce a widely distributed, 100 plus page document two or three times a year to present our forecast of the world economy. The document went into great detail regarding the development of the forecast and the assumptions behind the numbers in its tables and graphs. Groups used the document as a reference in both the budget and strategic plan development. Our surveys determined very few people read it from cover to cover. Most turned to the page they

needed and pulled off a number. Today, the document has been replaced by brief (two- to three-page summaries) written reports and spreadsheets of data electronically distributed to targeted individuals. The report contains a request for additional information that lets us meet detailed needs directly and helps foster individual contact between economics and the rest of the company.

*Team Participation.* Teams present excellent ways to enhance relationships and bring economics thinking to a broader audience. I participate on strategic planning, marketing and financial analysis teams on a regular basis.

*Electronic Information Sharing Methods.* The economics function aggressively uses new technology to disseminate data, analysis and forecasts. I still believe that electronic communication must enhance, not replace, face to face communication.

#### CHARACTERISTICS OF THE SUCCESSFUL BUSINESS ECONOMIST

I think economics can add a lot of value in a corporation, but I have to admit the gradual decline in the number of economics functions suggests many business people do not agree with me. To close out my thoughts, I would like to suggest “Four Minus One H” characteristics I think an economist should cultivate in order to succeed at a company.

*Honesty.* First, with yourself: know your strengths and use them; know your weaknesses and be willing to work on them. Do not be afraid to say you do not know when you do not know the answer to a question (but keep yourself learning so you do not have to say it too often). Acknowledge mistakes and forecast errors. Take positions based on principles, not based on internal politics. Many business types already think of economics as a “waffling” field, so you must cultivate a reputation for honesty.

*Helpfulness.* Try to respond to anyone who asks for help, keeping in mind how important the request may be for profitability. Find ways to make economics useful. Get out into the company through presentations, teams, written communications.

*Humor.* Keep a sense of humor about your field, yourself, and your function. It took me a while to realize that the rest of the company did not take economics as seriously as I did. I eventually came to the conclusion that the economist is not much more than a court jester; entertaining for the monarch’s court, but not always taken that seriously. The jester’s value comes from the ability to speak the truth in public that others in the royal court cannot whisper. A sense of humor lets the jester keep his or her head. It also makes the job a lot more fun.

*Humility minus Hubris.* Economists who always have to be right, who always are serious about their field and who exaggerate their importance to the company typically do not last long in the business world. Industrial companies especially can easily view economics as an expendable staff function of minor importance. A sense of humility helps me keep from getting too full of myself. While many of my audiences may not have a lot of formal economics training, experience and business intuition tend to produce an excellent feel for the economy. In my experience, many senior managers interpret the economy much better than highly trained economists.

Finally, I acknowledge many of these characteristics do not fit every successful business economist I know. One characteristic that does is a focus on the bottom line. Most good business people will value the function appropriately if it helps them improve the company’s results. If enough companies find economics improving profitability, we may even start improving the perception of the field.