



Careers in Business Economics

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The Profession of Business Economics

The everyday activities of business economists are a mystery to many people. Perhaps the main reason is that business economics as a profession was largely unknown until the depression-ridden 1930s, when economists assumed important positions in the federal government. As an academic discipline, economics goes back more than two centuries.

Business began to employ economists in increasing numbers after World War II. Since then, the profession has grown rapidly. Currently, business economists are at work in manufacturing, mining, transportation, communications, banking, insurance, retailing, investment, and other types of enterprise, as well as in government agencies, trade associations and consulting organizations.

The role of business economists varies with the size of the firm. Some large corporations have an economics department with several economists on staff, while other firms have economists who function partly in the profession and partly in corporate planning, finance or market research. Businesses not large enough to employ full-time economists often use the services of economic consultants. Even firms with full time economists frequently turn to consultants to augment their own capabilities.

The growth of business economics has stemmed from management's increasing awareness that applied economic analysis can provide assistance in planning and problem solving. The business cycle, government policies and international upheavals can have major impacts on companies. Business economists are able to analyze and interpret these developments in terms of their probable impact on consumer demand, prices, costs, competitive pressures, financial conditions and other matters. Such analyses and interpretations are vital to the successful operation of business firms. In addition to analyzing the external environment, economists are also knowledgeable about the basic principles of the behavior of business enterprises. They are thus able to help a firm achieve a more sophisticated understanding of its own activities.

In any type of business firm, trained business economists are:

- shrewd observers of what goes on both inside and outside the firm;
- enlightened analysts who can formulate and test promising ideas in an objective way; and
- persuasive communicators to management and others on behalf of the firm.

All three of these roles are essential in the business world.

The following articles all appeared in Business Economics, the journal of the National Association for Business Economics (NABE). They were written by NABE members to highlight the work they do for their companies. In addition, "Five I's for Business Economists" by Lawrence Small, President and COO of Fannie Mae, provides an overview of how economists can be more productive within their companies. After these articles come information on educational requirements, salaries, and information on NABE.

For more information about careers for people who use economics in their work, see NABE's web site at www.nabe.com, or contact them at

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Five I's for Business Economists

By Lawrence M. Small*

If you as a trained business economist wish to have a significant impact on your organization, you must: (1) focus on your internal constituents; (2) build a relevant information resource; (3) be insightful regarding your analytical work; (4) be an effective interpreter of economic events and trends for your colleagues; and (5) be identified as someone who can contribute to your organization's innovation process.

IN MANY ORGANIZATIONS, the Economics Department is regarded as an ivory tower; a staff function on the periphery of the organization, populated by intelligent, highly educated, articulate people who are often interesting to listen to but fundamentally not a part of the mainstream operation of the enterprise where they work. And while Economics Departments abound in the corporate world, they are rarely regarded as senior-level, critical functions deserving of key spots in the top management structure.

In my view, that is unfortunate, because many trained economists possess extremely useful skills that can provide real value to business organizations. But trained economists rarely have a significant impact on the organizations where they work if they are part of an enterprise's Economics Department. Almost always, the economists who have a real influence on institutional strategy are those who have left the Economics Department and gone on to other jobs. And plenty of economists have done just that. What can be done to change the common perception of Economics Departments,

what can be done to heighten their importance and enhance their abilities to contribute to top level decisionmaking?

USERS VIEWS OF ECONOMIC INPUT

My views, admittedly strong ones, on this topic, are based on thirty-five years of experience in the corporate world. I have served on the boards of directors of five New York Stock Exchange companies. As a banking and financial services person, I have been appointed to many investment, budget, finance and planning committees, not only of those boards but of the dozen or so nonprofit boards on which I have served as well. All of these committees have been the recipients of hundreds of presentations by economists, and I have been privy to the hundreds of conversations that have been held about those presentations and, naturally, the economists who gave them, after the presenter left the room.

What has always troubled me is that, more often than not, the behind-the-back comments about the very obviously intelligent, thoughtful, higher educated economists making those presentations are generally light-hearted, but mildly sarcastic, somewhat cynical barbs suggesting that what one has just heard should be taken with a grain of salt, is available from any number of suppliers of the same commodity, is "nice to know but not something we can or would act on" and other such obliquely (and sometimes, not so obliquely) critical statements. When you hear that kind of thing over and over for so many years, you have to say to yourself, "If this type of report is treated by its audience in such a cavalier way, why do they bother to continue to request it? Is it just some form of entertainment, an interlude provided to lighten things up or to fill space?"

Unfortunately, I don't believe I have the perfect answer to that question. However, I *think* what's going on is that people believe it's appropriate to seek interpretation of economic events, and they think it's appropriate to try to figure out what influence those events might have on the future. They also respect the fact that, to carry out the task of interpreting economic events and

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trends, you really have to have the appropriate brain power, education and experience. On the other hand, they do not seem, in most cases, willing to attribute enough credibility to economists who do not have hands-on business experience so that they react in a truly serious way to what economists say.

Obviously, that is not always true. There are any number of economists whose words are taken to be very relevant. But the number of meetings I have attended in my life where that was *not* the case has been quite significant. Consequently, I believe that business economists should be very serious about the serious question of whether they are being taken seriously. And if they discover they are not, and they are not doing what they are doing just for the occasional quote they get in the local paper, they should be asking themselves why not and, to the extent they can figure that out, they should then decide what to do about it.

WHY HAVE AN ECONOMICS DEPARTMENT?

To start that process, the first question that has to be asked is, “Why would any enterprise choose to have an Economics Department?” The answer to that should be, “Because it provides them with something they want that they otherwise wouldn’t be able to get, at least not for what having their own department costs them!”

With that as a basic premise, it would seem sensible for every Economics Department to be so obviously adding value to the enterprise that no one would even consider thinking of it as “overhead” or simply “nice to have.” That, of course, means that the department has to be providing the enterprise with information and analysis that it not only needs to run the business but also is either impossible or too expensive to get elsewhere.

And therein lies what I believe is a principal shortcoming of quite a number of Economics Departments, at least in the world I know best, that of larger corporations. They simply do not add significant business value to their institutions. While they may have an indicator or two that they track that is something no one else tracks, the fact is what most Economics Departments turn out is quite similar to what is easily available in the media.

It is certainly true that information that is readily available, but nonetheless attractively presented, or a well-written newsletter for a given institution’s customers, employees, suppliers and other constituencies has value. The issue is whether it has *sufficient* value. The issue is whether Economics Departments, by focusing so heavily on the “media” aspect of their work, reinforce the impression of economists as people who carry out a PR function.

If, indeed, economists are seen as carrying out a PR function, then it is quite natural for them to be viewed just the way most people in large scale enterprises view their PR people: specialists the modern world forces them to have but not real members of the group of key people

who really have a hand in shaping the key strategies of the enterprise.

There is no question you can make a decent living carrying out a communications function, you can make a decent living as an articulate interpreter of economic events and trends for employees and customers, and you can be a respected contributor to the speechwriting process for the CEO. While there’s no question there’s value in doing all of that, I believe there are ways to make the jobs in the Economics Department much more influential, much more powerful and most importantly, much more personally satisfying than they are.

If you agree with that and are attracted by the prospect of becoming a significant participant in the strategy development and execution activities of your enterprise, then, for sure, *your* Economics Department must demonstrate many times over that it is making a contribution to the corporation that simply is not—and cannot—be made by anyone else.

THE FIVE “I” STRATEGY

To make that contribution, that unique contribution, my belief is that successful business Economics Departments have what I call a “Five ‘I’ Strategy:”

1. Inside influence
2. Information
3. Insight
4. Interpretation
5. Involvement in Innovation

Inside Influence

If economists are going to be real “players” in the institutions where they work, they have to focus on their key internal constituencies to develop *inside influence*. The customer newsletters are great. The dinner speeches are personally gratifying. The conferences are terrific for networking. But none of them puts you in a corporation’s inner circle. To get in the inner circle, you have to hang out with the members of the inner circle, and to do that, you clearly have to be able to be an active participant in that particular world, a participant with relevant ideas and information. If you spend the bulk of your time focused outside of the inner circle, your probability of getting to be a member of it is not going to be very high. Even though your calendar is filled with publication deadlines, speaking engagements and industry conferences, if you want to have more to say about an institution’s trajectory, spend more time on *internal* matters than external ones.

You might respond to that by saying, “I agree with you. I would like to be more of a key player in my institution, but how do I suddenly start spending lots of time with the people who call the shots, particularly if they don’t take the economics function that seriously in the first place?”

That is where the other four “I’s” come in.

Information

The next one is *information*. Many business economists seem to traffic in information that is widely shared and pretty readily available. And much of what they talk about has a very significant overlap with what other economists talk about. Consequently, one hears the “it’s a commodity” statement quite often. And the way to make a commodity-based business successful is to surround the commodity with enough in the way of non-commodity products and services to make the total offering unique.

For example, I am on the board of the Chubb Corporation, which is a major supplier of homeowner’s insurance. Now, homeowner’s insurance is pretty much of a commodity. But Chubb has an extraordinary market share with affluent families who are more than willing to pay more for Chubb’s homeowner’s insurance protection than that of other companies. Why? Because the service is so good. Because the policy is so clearly written. Because the material for the homeowner is so attractively packaged. Because the responsiveness of the claims management process is so terrific. I could go on and on. The point is the company has turned a commodity into a specialty product, even a sort of status symbol where customers like telling others that “I have all my insurance with Chubb.” And Chubb has achieved that by pinpoint bombing, by precisely targeting their particular product to a very specific market segment, by figuring out just what their particular target market wants and needs and giving it to them.

Successful Economics Departments create that same type of imagery for the information they develop and supply. They convince their constituents that their analysis, their data bases, their indicators, their trend lines, their graphics and their tables constitute the absolutely best window on the world of their particular institution’s activities. They completely sell their internal constituents the idea that no one else, absolutely no one else, anywhere, has a better, more comprehensive set of facts and figures about what is going on in their enterprise’s business arena than they do. No one else is better informed. No one else has better information.

Insight

After information comes *insight*. It isn’t enough simply to have the best information; you have to be viewed as an individual who is uniquely insightful when it comes to figuring out what the information means for your enterprise. That, of course, makes it mandatory that you not only develop superb analytical skills in order to produce the right answers, but you also work very hard in making sure you get really good at asking the right questions.

I recall, for example, one case when I was a banker working with one of the country’s largest fast food companies. I remember the CEO of the company telling

me how their corporate economist had done a study analyzing the performance of their various restaurant units versus the key, relevant economic indicators for the immediate markets they served. The idea was to see whether their stores were doing as well, better or worse than the economies in which they were located. In one particular case, that of a central city store with tremendous volume, the economist indicated he felt that the restaurant was the “best in the chain” and that the management of that particular region should be congratulated because they were growing the store’s business at a much faster rate than the surrounding economy.

The CEO told the economist that he was really quite surprised to hear the economist’s conclusion, because he had actually been thinking about firing the management of that particular region. It appears that what they, and, it goes without saying, the economist, had missed was that real estate prices in that market had risen much faster than any of the economic trends of the fast food business. Consequently, it was patently obvious that the smart thing to do with the property was sell it (and not keep running it as a fast food restaurant), because the present value of the restaurant’s future fast food earnings was nowhere near what the market value of the land had become.

Suffice it to say the problem here was that the regional management and the economist simply were not insightful enough when looking at the economic indicators of the area in which that restaurant was located to arrive at what was a pretty obvious conclusion, at least for someone with an entrepreneurial mind.

In today’s world, in many large corporations a significant number of executives who are responsible for reasonably sizable business units are simply not that sophisticated when it comes to reading economic trends and grasping what those trends mean for an institution’s future. And even if they do have the intellectual and educational wherewithal to do so, there is always the issue of experience and familiarity with the business they are managing, not to speak of the time needed to wade through all the necessary data.

If you look at the *Fortune* 500, they all have thousands of executives running the various components of their portfolios of products, geographies and markets. At any given moment, you can be sure 10 to 15 percent of those executives have been in their jobs for fewer than twelve months due simply to turnover and corporate reorganizations. Therefore, almost always there’s a sizable percentage of corporate business units being led by people who simply aren’t that knowledgeable about the economic subtleties of the products, customer relationships or regional markets for which they’re responsible. That being the case, people who are really insightful when it comes to analyze the economic drivers of a company’s business should never be viewed as commodities or corporate overhead.

Interpretation

The fourth “I” stands for *interpretation*, i.e., the communication skills needed to translate the value of unique economic information resources and insight into meaningful conclusions for executives who are running an institution’s affairs.

I was chatting the other day with the retired Vice Chairman of one of the largest businesses in the United States. He told me that, during the course of his forty-year career, his company had only one corporate economist who was deemed to have made a really significant contribution to their company. I asked why that was so and he said, “He was a terrific teacher. He always knew how to get our attention. He was able to take complicated information and make it understandable. He never sounded pedantic. He never spoke in economic jargon. He always talked to us in our language. And over time, he took the entire management team to a whole new level of understanding about the indicators we needed to be watching, how they were interrelated and what the key drivers of our business success really were.”

Now, that is a description of someone who has become really influential in an institution’s top management team! The point is, to become an *internally influential* force in an institution’s management, you not only have to get close to the members of the senior management team, you not only have to develop what is perceived as unique, virtually proprietary, highly specialized *information* resources, you not only must be seen as being particularly *insightful* when it comes to analyzing the events and trends reflected by the information with which you’re dealing, but you also must learn how to become a superb *interpreter* of the conclusions you have drawn so that your colleagues will clearly, unequivocally, understand what you’re trying to communicate.

Involvement in Innovation

But, that’s *still* not enough. If you really want to be part of your institution’s leadership, you have to show you can play a role in the enterprise’s creative process. You have to demonstrate an *involvement in innovation*, the capacity to make a contribution to the development of business-building ideas. Although it’s not always the case, the correlation between the creation of increased revenue streams and significant career advancement is generally very, very high. Revenue is the lifeblood of all businesses and those individuals who show they are obsessed with building revenue momentum and gifted at creating new approaches to growing the business are inevitably viewed as highly valued corporate assets.

Interestingly, people in sales, marketing and production do not have a lock on playing the principal roles in the drama of innovation. There are numerous cases where accountants, lawyers, information technologists,

public relations people and even internal auditors have emerged from their particular islands of specialization to make vital contributions to efforts that have contributed to substantive institutional growth. While I know their have to be cases where people from Economics Departments have acted in a similar fashion, let’s just say that they are not widely known.

And I think the reason you do not often hear of the Economics Department playing a role in a company’s innovation process is simply that the people in those departments do not think they are supposed to. It certainly is not that they are unable to. The issue is not whether trained economists can have a major impact on the organizations in which they work. They can and do. The issue is whether the Economics Department can become a really influential force in an enterprise’s management.

EXAMPLES OF SUCCESSFUL ECONOMISTS

Let me demonstrate by citing examples of economists who play a vital role in influencing a company. At Fannie Mae, some of our most influential executives are trained economists.

David Berson, someone well known to all of you, is in frequent contact with our CEO and clearly someone who has had an influence on his thinking. He plays a real role in setting performance targets for the company, not to mention his participation in a wide range of strategy issues covering regional expansion, regulatory policy matters and product development.

Jayne Shontell has bachelor’s and master’s degrees in economics from Georgetown and at one time was the Chief Economist for our principal competitor, Freddie Mac. Jayne has been a major force in the innovation of major developments related to the securitization of mortgages. She has held a wide variety of positions at Fannie Mae and is currently our Senior Vice President for Investor Relations. Given that the market capitalization of Fannie Mae is around \$65 billion, she is in one of our most important jobs.

Tom Lawler has bachelor’s and master’s degrees in economics from the University of Virginia, came to us fourteen years ago as an economist, and since the late 1980s has been one of the truly pivotal figures in building up and running our \$370 billion mortgage portfolio, the part of our business that generates two-thirds of our earnings.

Tom reports to Tim Howard, who has bachelor’s and master’s degrees in economics from UCLA, worked as an economist at Wells Fargo and Chase Econometric Associates, and came to Fannie Mae to become our Chief Economist in 1982. Today, he’s our Executive Vice President and Chief Financial Officer. Tim has been one of the really key contributors to Fannie Mae’s spectacular growth in the latter half of the 1980s and in the 1990s and is today one of the most important figures

in top management. He has been a major force in shaping the huge, truly unique, secondary mortgage market in the United States.

I have no need to be convinced that economic training can be a valuable asset or that economists can carry out a wide variety of corporate roles. And these colleagues of mine prove just that. They have been at the heart of innovation in the housing finance business. They can take credit for generating billions of dollars of revenue. And my experience of more than twenty-seven years at Citicorp was the same. A number of really key executives, truly creative contributors to the building of our business, were trained as economists.

ROLE OF ECONOMICS

Can economics, a staff function, play a truly influential role in an enterprise's management?

I believe the answer is, it can. I am impressed by the rigorous training economists have to undergo. I am impressed by the intelligence of people who are attracted by the economics profession. I am impressed by the ability of many economists to communicate effectively. And I am impressed by the versatility of many economists, their willingness to deal with a wide variety of issues, and their enthusiasm at taking on new challenges.

The raw material is all there, and there is not a thing wrong with it. What is really required is leadership. What is required is for the corporate economist to say, "I want what I'm doing here to be more influential than it has been—a *lot* more influential—and I recognize I am going to have to make some changes if that's going

to take place. I am simply going to have to reorient what my department is doing and how it does it."

That is where the "Five 'I' Strategy" comes in:

1. Focus on those key *internal* constituents.
2. Build a uniquely relevant *information* resource.
3. Never stop worrying about whether you're being *insightful* enough regarding your analytical work. Make sure you're not only looking at the numbers from just an economics point of view. Ask the questions people who seek to build businesses would ask.
4. Discipline yourself to become an extraordinarily effective *interpreter* of economic events and trends for your colleagues. Become fanatical about avoiding academic jargon and zealously work to speak to business people in their own language.
5. Do everything you can to become identified as someone who can contribute to an institution's process of *innovation*, someone who is identified as being involved in innovation. Go where the money is. Get aggressive about applying your creativity to the task of making money for the company by finding ways to build the business.

I truly believe there is an opportunity out there. There is an opportunity to do more to shape the future. There is an opportunity to really have an influence.

You do not have to grasp it. If you are happy with the way things are, why do anything to disrupt the status quo? But for those of you who want more, who are frustrated by the image I have described, for those of you who like being corporate economists but would like to have more clout, not to speak of more pay, give the "Five 'I' Strategy" a try.

Making a Difference at AT&T: Transition to a New Professional Model

By C. Mark Dadd*

The huge changes taking place in AT&T in response to a tougher competitive marketplace mirror those taking place in many U.S. corporations across a broad range of industries. Cost reduction is receiving greater attention. Corporate center staff functions are increasingly being downsized and reorganized to obtain a tighter alignment with the operational and strategic needs of the business. Organizational changes are emphasizing a greater focus on customers. New employee work models are emerging that are less hierarchical and that facilitate greater flexibility and quicker response times. For economic analysts, that new environment has led to an increased emphasis on adding value – providing advice that has direct operational or strategic implications. In so doing, it has changed what work is done and, increasingly, how that work is done.

COMPETITION IN THE U.S. ECONOMY is getting tougher in many ways. Consumers are becoming increasingly savvy with the help of new information sources. They are increasingly looking for best prices. Consumer expectations about customer service are rising. Quality is becoming more important as a precondition of being successful in the marketplace and maintaining a strong brand image.

Producers are responding by improving product and service features to gain competitive advantage. They are reducing cycle times for new products and reducing competitive market response times. New producers are entering from abroad as the economy

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globalizes. Producers are entering and exiting markets. And in some industries like telecommunications, government is reducing the regulations that circumscribe producers' actions and allowing in new players.

AT&T CHANGES

The changing competitive environment has led to substantial changes in the way AT&T operates and is organized. For example, several rounds of cost cutting have taken place in recent years, particularly focused in the corporate center functions and support staff. In 1993, corporate center functions were required to fund themselves by contracting their services with the operating units, except for certain corporate required activities such as taxes. This process spawned a focus on benchmarking.

Contracting was aimed at getting tighter alignment between corporate center functions and the operational and strategic needs of the business, and reducing corporate center costs. Contracting resulted in the appointment of some corporate center function representatives in the operating units and, in some cases, the transfer of functions to the operating units.

In 1996, AT&T was split into four units in part to provide greater focus on customers. The four units were AT&T (telecom services); Lucent Technologies (telecom equipment); NCR (computer services and equipment); and AT&T Capital Corp. (credit and leasing). Subsequently, the finance organization initiated a three-year, 10 percent a year, cost reduction program to get to best quartile cost performance. The central economics organization is part of Finance.

A change also has been made to a less hierarchical work model. Reporting arrangements have been flattened, employees closest to the customer and to issues have greater empowerment, and supervisors are seen more as coaches and supporters (e.g., engaging in less directing, reviewing and rewriting of analyses and reports).

These changes in AT&T have substantially reshaped the central economics function and the activities of the many other economic analysts across the corporation.

WHAT: KEY ACTIVITIES AND FUNCTIONS

Economic analysts are found across the corporation, in the central economics organization, in corporate center divisions and in the operating units.

The Central Economics Organization

The small central economics organization (the Economic Analysis Section) provides macroeconomic and microeconomic analyses and forecasts for corporate center divisions, the operating units, and senior management. The size of the organization fell from nine before the split of AT&T in 1996 to five currently.

The key elements of that work are providing: (1) U.S. economic analysis and forecasts; (2) industry and regional analyses and forecasts; (3) financial market analysis, including interest rate forecasts; (4) analysis of international developments, including foreign exchange rates; (5) U.S. public policy analysis (tax and regulatory); and (6) advice for senior management. The work of the corporate center economics organization in 1990 was described in a *Business Economics* article by a former Chief Economist, Ken Militzer, now retired.¹

The forecasts are of the key macroeconomic drivers of operating unit financials. For example, the forecasts of GDP and of consumer expenditures on services are used as inputs by the product analysts in the units as the drivers for their product demand models. The forecasts for the U.S. economy, interest rates and foreign exchange rates are critical input assumptions for the preparation of budgets, plans and business case analyses. The largest users of the work are the Planning and Strategy organizations, Treasury, Government Affairs, and the product analysis and forecasting organizations in the operating units.

The focus of the work has been, and remains, on the business implications of economic developments and forecasts. Economic forecasts can be readily purchased from reputable external vendors much more cheaply than doing them internally, and we do not believe that it is adding value to try to forecast the economy more accurately than those vendors, at least in the current environment and in the telecom services industry.

Considerable effort has been expended in recent years to ensure that best practices are being used in the central economics organization. For example, a detailed benchmarking analysis of the central economics organizations in thirty-two nonfinancial U.S. corporations was conducted in 1990. The results of that survey were published in *Business Economics*.²

Changes Since 1996

When AT&T split up in 1996, three corporate

center economists went to Lucent – the telecom equipment industry analyst, the international analyst and a junior economist. The remaining five stayed at AT&T.

These developments caused the Economic Analysis Section again to change the emphasis of its work. The international economics activity in AT&T, which was heavily focused on telecom equipment sales abroad, declined sharply after the company split up. Moreover, the telecom services industry is less sensitive to the ups and downs of the business cycle than is the telecom equipment industry, decreasing the need for business cycle and macroeconomic analysis. In addition, the new industries like wireless and the Internet are in the take-off stage of development and so are less impacted by business cycle developments. These changes have resulted in the analysts focusing more on industry and microeconomic issues.

Subsequently, the sale of the Universal Card Services credit card operations in early 1998 substantially reduced the need for financial market analysis and forecasting.

Organization Alignment

In 1997, the Chief Economist was given responsibilities in the finance organization for competitive and industry analysis, competitive cost benchmarking, and the estimation of future AT&T costs for use in business cases (about 45 people). This caused a further blurring of the work of the central economics organization economists as they got drawn into some of these broader activities and of the identity of the central economics organization. It also gave rise to synergies, benefiting both the central economics organization and the competitive and industry analysis organization.

Economic Analysts in Other AT&T Organizations

AT&T employs many economic analysts in other organizations, not reporting to the Chief Economist. A few are in Government Affairs providing regulatory and related analyses, and many are in the units analyzing product demand. There is no precise estimate of the total numbers of people at AT&T who would identify themselves as economic analysts, but the number could easily be around 100. In addition, there are a large number of other trained economists at AT&T who use economics in their analytical work.

The work of these economic analysts in the corporation also has changed. The analysts in Government Affairs have been focusing on analysis of the costs of long-distance telecom companies entering local markets under the terms of the Telecommunications Act of 1996. The product modelers in the units have been refocusing their work away from longer-term demand forecasts that are used in planning towards helping with the analysis of new product offers in the marketplace.

¹ See footnotes at end of text.

We expect the trend to a smaller central economics activity and to most economic analysts working in the operating units to continue, given the reduced importance of the business cycle and other macroeconomic developments to AT&T since the company was split up. That is the same trend that NABE has seen in the profession as a whole, i.e., the move from the so-called "traditional" business economist in a central economics organization to the "nontraditional" analyst who is using economics in a functional division or operating unit.

HOW: THE INTERNAL CONSULTING MODEL

The critical success factor for any economic analyst in the corporation is to operate as if an internal consultant, whether or not financed directly by internal clients.

Successful consulting first requires understanding the needs of the customer. So it is necessary to build close relationships with division and operating unit customers in order to understand their needs and to ensure the analyst has a seat at the table. The overarching requirement of internal customers in the operating units is that the economic analyst contribute to the bottom line of the corporation.

Unit customers look particularly for their analytical organizations to see issues in a strategic framework, to have a balanced perspective, to exercise sound judgment, to adopt a shared ownership with them for problems, and to be proactive. Those unit customers also expect the analysis itself to be compelling and timely (quick turn around).

Communication

Emphasize communication. The ability to write clear, concise and compelling analyses is one of the most critical skills for a successful economic analyst. Client time, particularly senior management time, is scarce. The AT&T central economics organization specializes in punchy one-page summaries of longer analyses that are particularly appealing to senior managers. It is also important for an analytical organization to have a brand identity, e.g., the name of the organization should be placed on every piece of work provided, not just the analyst's name. In addition, work in the AT&T's central economics organization is referred to as "analysis," not "research," because analysis to us implies business implications, whereas

research does not. Excellent communication is becoming even more important as corporations become leaner and there are fewer management layers between analysts and the operational unit leaders.

Comparative Advantages of the Economic Analyst

The key skills of the economic analyst compared to other business analysts is the ability to link industry/market developments to the overall economy, i.e., to see the forest as well as the trees. The economic analyst often has a comparative advantage in the analysis of product and financial markets, strategy, deregulation and government policy. The broad training of economists provides a flexibility that allows them to turn their hand to a broad range of analytical problems – a critical attribute in a company experiencing a redirection of industry interests.

Contracting for economic analytical services with internal divisions and operating units may be a viable option based on our experience. We found operating units and divisions very happy to finance us from 1993 until 1997, after which that form of financing was prohibited in AT&T. Internal economics organizations have a competitive advantage over external consulting organizations because of their knowledge of the company and the industry.

CONCLUSION

Implications, implications, implications are the three most important aspects of being a successful corporate economic analyst.

The customer is king. Know your internal customers' needs.

Excellent communication is critical and, potentially, a key differentiator.

Exercise your comparative advantage as an economic analyst.

Be proactive in responding to the changes that corporations are experiencing – change before your management requires you to.

FOOTNOTES

1. Militzer, Ken, "The Business Economist at Work: The Chief Economist at AT&T," *Business Economics*, January 1990.

2. Hoover, Dennis, "Business Economists: Not Just Forecasters," *Business Economics*, July 1992.

Making a Difference at Chrysler

By W. V. Bussmann*

The most important lesson we have learned to maintain our effectiveness is to keep developing customers throughout the company. We focus on issues relevant to the company or our industry by building credibility for our work (not necessarily by providing the most accurate or precise forecasts, though accuracy is not to be shunned, but through simple, understandable, and story-backed presentations), and by maintaining our neutrality on intracompany issues and our business perspective on extracompany issues. As a result, people throughout the company tend to think of us as useful contributors to relevant projects, and demand for our services remains solid.

FOR THE PAST five to ten years, decisionmaking at Chrysler has become more and more decentralized. This change has coincided with a fundamental reorganization of the company's vehicle-making process. The old way of bringing new vehicles to market relied on individual functions, such as design, engineering, procurement and supply, suppliers, and manufacturing, to perform their individual tasks. Each function handed the results of its work to the next function in essentially a sequential process that was time-consuming, costly, and prone to errors. As a result, the quality of the vehicles brought to market was low, with an average of more than five defects per vehicle.

The current method, adapted from Japanese manufacturers and since imitated by others, is to assemble representatives from each of the key functions into platform teams. (A platform is a basic chassis from

which several vehicles may be made.) Team members from the different functions work simultaneously and communicate frequently to assure, for instance, that the shape of a particular body part will accommodate adjacent components. In addition, a manufacturing representative may suggest that a minor change in the design of a component will facilitate more error-free assembly, or a supplier may suggest that a change will not only increase the reliability of a component but also save cost. Under the old, chimney-style way of producing vehicles, most of these suggestions would have virtually no chance of being adopted. With platform teams, most of them become reality. The result is a reduction of the time it takes to bring a new vehicle to market from about five years to less than half that in many instances. Commensurate savings are achieved in costs, and defects average about one per vehicle currently.

These changes have, fortuitously, enhanced the impact that the economics function has on decisionmaking at Chrysler by pushing decisionmaking down to the lowest appropriate level. Although no system is perfect, the effect on the economics function has been to increase the demand for economic analysis throughout the company.

WHAT WE DO

Forecasts

The economics function provides many services to various parts of the corporation. We provide the usual array of economic forecasts and analysis for economies throughout the world, with an emphasis on the United States. More importantly, we also have the responsibility for forecasting sales of new vehicles for the countries in which we do business. More than 90 percent of Chrysler's sales occurs in North America, although that percentage continues to drop as we expand more rapidly overseas than domestically. As a result, our forecasts of the North American market are more detailed and are made more frequently (monthly) than are our forecasts of overseas markets (twice a year or more often if needed). The short-term

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(two-year) forecasts are the starting point for the scheduling of production at plants, and the longer-term (five- and ten-year) forecasts form the basis of the product and business plans. Because our forecasts of the industry include a breakdown to seventeen segments and include estimates of the country of origin of sales, we are forced to understand the details of the market in ways similar to those who work in sales and marketing, product planning, design, and pricing.

Analysis

We also undertake in-depth analyses of various topics of importance, either to the industry or to Chrysler. For example, in the past few years we have studied the affordability of new vehicles, including the effects of changes in real incomes and the distribution of incomes. We also keep track of the manufacturing capacity of vehicles, both in total and by type of vehicle, as well as estimates of elasticities of demand and the determinants of residual (used-vehicle) values.

Other

Finally, we are part of a team that hedges our exposure to foreign currencies; we are members of the Investment Strategy Group, which manages asset allocations for the pension fund; and we participate in the analysis of public policy issues, mostly regulatory and environmental.

HOW WE DO IT

Economists at automobile companies are fortunate in that part of their job has already been done for them. No one has to convince anyone who works for an auto company of the importance of or linkages of the company to the overall market for new vehicles. This situation is in marked contrast to that of most companies for which explicit market data, i.e., data for sales of virtually the same products from competing companies, are not available. For instance, what is the market for consumer credit reports? What about the market for industrial fasteners? Yes, executives in the fastener industry know that they sell to, say, the auto industry, the machine tool industry, the medical equipment industry, and the industrial equipment industry. But suppose some of their customers' industries are expanding and others are contracting. How are they to estimate the effects on their own business? Economists can make a distinct and valuable contribution to companies with vaguely measured customer markets through judicious use of their statistical training. This, perhaps, is the subject of another article.

However, market forecasts of auto sales are available from outside vendors, and other functions within the company are also capable of providing forecasts. Why is the economics function at Chrysler responsible for this task?

One important reason is that we have worked very hard over the years at playing the role of honest broker. Market forecasts from the sales and marketing function might be perceived as containing either a sandbag bias so that their volume targets are easier to achieve or an inflation bias that would make their share targets more attainable. (These would presumably occur at different times, depending on which target was more binding at the time.) Forecasts from the platform teams or from the product planning function might be thought to reflect a desire to justify new product programs or higher program spending, while forecasts from the finance function might be viewed merely as justifying spending reductions. Exchange rate forecasts or forecasts of inflation from the procurement and supply function would be similarly tainted.

Economists are human beings, of course, subject to the same biases as other people. However, the economics function should have no business purpose in shading a forecast one way or the other. If a company's economics function is perceived as allowing political or other influences to affect its forecasts or analyses, then its effectiveness to the company is likely to be diminished. This is not to say that in all discussions with other employees or executives, we economists do not make our views known. However, we take great pains to make it clear that our judgments on matters that affect the company are free from such biases.

Communication

One way of doing this is to make forecasts convincing by backing them up with clear, simple stories. The most accurate forecast is worthless unless it is understood and believed and thus can be acted upon. Simple, clearly articulated, nontheoretical (i.e., lacking technical jargon) reasons or thought processes that underlie a forecast are what give the forecast life and meaning to other executives who are not economists.

An implication of the need to make a forecast convincing is to keep explanations nontechnical and to the point. I cannot remember the last time I uttered such terms as "rational expectations," "monetarist," "Keynesian," "general equilibrium," "stochastic," or "heteroscedastic" unless prompted or for effect, usually with technical folks outside the company. Of course, even the most convincing forecasts, if wrong too often, will soon cease to be convincing. But credibility is enhanced if the users of forecasts can understand the reasoning behind them. Ideally, the forecasts become theirs in the sense that they take ownership of them by acting upon them from a belief that they are the most logical and useful forecasts available.

One way of keeping messages simple and understandable is to use well-executed graphs or charts, often with a line or two of explanation on each to illustrate points. The key phrase is "well-executed."

Charts that have too many lines or bars or that are not clearly labeled or titled or that have too many numbers, lines, or columns on them or that try to make more than one point per chart may confuse more than clarify. My own brilliant failures in communication have stemmed more from violating the “kiss” (keep it simple, stupid) principle than from anything else. Top executives, in my experience, are easily as smart as any of us. Given the time and inclination, they could readily understand any concept we cared to throw at them. But they have many other uses of their time. We do ourselves a favor by forcing our explanations and language to meet their needs rather than unrealistically expecting them to adapt to our frame of reference.

Customer Development

Communication with top executives is important to the success of an economics function within a company. However, communication with many others throughout the company is at least as important, if not more so. All members of the economics department at Chrysler have worked hard to build relationships throughout the company. This work ranges from providing the appropriate data in response to often vague requests to offering to help with projects in which it was not at first clear that we had something to contribute. Again, we are fortunate in not having to convince anyone of the importance of understanding our well-defined industry or the economy at large. Consequently, we respond to virtually every request to discuss with or present to groups that are interested in our work. Such groups range from the staffs of line officers to town halls of entire departments; from car dealers to summer interns; from factory workers, through a monthly broadcast over the internal TV network, to platform teams. Our interactions also include many informal meetings with *ad hoc* teams in which economic counsel is needed.

One reason that we are invited to such functions is that our reputation for unbiased analysis pervades the company. In addition, people generally understand that we have a strong desire to communicate on their terms and for their purposes. In addition, we try to avoid dogmatism in the sense of avoiding the attitude or the perception of having the attitude that if a particular group does not make the most economically rational decision, then they are simple troglodytes.

This last point also has public policy implications. We are, of course, members of the economics profession. But we are also employees of our companies. Sometimes, these two roles come into conflict. As economists, we are responsible for providing our companies with the best economic analysis and applying it in the most useful ways. As employees, we should try to serve the best interests of the company.

For example, general equilibrium models predicate efficient labor markets so that the economy is always at full employment. How should an economist respond to the request for analysis of the effects of companies from another country persistently selling their competing goods in this country at below “cost,” while at the same time restricting U.S. companies from exporting to that country? Simply saying that the other country hurts its citizens by denying them the benefits of free trade and that employment in the United States will be unaffected because markets will adjust is not satisfying. Similar responses to many such questions would soon earn us the reputation of “too theoretical” or, worse, “irrelevant.”

On the other hand (ah, finally, the beloved phrase), not pointing out those economic conclusions would be to deny our roles as professionals. However, pointing out also that while markets adjust, they often adjust slowly, so that the adjustment may impose great cost on imperfectly mobile workers or prematurely obsolete immovable capital remains true not only to our professional training but also to the realities of business. There are, of course, many other economic, political, and negotiating-type issues with this highly charged and politicized example. I use it as an example only to illustrate that purely theoretical economic answers to real-world issues are likely to be insufficient to make full use of economists’ talents in many companies.

Macro vs. Micro

This last, macroeconomic, issue illustrates another difficulty faced by many company economists. Restricting or focusing one’s scope on macroeconomic issues is fraught with difficulty. But if the economist can demonstrate that the fortunes (sales, assets, profits) of the company or part of the company have been closely associated with particular measures of industrial production or interest rates or retail sales (recall the consumer credit reports business) or some other broader measures of economic activity, then the executive is much more likely to believe in the relevance of macroeconomics to the company. Or suppose that the economist can provide an estimate of the magnitude of price decrease necessary to reduce inventories to a particular level? In that example, it is not the economist who will be asking for future meetings.

The vast majority of issues that executives at all levels of companies care about are those that have a direct impact on the business. These are predominantly microeconomic issues dealing with prices, markets, competition, and technology. Generally, we have found that top executives are more willing to listen to macro discussions if they first believe that an economist contributes to the microeconomic well being of the firm.

Making a Difference at Weyerhaeuser

By Lynn O. Michaelis*

The economics function at Weyerhaeuser combines marketing and economic research, with 95 percent of the time spent on industry-specific issues. Nearly 80 percent of the department's budget is charged back to the company's diverse businesses. Consequently, customer focus and responsiveness are crucial to success. The role of the group is to provide insights into industry conditions and longer-term trends. The group is looked upon as an objective source of information on a likely set of industry events, with much emphasis on effective communication, especially graphic communications. This approach has changed materially in the past decade; emphasis used to be more on macro forecasting with a staff about double the present size.

THE FUNCTION I manage at Weyerhaeuser is called the Marketing and Economic Research group or M&ER. The group has been operational at the company for nearly thirty years. The composition, size and emphasis of the group have changed dramatically during that period. At one point the group was made up of forty people, about equally split between economists and market researchers. At that point in time, the group had three economists completely focused on macroeconomic or demographic issues. We also subscribed to about every major macroeconomic service. The budget for the department was carried at the corporate level within the corporate planning area.

Today, the function is composed of only fourteen

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people. About half of the group is economists or market research professionals, while the other half provide technical support (such as graphics and data base management). The group spends nearly 95 percent of its time engaged in industry-specific issues (microeconomics or market research). There is no full time macro economist and we do not subscribe to any U.S. macro service. The only service we buy outside concerns international developments. Occasionally an outside service is engaged when there is a particular decision that needs additional specialized help.

The other major change is budget support. Nearly 80 percent of the department's budget is charged back to the businesses. The only budget carried at the corporate level is to cover those activities that are truly done for the senior management or for the board of directors. Individuals from the group will occasionally be asked to devote four to six months to a special project that is sponsored by senior management.

The move to charge the businesses for the group's service predates my tenure as manager. M&ER was the first staff group in the company to do this. Initially the move to charge the business for the group's time was a tactic to broaden the support the group. This way the group would not be completely eliminated in one of those routine cyclic events that happen in corporations, i.e., cut overhead when earnings decline. Although the tactic has not made the group immune from budget cuts, the charge back kept us alive in the late 1980s. In one of the more serious overhead reviews in 1989, a senior manager did move to eliminate all his budget support. This undercut our ability to continue supporting his entire division. Rather than have that happen, the businesses increased their budget support.

The biggest benefit of the charge-back system has been in how our group operates. Rather than just being oriented to the needs of the Top Dog, we feel the need to be responsive to the entire organization. Customer focus and responsiveness are crucial elements of our group's value system.

We meet with each of our major clients every year to review what the group has accomplished and what

the priorities for the next year should be. A customer satisfaction survey is conducted every year, asking how we did on both routine support services and any special projects. If a concern is raised, I get in touch with the client to discuss the reason for the concern and what actions they suggest be taken to correct the problem. Fortunately, this does not happen frequently.

THE MISSION AND VALUES OF THE DEPARTMENT

During the past ten years, the group has reshaped its mission and product offerings. As noted earlier, macroeconomics is not a major event any more. We have come to accept that no one can forecast the future with perfect precision. We don't even try to see if we can get a GDP forecast that is 0.3 percent more accurate than consensus. A small difference in GDP growth would not affect a business decision. Besides, as will be seen in the examples below, our biggest impact has been on those decisions that require longer-term trend input. Our role is to provide insights about the industry conditions that will allow the company's business management to make the best decisions possible. Rather than forecast, the role is more oriented to helping the business think about the future with assumptions, facts and data.

Achieving that mission is not easy. The business management has to believe that the insights provided are worth acting on. Building credibility with the management team is essential. To do this, each analyst in the group develops a client relationship with one or two businesses. The analyst then specializes in that business or industry. For instance, one of the area managers has a Ph.D. in forest economics. He specializes in timber management, timber values and other raw material issues in the United States and the world.

Another major task is to be viewed by the business and the senior management teams as a completely objective source on a likely set of events for the industry. Our analysis is never compromised to support a major capital project that the business believes it needs. This will be illustrated in an example below. Unlike an outside consultant on the industry who might meet a client's desired needs, as responsible corporate managers we have the same goal as the business management: generate good returns on the shareholders' investments.

Finally, we must constantly be finding better ways to develop those insights, to think about the future or to communicate effectively to insure the correct actions are taken. Failure to communicate the work effectively means nothing is done. Even worse, the wrong thing is done in spite of what analysis suggests. One of the reasons graphics support is such a big part

of the group's activity is communication. Graphic display of history or relationships is the most effective way to build understanding and conviction. For some reason, R bar squared or a Durbin-Watson statistic just don't cut it.

Thus, the values of our group are very simple. We believe that objective and rigorous analysis is essential to a sound business decision process. When our analysis leads to a point of view about the future, we insist on finding ways to be heard by the business leaders. It is also important to make clear how we arrived at a point of view, what the assumptions were and where the primary risks are.

TRACKING YOUR IMPACT

The constant pressure to justify our budget (in some cases defending why staff even exists in a line organization) has forced me to keep track of those instances where we clearly made a difference. It is easier to track the impact on the special projects than it is on our routine work. Part of the budget with each business is to cover routine quarterly or annual reviews to support the normal planning process. The business agrees on a retainer to cover these activities. Any outside consulting services for data or other industry information are imbedded in this "core" budget.

These quarterly or annual industry review sessions are very proactive. A base case view of the general economy, the demand side for the major markets and a probable supply situation is developed along with a price outlook for key variables. Each business team has a chance to review and add additional input on key assumptions or industry developments. The sessions are meant to encourage dialogue on pricing strategies, inventory targets, investment priorities or competitor activities. For instance, a special inventory model was developed for the Pulp and Fine Paper Businesses to evaluate the potential price risk at any point in time. They have found it useful for both pricing strategies and downtime planning.

These review sessions are particularly important to the M&ER analysts as well. First, they can find out what the business is concerned about. Second, they usually learn something as well. Input from the sales and production people keeps us current on how the industry is changing and where to look for the next "surprise."

The place where we have made our biggest contribution is in the area of special studies. We usually initiate these when we feel there is a major new trend emerging. In some cases a senior executive who feels uncomfortable with the business view has triggered them. Special projects allow us to use economic theory to assess what might happen if historic relationships don't hold. Economic training allows us to see things when history is *not* the only guide to the future.

A few examples will illustrate several ways in which M&ER has made a difference. As you will see, most of our big impact efforts had nothing to do with a great forecast of GDP or with having built a great econometric model. In almost every case, the impact was made because of the economic framework that was used and how effectively the results of the analysis were communicated to the business group.

EXAMPLE #1: THE INFEASIBLE SOLUTION

In the 1990-91 period, it became very clear to us that the federal government was in effect going to eliminate the harvest of timber from public lands in the western states in order to protect the Spotted Owl and to respond to environmentalist pressures. We began to address the issue by asking how high lumber prices would have to go to clear the impending shortage. After that we had to determine which products or producing geographies would benefit from the rise in prices. Because there had never been such a draconian cut in public timbers supply, an historic situation was not available to build a model.

To answer the first question on price, a literature search was conducted. What is the price elasticity of commodity products? What other industries had experienced large supply shocks and how high did prices go? Most studies put the long-term price elasticity for commodities around 0.2 percent. The combined effect of the supply restriction and growth in trend demand would create about a 10 percent gap between potential demand and likely supply in the year 1994. (The situation was called the "Infeasible Solution," because there did not appear to be enough timber to produce the lumber required to support the next housing recovery in 1993-94.) We concluded that lumber prices would have to go up at least 50 percent from 1980 levels to clear the market.

We then built a linear programming model of the lumber and plywood industries to simulate shadow prices to estimate likely regional margins and supply responses. Mill margins had to remain negative in the Western United States to force closure. Mill margins in the Southern United States and Canada were expected to (and did) explode. Finally, we concluded the timber values would rise sharply in both the West and the South, because timber was the constraining factor.

Our communication task was not easy. With hindsight, this task might appear to be easy. But remember this industry had been depressed for twelve years. Lumber prices in the mid-1980s had reached levels in real terms that were close to the levels of the 1930s. A jump of 50 percent in prices seemed unlikely, as much as they wanted to believe us. After twelve months of reviews with several levels of management, they started to believe us. One decision was reached to purchase over \$100 million worth of southern timber

for conversion over the 1993-94 period. The southern lumber business earned a 40 percent return on that investment. On several occasions they have given us credit for helping to make that happen.

EXAMPLE #2: EXCESS DE-INK PULP CAPACITY

In 1994, the paper industry (everyone, not just Weyerhaeuser) had convinced themselves that – unless they could increase the content of a paper sheet to about 20 percent recycled fiber, they would not be in business after 1997. This triggered a project at one of our complexes to install what is called a de-ink digester. The cost was \$70-100 million. The initial investment analysis concluded that the project would earn the company a 17 percent return on investment (ROI).

In several settings, we had raised serious objections to the assumptions being used by the project team. M&ER were asked by the senior management team to take an independent look at the assumptions used in the financials. A team was pulled together, including people from our R&D organization, our recycling business and the paper business. It was important to establish not where the industry had been, but where it was likely to be in 1997 and beyond. Because the entire industry had the same future belief about the need for recycled content, a bunch of digesters were being built. Our first effort was to evaluate whether there was enough raw materials to feed all the new digesters. The team concluded that the price of the raw material (office waste) for feeding these digesters would skyrocket. Also, because so much capacity was coming on, it was essential to believe that people, especially those that just want commodity paper grades, would pay a premium for that recycled paper content.

In the final decision meeting with the new senior vice president of our Pulp, Paper and Packaging Division, the key bet was made very clear. To get a 17 percent ROI you had to believe that you could get a 3 percent higher price for paper with 25 percent recycled fiber content when compared to paper made with 100 percent wood fiber. He concluded we couldn't and killed the project. As it turned out, the industry has not gone to 25 percent content, because very few customers (not even the government with mandates) wanted to pay the premium for recycled content. Those who did invest in the de-ink digesters were very sorry they had. Today, a de-ink line will sell for 40 percent of the investment cost.

EXAMPLE #3: ADDING THE SCENARIO APPROACH TO THE TOOL KIT

Recently the group has encouraged the use of Scenario Approach – another way to think about the future and develop strategy accordingly. The space allocated for this article does not allow me to describe

the process in detail. What we mean by the Scenario Approach is a very time and analytically intensive process that can take up to six months to complete. It is *not* the high, low and middle trajectory scenarios. Recently, we convinced our Western Timberland and Western Lumber businesses to adopt the approach to assess our future strategy options relative to Japan.

The Japan market is crucial to our western wood products business. The outlook is extremely uncertain, however, based on the changing market demands and the demographic trends in Japan. By forcing the management team to immerse themselves in the outlook process, they became committed to constructing several strategic responses to some different future plausible states. If we had given them a forecast of one of the scenarios developed, they would have dismissed it as impossible. After spending the time, the business came to see how tough the market might become.

As a result of this process, our management had already developed several strategic responses to a tough market in Japan. They were able to act quickly last year when the market collapsed. On several occasions, they have complimented us for initiating the effort.

A REALITY CHECK

Clearly, I chose a few examples that put the group's role in the best possible light. There have been times where our analysis proved correct, but the business had chosen to ignore it. Similarly, there have been a few times when our analysis led to the wrong decision. Fortunately, there have not been many, and usually the key assumptions supporting the analytic framework proved to be wrong. Also, by introducing innovative approaches to thinking about the future, such as the scenario approach, we have defused the notion that we *know* the future.

Outlooks are conditional. They depend on assumptions and relationships. The economy is constantly changing, and a relationship modeled for the 1980s may not work in the late 1990s. Our key decisionmakers respect the honesty and objectivity we bring to the discussion about the future. They also have come to accept that an honest "I don't know" is better than a poorly founded answer.

STILL AT RISK

Like any staff organization in a manufacturing

business, our group is always under scrutiny. Not only do we hear, "What have you done for us lately," but we have to fight the simplistic way some managers like to make decisions. There are those managers that have little patience for hearing why we arrived at a certain outlook. "Just give me the numbers," is still heard.

Also, changes in key management, especially those hired outside the company, can create challenges because they might opt to cut our budget before they even get to know what we contribute. "I did not have this function at company X, so why do I need them here. Besides, aren't economists just those muddled-headed folks that can't agree on anything?" This actually happened. Fortunately, there were several people in his organization that had worked with us for years and valued our input. Our budget was kept afloat by working closely with those people to maintain a budget and contact with that business. Recently, that manager left the company and the new vice president was one of those supporters during the dark days of being outcasts.

CONCLUDING COMMENTS

There are a number of other instances where our group has made a difference. However, one of the trickier tasks is making sure people remember when you made a difference. If you live by forecasts alone, the task is very difficult. I learned early was that one missed forecast can cancel ten right ones. People remember when you are wrong, but for some reason have a hard time recalling when you are right. There are subtle – and they had better be subtle – ways to remind people of the times you helped make a better decision.

Subtlety is crucial. Business managers are paid to make the decisions. Our role is to play an integral part of the decision process. When staff groups start to act like they are the primary reason for a certain outcome, then their future could also be in doubt. Because of our close working relationship with the business management team, they are usually our best spokesmen on where we have made a difference. It is because of that relationship and our impact on their decisions that the group exists today. Economics and economic training are a crucial part of strategy development and project return assessment, but it is not always easy demonstrating that fact.

Making a Difference At Caterpillar

By David Vance*

The economics group in Caterpillar operates in a decentralized organization where acceptance of its services is discretionary. Success depends on the satisfaction of their internal (or external) clients who pay for their services, and the payments must cover the costs of providing them. Services provided include assistance in constructing forecasts of regional sales and customer sales by industry. In addition, forecasts are made of inflation rates, exchange rates, interest rates and commodity prices and also special studies are prepared for specific needs. Underlying this approach is a statement of vision, mission and values that provides the direction and cohesiveness for a growing group in a decentralized environment.

MAKING A DIFFERENCE has made all the difference to the Economics group at Caterpillar Inc. By helping our clients make decisions, we have enjoyed a steady increase in demand for our services since 1990, and all indications are that demand will continue to grow as the company grows. While there are many reasons for our success, this article will concentrate on two that are related: customer focus and a decentralized consulting structure.

Like many economics departments, the size of the group has fluctuated through the past four decades. The group began in the mid-1950s and reached a peak in the 1970s. The 1980-82 recession hit Caterpillar hard and the group was reduced to near its present size. We have three economists (soon to be four) and two economic analysts in Peoria and another economist located in Geneva. Responsibilities for economic outlooks, sales forecasts, special studies and consulting

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are divided geographically, which matches the organization of the marketing units.

As a group we had always had a keen interest in satisfying our internal customers, but this was raised to a new level by the company-wide decentralization in 1991. At this time the company abandoned its centralized functional concept (e.g. manufacturing, scheduling, pricing, etc.) in favor of decentralized, autonomous business units. Product business units (like excavators) were made responsible for designing and manufacturing product. Marketing business units (like a North American marketing group) were responsible for selling the product purchased from the product groups through our independent dealer system. And several service business units were responsible for providing the remaining centralized services to the product or marketing units.

The Economics group is part of the Corporate Services Division, which provides services like accounting, treasury, tax, and information. Some of these services like tax or accounting are provided free of charge to all business units, because participation in the corporate system is mandatory. Others like economics are discretionary, which means that clients can refuse the service we offer and instead purchase it on the outside or forego it all together. So in 1991 we began selling our services to our internal clients. (We also are free to sell our services externally.)

CUSTOMER FOCUS

Our mandate was to provide desired services for a fee – and break even. If clients did not want our services or were not willing to pay our asking price, then we were responsible for cutting costs, including downsizing the group if necessary. On the other hand, if we could sell more services then we could add staff. A free market in economics services came into being as we began negotiating services and fees with our clients.

The process has worked very well and has guaranteed that we make a difference for our clients. After all, if we don't add value, they won't use us. We had several advantages from the beginning that helped us succeed:

1. We had a history of satisfying our clients – even though they weren't required to pay in the past. We had excellent relations with the marketing groups, especially our North American marketing group (about one-half of Caterpillar sales are in the United States). So, these clients were favorably predisposed to continue our service.
2. Our costs were very competitive, which was a good thing. We are charged for everything we use (rent, office services, duplicating, etc.), we cover the full compensation costs of our employees, and we pay for any inside or outside consultants we use. We found we could cover our costs and still charge less than an outside economic consultant.
3. Because we knew our business better than anyone else, we could deliver more value than an outside consultant. Our clients knew from experience that consultants require a "ramp up" period during which they are paid to learn our business. By using us, they avoid the ramp up period and work with people they already know and trust.

As a result of these advantages, we kept our existing client base and picked up quite a few new clients. The mechanics of the prices also contribute to its success by ensuring three things: relevance, scope and communication. Each of these has made us a better provider of service, enhanced the value delivered, and improved employee and customer satisfaction. For ongoing services, we meet with clients regularly to discuss the deliverables, identify emerging needs, check satisfaction and discuss fees. For projects, we first meet to understand the need and to scope out the work. Then we draft a proposal discussing the need, the deliverables, timing and fees. In either case, the clients know what they are getting, when, and how much it will cost.

Because they are driven by the market to scrutinize costs, they only engage our services if they believe we will make a difference. Bottom line, will the value added by our work be worth the cost of the effort? If not, don't hire us to do the work! This immediacy guarantees relevance and efficiency but also employee satisfaction. How often have we all worked hard on a project only to have the final results placed in a binder on a shelf – with no action taken? We don't do this any more. Nobody can afford it. The work we do now has passed the internal market test of value – our results are worth at least the project cost to someone who needs to make a decision. And that makes the work exciting and satisfying!

Growth in a Free Market

This setup also has allowed us to grow. We are adding another economist this year, and we have vastly expanded the use of outside consulting services as well. Growth has been even more dramatic in our Business Intelligence Group, which encompasses Marketing

Research, Information Systems, Forecast Coordination and Trade Association work as well as Economics. The size of this group has almost doubled since the decentralization. Such growth would have been difficult under the old regime, because it would have been hard to convince our executive office that demand for our services really had expanded this much. Even if our clients confirmed their demand, the executives would still have to make a judgment about whether adding full-time positions in our group was the best way to meet this demand and whether the new positions were worth the cost.

Under our current system, the "free market" works relatively unfettered (so far anyway). We prepare a business plan each year based on meeting client needs through agreed-upon fees that covers our anticipated costs. For the past several years, each plan has included new positions, and each year we have gotten approval to add new positions. The executive office basically defers to our clients. If our clients want us to provide the services and they (our clients) can still meet their profit targets while paying for these additional services, then our plan is approved. (For this reason, service centers go last in the business plan approval process.)

Of course, decentralized opportunity also means decentralized responsibility. The focus is on the bottom line, in our case at least breaking even. In our current competitive environment, we are not able to raise the prices we charge our internal clients (they are not bashful about this), so we manage costs carefully and continuously improve productivity. Every year we have to find enough productivity improvement (or costs that can be reduced) to pay the merit increases our employees expect and to pay for higher overhead charges.

We also need to manage revenues and costs through the business cycle. Caterpillar is committed to remaining profitable during the next recession (we lost \$622 million in 1991 and 1992), and as a group we must be prepared to break even as existing clients reduce their work with us. In the event of a downturn, we would of course first try to find new clients to keep our workload steady. We have developed marketing brochures, and we would use these to launch a concerted campaign to find new internal customers. We also would target external customers, whom we so far have not had time to pursue. We have also increased our use of both consultants and flexible work arrangements, which provide some opportunity to reduce costs. All that said, though, meeting targets in a downturn is always harder than it sounds, and we will be grateful for several more good years to "get ready."

DECENTRALIZED CONSULTING

So, what kinds of services do we provide that clients are happy to purchase? Primarily, we help our

clients forecast sales. This usually takes the form of industry demand where industry equals Caterpillar plus all our competitors. We start with an economic outlook for each region of the world, focusing on the sectors important to our business like construction and mining. Then we decide what this implies for industry demand: up (how much), down (how much), or flat. Finally, we communicate the essentials of the economic outlook and the industry forecast. Basically, we tell a story. It needs to be internally consistent, it needs to make sense, and it needs to be clear. In short, we add value by distilling the economic news, analyzing it from our perspective and communicating its meaning to Caterpillar.

It wasn't always so. Once, in the days when information was scarce, clients would have paid us to gather economic information and share it with them. In general, this is no longer the case because information is absolutely abundant. Clients get it in newspapers, magazines and on the Internet. Banks and investment houses distribute more data, economic outlooks and special analyses than you can hope to read – frequently and for free. So now there is a wealth of information at little cost. Our clients won't pay us to duplicate this. Our clients also won't pay for us to maintain macro models, and they shouldn't. That is not our specialty.

Instead, we read as much as we can, do our own analysis, and decide for ourselves what we believe the economic outlook will be for a region. Often this means deciding which of the many views already out there we believe to be correct. Occasionally, it means taking a stand apart from the consensus. Next, we determine the implications of the economic outlook on the industry. Here we focus on construction, mining, forestry, agriculture and petroleum – sectors critical to our business. And we conclude with a forecast of industry demand that serves as the starting point for our company shipment forecast. We present the economic outlook (focusing on indicators key to our business) and the industry forecast in both verbal presentations and written reports. Equally important, we share our thoughts on upside opportunities and downside risks, often through the use of scenarios (especially for long-term forecasts). We maintain all the outlooks and summaries real time on our intranet web site so our clients can access the most current forecast at any time.

We also forecast inflation rates, exchange rates and interest rates as well as commodity prices. We work closely with our clients to use this information to advantage in structuring purchasing agreements, making hedging or investment decisions and placing/retiring debt. And we perform special studies and conduct project work – all in response to particular client needs. The bottom line in all this is that we provide more than numbers – we provide guidance, understanding and most importantly we provide an-

swers to their specific questions.

An example of meeting specific client needs arose several years ago when our North American marketing group was having difficulty gaining “buy in” for their business plan sales forecast. There are seventeen district office in the United States and Canada that work closely with our independent dealers to sell product to the end users. With the move to a decentralized company, the goal was to have the districts “own” their forecasts and be responsible for meeting them. In fact, their incentive pay would be based on it. So, the districts sent in their forecasts, and these were aggregated to U.S. and Canada levels.

But there was a problem. Based on our economic outlooks and industry modeling at the U.S. and Canadian levels, the view from Peoria was different than the view from the districts. Because the top level view was supported by our work, the marketing organization overrode the district input and submitted a business plan forecast based on our input. Then the district forecasts were adjusted to add to Peoria's total and the districts were held accountable for achieving Peoria's plan. You can imagine how this went over in the districts. They were now responsible for achieving a forecast that wasn't “theirs.” A typical comment was, “Next year, don't ask us to provide a forecast since you aren't going to use it anyway. And don't talk to us about empowerment.”

In response to this problem, we developed district level sales forecasts that we shared with them several months before their forecasts were due in Peoria. We told them what the important economic drivers were for their own district and shared with them both the history and forecast for these explanatory variables. And we encouraged them to run these forecasts for housing starts and other variables by local experts in banks and universities to see if we had agreement. In some cases, we found local experts not only had significantly different forecasts but that theirs made more sense, so we reran the sales model using their forecasts.

We have used this approach now for several years. The districts generally have submitted forecasts close to our recommendations, so the roll up has come in right where we thought it should. Consequently, there have been only minor adjustments to their forecasts, and the process runs much more smoothly. As a result of forecasting at a lower level, we not only got “buy in” but better understanding, which has led to better forecasts.

THE OTHER ELEMENTS FOR SUCCESS

So, the decentralized structure is in place, and we are successfully providing value-added services to our paying clients. What else is there? Especially for a growing group or a group with turnover, I would add

a Statement of Vision, Mission and Values. Just having the group discuss and agree on these will prove to be very positive, but the benefit will be more apparent down the road. In a decentralized environment everyone needs to be more independent – able to respond to customer needs and problems, deal with internal and external consultants, and create opportunities. This independence or empowerment can be a very powerful force and lead to high levels of employee and client satisfaction – as long as it is channeled appropriately. That is where the vision, mission and values come in. They provide the framework, the comfort zone, the boundaries.

The vision is what you would like to be, if not now, then someday. Our vision for Business Intelligence is: “Be the best client-driven provider of Business Intelligence.” This gives people an idea of where we are going. Next is the mission or purpose, which is more down to earth and immediate: “Provide our clients with the business intelligence required to make better decisions.” This pays the bills day in, day out. Last, but certainly not least, are our values. The hardest part about deciding on core values is keeping the list short. So you need to force yourself to choose those that are most appropriate for your particular group. We settled on these seven after much discussion, and they have worked well:

Treat people with Respect, Honesty and Dignity
Be Open-minded
Integrity
Support one another personally and professionally
Learn, Adapt, Develop, Grow
Excellence
Client focused

From experience, we have found that a values orientation can really make a difference if you take the values to heart and try to live them on a daily basis. Taken together, the vision, mission and values provide the direction and cohesiveness needed for a growing group in a decentralized environment. And, because customer focus is one of the core values, this approach reinforces the client-based, service orientation critical to our success.

This brings us back to the beginning. Customer focus and a decentralized structure have allowed us to really “make a difference” at Caterpillar since 1991. We have prospered in this environment by helping our clients make better decisions. This in turn has led to a greater demand for our services and a real sense of satisfaction among members of the group who know their work is truly appreciated. After all, the clients not only say they like our work but are willing to hire us to do more. And by maintaining our customer focus, we plan to continue making a difference.

Making a Difference at Air Products & Chemicals

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.

AS 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 macroeconomic 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.

The Business Economist at Work: Argus Research Corporation

By Richard A. Yamarone



Richard A. Yamarone is Senior Economist, Argus Research Corporation, New York, NY.

While formal academic training as an economist is indispensable, it only partly prepares for work as a financial markets economist. My job as a Wall Street economist at Argus Research includes creating and maintaining a database of economic statistics as well as a number of macroeconomic models. From this database springs the firm's forecast of all the major economic indicators released each trading day, as well as a longer-term view of economic trends. I also generate extensive commentary on current and future economic conditions for the firm and its clients.

As with many professions, the practical functions performed daily by the financial markets economist have little to do with the theory taught in graduate school. And yet those daily functions, duties, and responsibilities can best be summed up in a phrase borrowed from an earlier stage of schooling: reading, writing, and a whole lot of arithmetic.

Our nation's universities rarely teach practical "real life" economics. Schools are so determined to impress upon economists-in-training the importance of Giffen Good paradoxes and the latest debate between Smithian free-market and Keynesian philosophies that these trees tend to obscure the forest of daily practice. While a firm foundation in theory is indispensable, the fledgling economist comes only partly prepared to Wall Street. In the absence of a mentor, new economists must navigate on their own some deep and treacherous waters: from gaining a complete understanding of the National Income and Product Accounts, to the calculation of major economic statistics such as CPI, to deciphering the cryptic Fed-speak that accompanies a shift in Federal Reserve policy.

One reason for the dearth of "real-world" economics courses is that each career path requires its own path-specific approach. No single title applies to those who ply their trade on the Street. Some of the more familiar roles played

by economists on Wall Street are macroforecaster, statistician, econometrician, and international economist. Perhaps the most widely accepted is financial markets economist.

Job of a Wall Street Economist

The term “financial economist” is a bit of a misnomer; it conjures images of Fisher Black and Myron Scholes laboring over their option-pricing models. A better term for what I do might be Wall Street economist.

Some background in the ways of Wall Street is a must for this position. Practical work experience in at least two related but distinct areas is a requirement at Argus Research. First-hand experience trading in the stock or bond markets, for example, provides a useful backdrop when considering the forces that affect those markets. Individuals who have “ridden” a position overnight are best situated to write about those economic events that affect positions in foreign exchange, fixed income or equities. Looking at the economy from the perspective of a trader provides insights denied the pure academic.

Argus regards this “insider’s” viewpoint as a great generator of ideas for new and timely market-related commentary. Years ago, working as a trader of money-market instruments and interest-rate derivative securities, I saw first-hand how the credit markets responded to releases of the Federal Reserve’s Beige Book. As a trading floor economist for an Australian bank, I created a mock Beige Book that detailed the goings on in each of the Fed’s twelve districts—two weeks before the official book was released. I eventually performed the same function regarding the Fed’s Blue and Green Books. These books were reviewed during policy meetings, winning kudos from senior management.

Yet an economist can’t permit earlier experiences to obscure the needs of current clients. Products and commentary must always be considered with respect to the client’s needs. When writing for a daily trading audience, I focused more on yield spreads and Federal Reserve activity. Argus subscribers come to us for equity-related advice, and my focus is on more industry-specific matters, e.g., the effect of rising oil prices on transportation issues.

Reading

The Argus approach to economic analysis parallels that of Fed Chairman Alan Greenspan—gather all relevant information on the economy, industry, financial markets and international developments, toss in a few academic “white papers,” and form an opinion on the direction of the economy, interest rates and monetary policy. Unfortunately, the major difference between the Fed chairman and the Argus economics team is that the Fed has an arsenal of research and economic professionals. Sometimes dozens of economists are employed in the creation of one economic measure.

It is most efficient to get the reading out of the way during the morning commute. Clearly if you drive to work this isn’t such a great idea. But listening to a financial news station on the radio, such as Bloomberg Business

Radio here in New York, could provide an alternative way of thinking about a problem or a solution.

Most of the topics that are chosen for the morning commentary are derived prior to 6:30 a.m., what I refer to as the information hour. By the first hour of work (6:00 a.m. to 7:00 a.m.) I have been able to digest the top ten economically rel-

evant stories from a dozen newspapers and daily closing commentaries from overseas sources. E-mail and early morning telephone conversations provide insight for the first and foremost question of the day: What will the top story be that affects the U.S. financial markets? The answer is usually provided by our sources in Australia, Tokyo, Singapore or London.

What to read? Obviously each economist has favorites. But I have found that the most market-moving commentary and most talked-about stories on trading floors have come from (in the order of market-moving history) *The Financial Times*, *The Washington Post*, *The Wall Street Journal* and *The New York Times*. Others papers read on a daily basis for content include *The South China Morning Post*, *The Chicago Sun Times* and *The Journal of Commerce*.

The Journal of Commerce provides the most comprehensive collection of daily commodity, industrial and economic data available in any newspaper. Arguably, this paper contains more in-depth coverage of commodity

***Products and
commentary must
always be considered
with respect to the
client’s needs.***

prices like metals, chemicals and energy than any other available publication. The commentary on trade and shipping issues is second to none. If you are starting up an economic database, it would be in your best interest to start with a subscription to the JOC.

Barron's, a newsweekly, is perhaps the most timely of all weeklies with respect to coverage of economic activity, markets and economic and financial data. It is a "must read" for any serious market pundit. It challenges daily publications on issues with respect to timeliness.

Magazines complete the package, providing economic data, relevant market and economic coverage and, in most instances, a unique global perspective. Must reads include: *The Economist*, the *Far East Economic Review*, *International Economy* and *Business Week*.

Daily and weekly reading is done for many reasons. First and foremost, information drives the financial markets, as markets need information on which to trade. And the primary source for that information can be found in the papers. A day without the release of any significant economic data is a dead day. Watch the markets for this phenomenon.

This is the key to providing a good economic service: Know your client's needs. Know what they need to know before the rest of the market—then provide it to them as soon as possible. Frequently, dealers come in on Friday mornings to see that the benchmark thirty-year Treasury bond has moved considerably. More times than not, the move can be traced to a story appearing on the *Business Week* website that was released at 6:00 p.m. on Thursday evening (a day before the magazine hits the newsstands). If you can provide this type of quick investigative research, word will get out, and prospective clients will flock to your sales department.

Reading the speeches of Federal Reserve and Treasury officials, regional "beige books" and the Humphrey-Hawkins testimony of Fed Chairman Alan Greenspan provide the foundation for the weekly Fed Watch column and help form the Argus opinion/forecast of the direction of future monetary policy.

***Know your client's needs.
Know what they need to
know before the rest of
the market—then
provide it to them as
soon as possible.***

Before I conclude the reading section, I should provide my definition of "reading." With some dozen newspapers served up each day, reading each publication cover to cover would consume about eight hours of valuable time. What I really do is skim each paper (by headline), looking for only those articles that could and would influence the economy in a significant manner.

Usually, very little can be found in the Entertainment, Home and Metropolitan sections. The Nation, Politics and Business sections are generally the most beneficial sources for such information.

Writing

Reading helps with writing. Timely and relevant topics for commentary can be taken from a brief comment heard on the radio or written in an overseas newspaper. The market-dictating economic story—found during the information hour described above—will lead-off the morning publication called the *Argus Market Watch*. This report always consists of a graphical depiction of the day's most relevant topic or trend, supported by a concise (150-word) presentation.

At Argus Research, the senior economist is responsible for writing the cover page of the *Weekly Staff Report*—a responsibility of the senior economist for more than sixty-five years. Traditionally, topics include anything and everything related to the economy and financial markets. Recent titles include: "Outlook Bleak for Agricultural Credit Conditions," "Uncle Sam Money Manager," and "*Agitata Da Due Venti*." These columns range anywhere from a minimum of 750 words to a maximum of 3,000 words.

Other written responsibilities in the *Weekly Staff Report* are columns entitled: "Fed Watch," "Economic Observations," "The Monthly Economic Calendar," and "U.S. Macro-economic Data." These generally take up only a handful of the thirty-two-page weekly report.

A biweekly publication entitled *Economy at a Glance* is a four-page report containing a series of charts and graphs supporting the associated commentary. The last page contains our forecasts of the forthcoming weeks' economic statistics in calendar form.

Monthly commentary includes the *Economic and*

Interest Rate Viewpoint, which is a written estimation of the U.S. macroeconomy and the interest-rate forecast, supported with charts and tables of germane statistics and indicators. This report discusses the Argus investment policy and its relationship to economic political and market developments.

Monthly commentary must also be written for the Argus Monthly Conference Call. Generally this contains one part forecasts, one part international outlook, one part fixed-income commentary and a final miscellaneous economic topic.

A Whole Lot of Arithmetic

Saturday is Forecasting Day. All major macroeconomic variables are forecast with simple models (mostly multiple linear regressions) for the monthly economic statistics. Typically, they include: industrial production, housing starts, consumer spending and consumer prices. Many of these monthly indicators are used in the evaluation of the broader macroeconomic view. After the numbers are crunched, the commentary obtained by each of the Argus industry analysts is employed (respective to the indicator), and the final figures are subjectively tweaked with respect to the analyst's remarks and observations.

Approximately eight times a year, the Argus macroeconomic model is loaded up and estimated. The detailed results are presented initially to our subscribers, while the broader components are released to the press at least two weeks after our clients have had ample time to digest the figures.

In this calculation of GDP and its components, input from sources other than Argus analysts and their respective industry heads are utilized. For example, the Federal Reserve's Beige Book and minutes from recent FOMC meetings are immensely informative. In other cases, contact with state officials about labor market conditions and economic growth in their respective states provide insight to turning points in the direction of overall economic activity. Input from notes obtained by way of my readings are frequently used.

During early March, New York State experienced some major snow storms, so that Governor Pataki declared a state of emergency in seventeen counties. Having written this down in my notebook, I was able to shave off some activity in my forecast of some March data.

The role of the financial markets economist is both enhanced and complicated by Internet technology.

Every day, the Argus Commodity Price Index is updated and charted. By personally inputting each of the data each morning, I have been able to notice the trends and influences that some of the commodities have experienced, both individually and cumulatively, as an indicator of overall commodity price activity.

Finally, the quarterly interest-rate forecasts are produced for fed funds, the three-month Treasury bill, the two-year, three-year, five-year and ten-year Treasury note and the benchmark thirty-year Treasury bond. The range for each maturity along the yield curve is provided, as well as an "average" yield for each quarter.

The Internet, an Economist's Secret Research Department

The role of the financial markets economist is both enhanced and complicated by Internet technology. Research that would have taken weeks can now be conducted in a matter of seconds. Data are plentiful and available on every industry. Virtually every company, state and central bank has a web site containing the most important tool for the economist, i.e., information. The nation's providers of economic data, the Bureau of Labor Statistics, the Department of Commerce and the Federal Reserve, all have web sites containing the most recent economic data. I dedicate about two (early morning) hours daily to the gathering of economic reports, data, information and research released by these agencies. Any of the Fed's thirteen web sites provides more economic information and data than any economic start-up could demand. Academic research papers provide an excellent foundation for future commentary and economic model development. An excellent source for this information is the home pages of university departments of economics. U. S. economics departments on the Internet can be found at <http://price.bus.okstate.edu/econdept.html>. At last count, 320 schools were represented on this site. Staff reports, working papers and discussion

papers from web sites generally account for the bulk of evening and weekend readings.

Journal articles from think tanks also provide insight for upcoming commentaries, speeches or forecast methods. Preferred sources include the Brookings Institute, the American Economic Institute, *Challenge*, and the NABE's own *Business Economics*. All are excellent places to find topics for economic commentary. Even those working papers deemed too technical for the junior economist can generate new ideas. Papers on inventory cycles, the wealth effect and the Asian financial crisis are just a few of the thousands of areas that can help provide support for an argument in a commentary, update a module in the firm's model or generate new ideas for future projects and speeches.

We recently found a working paper found on Granger Causality that added color to our research and commentary on whether increases in wages, as measured by average hourly earnings, equate to increases in the general price level. Even if a paper merely prompts a thought, it may assist you in future research.

Other respected and much-frequented sites for research include the Bank for International Settlements (with links to fifty-five central banks from around the world), the U.S. Treasury Department, the Department of Commerce and the Bureau of Labor Statistics. Much of the day's time is dedicated to searching these sites for material, papers and data.

Industry Analyst Input

One of best aspects of working at an independent equity research firm is the ability to speak with industry experts. I frequently discuss emerging trends in areas as diverse as building materials, merchandising, and banking. Analysts provide not just the hard numbers but insight into the consequences that their "covered" firms face when global economies slow or accelerate. When companies experience problems—bottlenecks, weather-related issues, shipping disruptions—the industry analyst can quantify the degree to which these developments hinder or promote activity not only in the industry, but in the economy as a whole. Again, this helps the economist with macroeconomic forecasts. At Argus Research, analysts use the forum of a weekly Tuesday meeting (now in its sixty-fifth year) to discuss existing and pending developments.

In addition to having to forecast all of the major macroeconomic variables, database maintenance is an essential part of the job.

This provides the economist with much greater insight and a wider perspective regarding future economic activity than similar trading floor economists or many banking/financial economists may receive. I actually believe that the Federal Reserve doesn't get a perspective as immediate and profound as this.

By necessity, some relationships are "tighter" than others. From a macroeconomic perspective, the insights from the basic materials or retail analyst will play a more integral role in shaping economic forecasts than input from, say, the pharmaceutical analyst. In the macroeconomic picture, some inputs carry greater weight in overall economic activity. Conversely, consumer and producer price forecasts are deeply dependent on input from consumer nondurable analysts.

Another great benefit of having all of these analysts around is the availability of trade journals. Nothing is more attractive to a macroeconomist than some trade journals lying around the office, chock-full of data. Some of the more informative journals include: *Oil & Gas Investor*, *Chemical Market Reporter*, *Automotive News*, *Railway Age* and *Beverage World*. A truly devoted macroeconomist takes to these journals as a sixteen-year old boy would to a *Playboy* magazine.

Database Management

In addition to having to forecast all of the major macroeconomic variables, database maintenance is an essential part of the job. How credible can the forecasts be if they are based on outdated and unrevised data? A great portion of the day is spent updating this database. At last count it comprises 6,500 series, including some lesser-known but important economic statistics. Some of the more obscure data include railroad car loadings, oil rig counts and shipping and port activity.

Again, trade journals contribute extensively to the data-

base. Some of the more recognized data-providing journals include: *Railway Age*, *Modern Plastics*, *Engineering News-Record*, *Pulp & Paper* and *Automotive News*.

Furthermore, the models are frequently revised with respect to new information obtained either by reading or through some of the industry contacts. As web sites are discovered and new data become available, the data are incorporated into our models. A recent example is having stumbled upon sites containing pallet production data. We have since incorporated that into some of our shipping and export components of the Argus macromodel.

Media and Press

One of the more essential duties of the Wall Street economist is the marketing and promotion of the firm's wares. How can the firm attract more clients without the knowledge of the existence of the firm's business? The economist of a firm has the ability to present the firm and its opinions for public attention.

When the media calls, it is in the best interest of the economist to respond in an informative manner. At Argus, all analysts and economists are encouraged to make appearances on the major Business Networks like CNNfN, CNBC and Bloomberg Television when time affords it.

Stealing from Joel Prakken's comments in this column in January 1999, "Never turn down a national TV spot." The exposure that a national television spot creates is remarkable. After appearing on CNNfN, my office is inundated with phone calls, some from prospective clients.

Newspapers and newswire comments are just as important, because it is this path that permits the general public to read about your forecasts and your interpretation of different economic releases.

Suggestions

Finally, some helpful hints. These may not be secrets to fellow economists, but to those of you that are just getting started or are thinking of making your way into Wall Street as an economist, they should prove beneficial.

Read everything! The greatest tool an economist can have is information. Generally, the information comes in the form of economic news reports, and not everyone can have the newswires running through their home. So, read the newspapers and use the Internet. Every newspaper

contains something of importance to the macroeconomy; you just have to look for it.

This is where the economist's second greatest tool comes in handy—a pair of scissors. Literally cut the important information from the newspaper or magazine and paste it into a notebook or file. Then, when you are called for a presentation by clients, schools or finance groups, you have some reference materials available.

Carry a notebook with you at all times. Ideas come at the most unexpected times and should be jotted down. When economists are required to write weekly columns on the economy, it can be boring for readers to read about economic data releases. In fact, I shy away from writing about releases in our *Weekly Staff Report*. It isn't always economic data that finds its way into this book and subsequently into my writings. Generally anything that disrupts or furthers economic activity to a substantial degree finds its way into this book.

Folders in my office range from the truly obscure India & the Bomb, the Big Mac Index, and Cigarette Tax to the more common Social Security and Underground Economy.

Build that Rolodex. Make contacts in many different fields. Don't limit your contact sheets to just traders of bonds, futures or equities. Find heads of industry, Federal Reserve Bank officials, senior economists in state and local municipalities. I have found that academics are wonderful sources for insight to international developments and alternative ways to look at economic conditions and developments. ■

The Business Economist at Work: The National Federation of Independent Business

By William C. Dunkelberg



William C. Dunkelberg is Chief Economist, The National Federation of Independent Business, Washington, DC. He also is a past president and a Fellow of NABE as well as an associate editor of this journal.

The economics staff of NICB has several major functions. It helps the organization identify and articulate its strategic goals and objectives in the framework of its mission to improve the economic and regulatory environment for small business and entrepreneurship. It explains to the political arm of the organization the implications for our members of bills that arise in Congress or in state legislatures, and helps our representatives make the case for legislation that NFIB would like to support, including presentations to Congress, academic meetings, government agencies, and the media. The economic staff collects, maintains, and analyzes the NFIB data base, consisting of thousands of interviews with U.S. employers each year dating back to 1973. As well it designs and executes special studies to support NFIB's agenda, e.g., studies of the impact of bank deregulation or the Clinton health care initiative.

Organizations have simple goals, and the world is complex. For every action there is some sort of reaction (borrowing a bit of physics). And thus the need for the “organizational” economist, a person who “interprets” the complex world to the organization and who helps anticipate the world’s reaction to organizational changes and helps to plan those strategies. The National Federation of Independent Business (NFIB) is an organization with over 600,000 member firms. It represents the interests of small business in Washington and in fifty state capitals. NFIB was founded in 1943 to provide a stronger voice for small business in a political world where “big business” exercised a strong voice that often did not recognize the differences between them and the smaller firms that constitute the small business community. According to the Small Business Administration, more than 90 percent of all employers in the United States have fewer than twenty employees, and 98 percent have fewer than 500. These firms, taken together, would constitute the third largest economy in the world, after those of the entire United States and Japan.

Research Staff

NFIB is in an unusual position—it generates its own unique data, using the membership as a source of informa-

tion. It has, since 1973, built its own time series data through the use of quarterly (now monthly) surveys of its member firms. About one of every eight employers in the United States is a member. In addition, NFIB has undertaken a number of specialized issue-focused studies, including studies of the impact of the energy shortage, banking deregulation, and health insurance regulation (*US News* credits NFIB with the failure of the Clinton health care initiative, a challenge that engaged the economics staff from strategic planning, e.g., what should our position be, to data collection, education, testimony, press coverage and the preparation of a monograph).

NFIB does not maintain a large staff of economists. Indeed, there is only one (me), who works closely with a research-oriented political scientist with strong Washington, DC, experience and an assistant or two. When specialized studies are needed, we “make a deal” with the best available specialist in the field, providing data in exchange for an “objectively” written monograph. Our collaboration with Mike Boskin years ago on Social Security is an example of this partnering process. This allows NFIB to have all of academia as its staff and to provide academics and other research organizations with a rich set of data on a segment of the U.S. economy that was neglected by government data collection initiatives for decades.

Skills Required

The skill requirements for the position are probably typical of those for most senior economist jobs. First are the communication skills. Both oral and written skills are essential. Analytical skills are also important and closely tied to presentation skills. You have to learn what is important to show and how to show it to your audience. Complex analytical programs may provide insights, but even these must be presented in creative, clever and simple ways. Taking advantage of NABE’s many skill seminars is a must for developing your communication, presentation and analytical skills. NFIB has a particular need for skills in the area of survey research that are not typical of most senior economist jobs. However, the use of “survey data” is growing in many of the functional areas in which business economics is practiced, including market research and strategic planning.

Perhaps the most important skill is effective communication.

Perhaps the most important skill to develop is effective communication. Take every opportunity you have to improve your presentation skills. You need these to sell yourself and your ideas. There are internal battles over budgets to win,

clients to entertain and inform, Congressional committees to convince, the press to inform, and your internal clients to serve. I have done “one-minute” editorials for years for radio. That’s good practice—can you convey an important idea in just sixty seconds? It’s a good skill to develop. I have over the years watched the presentation of testimony before Congressional committees and am struck with how ineffective these have been. When the testimony starts, the head of the witness drops as he begins *reading* testimony. There is no “eye” contact; all the committee can see is an emerging bald spot. Naturally, committee members stop listening and start talking to each other or to staff. Time runs out half way through the “dramatic reading,” and the presenter has not even made the important points. When you are giving a speech or testimony, be crisp, have your basic points in mind and look your audience in the eye as you hammer your points home. This way, you can manage the encounter and better ensure that your message gets across.

Traditional analytical skills are important for everyone practicing business economics. Even if you don’t do data analysis yourself, you need to be able to recognize bad work when you see it! This is becoming increasingly true for interpreting “poll data.” Too many “analysts” just run some data and produce a chart. You need to be aware of the deficiencies of the data or the collection methods used to generate it, the revision process, issues of “real” vs. “nominal,” etc. For most of your “clients” (internal, press, Congress), your empirical work will be modest in complexity, but when needed, you had better be able to explain “regression” in very simple terms and be able to use the sophisticated analytical techniques available and the insights these methodologies provide.

NFIB generates its own data using survey methodology. This is not often done by organizations and companies, but more so today than ever before due to the newer interviewing technologies that are available. When generating time-series data, you can’t change the question midstream without compromising the meaningfulness of the data, so “get-

ting it right” the first time is important. In 1973, when we first designed the NFIB questionnaire, who would have thought to ask about price cuts or leasing of capital equipment? There are a number of issues related to scientific sampling, response rates, and the representativeness of the NFIB membership list that must be resolved in the data collection process. Question and questionnaire design are both art and science and present many challenges as we respond to the desires of our internal clients for information. If you do this work periodically, get professional help!

The Work To Be Done

NFIB has surveyed its members continuously since 1973, creating a meaningful and valuable data base used by private economists, academics, government agencies and the press. Each month, we mail up to 8,000 interviews to NFIB members on the first day of the month. This is followed with a second mailing ten days later. Overall, this has historically produced a response rate of about 30 percent, although this performance has faded of late. As the questionnaires are returned, they are coded into a data file (one day we will use scanners). At the end of the month, basic SPSS cross-tabs are run on the data, and the response is checked for bias by comparing the information in the sample frame to the characteristics of the sample. Because we mail to members, we have information about the sample frame and can determine whether or not the respondents are different from the frame, e.g., was there a “bias” in the response with respect to important firm characteristics. By comparing the industry, employment, sales, region, etc. distributions from the sample to those from the total membership, we can identify potential problems resulting from response bias and, when necessary, correct them by weighting the sample.

Once the sample is clean, a series of cross-tabulations are run to collect the basic data for the time series data base, which includes data on hiring, changes in prices, capital spending, expectations for future spending, hiring and price changes etc. These data are entered into spreadsheets that serve as input to more complex analytical programs as well as the graphics programs. The raw numbers are plugged into models used to predict GDP growth, CPI inflation, employment growth, capital spending, inventory investment, etc. These models are not structural models of the economy but simply convert the NFIB data into predic-

The NFIB measures provide an excellent framework for monitoring the current performance of the economy.

tions of the behavior of important economic aggregates that are followed by the press and policymakers (the Federal Reserve is always first to receive the data). The NFIB measures provide an excellent framework for monitoring the current performance of the economy but cannot be used in structural models of the economy that are used to produce long-term forecasts, because forecasting expectations and plans five years out is not feasible.

Once the basic data are ready, the reports are written and released to clients as soon as they are done and to the press on the fifteenth of each month. By this time, of course, we are half way through the survey for the next month, so only fifteen days remain until the process starts again.

Technology is changing the way we process the monthly NFIB studies. By the end of the year, we hope to be able to process returned questionnaires each day and access the data on any given day in response to requests for early readings on the data before important policy meetings and presentations or in response to important economic events. Recalling the October 1987 stock market crash, we were able to divide our sample into interviews done before the crash and afterward, because interviews come in every day of the month. Based on that analysis, we quickly predicted that there were no serious adverse impacts of the crash on the “real” economy and no need to fear a 1929-type economic disaster. Indeed, we discovered that the record stock market decline had virtually no impact at all on spending and hiring plans and surprisingly little impact on business owner sentiment. As the technology for processing data and communicating improves, we will be able to undertake more analyses of this type.

Part of our job is to produce “academic” articles that can be published in traditional research journals. This does require that we are “up to speed” on the latest stuff. We are expected to make presentations to academic conferences and publish our research work, another job requirement that is a bit different from those of most senior economists.

But this task is made easier by the availability of unique data sets and our ability actually to design the data collection to fit the theoretical models we work with. Most researchers must work with the data that someone else collected for some other purpose. It is a rare opportunity to be able to design data collection based on the theoretical constructs that the researcher wishes to work with.

Whenever you are asked to collect some data, there is an “implicit” model of economic behavior behind the request. Using your training to discover and amplify the model will improve your data collection and the quality of the analysis and presentation that you ultimately will have to make. Don’t miss opportunities to enrich any data collection effort by looking for ways to widen the potential for analysis, often with the addition of just one question to a questionnaire. When you are collecting a large number of basic descriptive variables in a survey, adding one more “dependent variable” with just one question can magnify the analytical leverage of your data collection effort. We use this approach to build multiple uses into every survey we do. We have produced an excellent guide to questionnaire construction for internal use at NFIB, which we will be happy to make available.

As the Next Survey is Underway...

With the data safely stored away in a spreadsheet, all forecasts updated and the monthly report distributed, we switch to “news watching.” With a corner on the data that covers nearly half the U.S. economy, we have much to say in anticipation of and in response to the release of important economic indicators. We often disagree with the numbers and very often are vindicated by the revisions. Because we are talking each month to the firms that are engaged in the behavior covered by the releases (prices, jobs, capital spending, inventories, etc.), our numbers turn out to be very reliable and are never subject to revision. Throughout the month, we prepare press releases in anticipation of government releases and respond to the numbers at release time. Our goal, of course, is to increase the public awareness of NFIB and to contribute some insight to the public discussion of the numbers, which are often a bit misleading and inaccurate before they are finally revised.

The thirty-day cycle keeps us busy and compels us to keep on top of current economic events. Keeping up with the many requests for data from our various clients is a

major task unto itself. And the briefings for the staff and the planning for next year’s special projects must be worked in. We clearly have another battle on the minimum wage, health care and “death taxes” to prepare for. And we need to identify our proactive agenda and design studies that provide data to support those positions. Because our “political arm” has discovered the “power of the poll,” there is a continual need to control the number of items we mail to our 600,000 plus members, a tough coordination problem with fifty state directors to work with.

The successful execution of our duties most often makes use of basic economic logic and models (the principles of economics seem to have eluded many policymakers in Washington as well as our company managers) and the careful use of simple statistics and presentations. Being able to “step back and see the big picture” is critical to the success of anyone practicing business economics, because most employees in an organization (yours or the government or some other) have a very narrow focus and miss the important nature of “feedback” in an economic system (the firm or the economy). Opportunities are also available to help management on such issues as incentives and the implications of new accounting schemes and measurements for company performance (remember, accounting systems produce numbers that people try to maximize or minimize). NFIB is continually looking for ways to improve organizational performance and structure. Be on the lookout to provide some helpful commentary to management when the opportunity arises. It’s part of the job description for a successful practitioner of business economics. Economics gives you a unique and useful perspective on the economy—it’s our competitive advantage in the workplace if we learn how to use it. ■

The Business Economist at Work: Thomson Financial Services

By Nancy J. Kimelman*

Thomson is a leading provider of real-time economic, technical and fundamental analysis of fixed-income securities and foreign exchange markets to clients globally via various screen services. As a financial markets economist, most analyses are made within minutes of news scrolling across newswires, and more lengthy reports are completed within thirty minutes of release. The company also provides the results of weekly polls of economists to provide a consensus for the next two weeks of economic data. The focus of work is short term and on the short end of fixed-income securities markets. Services are sold directly to clients, so that the compensation for this line position depends on quick and successful interpretation and marketing of information.

FACE IT: Economics is not a profession known to most high-school students. Like many of my generation, when I was kid I dreamed of becoming a doctor, preferably one who would work in as exciting and action-packed environment as the MASH unit I saw on TV each week. I dutifully took the science and math courses required for a pre-med concentration when I first hit college, and then it hit me. While I loved MASH, I hated the natural sciences, found three-hour labs woefully boring, and got faint at the sight of blood. Luckily, after I picked myself up off the floor, it wasn't long before I realized an intense attraction for markets. Which is how and why I became a financial market economist.

Since I joined Thomson Financial nine years ago, I've been lucky enough to join my craving for the

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excitement and immediacy of a MASH unit with what has become an intellectual as well as visceral attraction to the financial markets. Thomson Global Markets is a leading provider of optional services that offer real-time economic, technical and fundamental analysis of the fixed-income and foreign exchange markets to clients globally over the Telerate, Bloomberg, Bridge and Reuters networks. As Chief Economist located in our Boston office, I spend my day providing real-time economic analysis that supports traders, salesmen and investors in these markets. This work entails a full range of macroeconomic analysis, from covering Greenspan's Humphrey-Hawkins testimony or the employment report to writing a daily comment that sheds light on a little-known or underappreciated trend in the economy to forecasting interest and exchange rates.

MASH surgeons performed what they called "meatball surgery" at the front, i.e., their aim was to stabilize incoming wounded, often for transfer to an army hospital for considered care. Sometimes those wounded were not seriously ill; their wounds were treated at the MASH facility and the soldiers returned directly back to their units. It seemed that all too often, however, the surgeons had no alternative but to attempt complicated surgery in the less-than-ideal conditions of the mobile unit. You may remember the episode when Charles, a surgeon from Mass General Hospital, took his first turn in the operating room. He was appalled.

ÔMEATBALLÖ ECONOMICS

At Thomson, I practice "meatball" economics. At my job, I provide real-time analysis for clients to react sensibly to incoming economic and political news. The key word in that sentence is "react." This is not the stuff dissertations are made of! My initial analysis must be completed within minutes of the news scrolling across the newswires. My "full" analysis of the monthly employment report is finished within thirty minutes of its release.

Often, the economic news is not critical, so the little time and effort I expend to cover the event is all

anyone needs to go on with their day. But sometimes economics circumstances conspire to make it seem like the world—or at least a great deal of cash—hangs on my quick analysis. Especially in recessions, bear markets, and times of political unrest, the need for fast, accurate analysis can be overwhelming.

Many academic economists, I suspect, would be appalled if they saw me in action. They needn't be, for the economics I practice is good, sound economics even if it's far removed from the economic analysis that has benefited from intensive research, econometric testing and peer review.

Consensus Building

Thomson provides a critical service to the market with the economist survey we conduct every Friday. About thirty economists in the financial community are polled for their estimates of the next two weeks' numbers. We tabulate the results and post them to our screen services, which are available on Telerate, Bloomberg and Bridge. We also make the survey results available to the press. *The Wall Street Journal* and *Barron's* carry the results of our U.S. survey each week. In fact, the three global editions of *The Wall Street Journal* report consensus figures from the Thomson surveys conducted in the United States, Europe and Asia.

Efficient markets price in information as it becomes available, so my job on the screens is to analyze the "new" news that hits the Street. My write-up of economic data releases will make short shrift of the known trends in the data, therefore, and focus either on new trends that may be in the works or on deviations from existing trends. I think this is one of the reasons why Wall Street economists like myself often sound alarmist; we forget to state the obvious.

Short-term Focus

Not only does the analysis we provide have a very short fuse, it often focuses on the short end of the market. Chairman Greenspan, and Volcker before him, have done a lot to bury the fine art of Fed watching. Nevertheless, participants in the markets always want to know if a piece of news will alter the Fed's thinking or bring it closer to a rate adjustment. The globalization of the financial markets has added another twist to our work. Now the markets also want to know if the news will affect the likelihood of foreign exchange intervention here in the United States or by a foreign central bank.

Macroeconomists working in the 1970s and 1980s typically passed new information through their quarterly econometric models to estimate the impact on GDP growth, interest and exchange rates, the federal budget and Fed policy. There's no time for that sort of thing anymore, and I'm not sure the process had better

results than the quick back-of-the-envelope forecast adjustments that economists like myself perform now. A lot of what was made explicit in those economic models has been internalized by financial market economists. And a lot of that has been adopted by traders, salesmen and investors themselves. The level of sophistication of those we serve has increased probably ten-fold in the past ten years. I have to believe the easy access to economic analysis over screens is one reason why that is so.

Biographies of Important Economic Figures

This was not a subject I learned much about in grad school. While most economists idolize the economists who have made a brilliant contribution to the science of economics, players in the financial markets idolize those who practice economics brilliantly. Ask a trader which economist she holds in highest regard, and the answer is as likely to be Treasury Secretary Robert Rubin, an ex-trader, as it is Alan Greenspan, a card-carrying economist.

Because economic policy has played such an important role in the business cycle, for better or for worse, comments of high-ranking government officials are considered at least as important as fresh economic data. Thomson's economic calendars have been amended with the addition of an events calendar listing who is speaking, when, where, and why. I spend a good chunk of my day watching the newswires out of the corner of my eye, on the alert for remarks made by senior Treasury and Fed officials. It may seem a waste of my time, but this is exactly the service my firm provides. Thomson's clients get my seasoned point of view of minor and major events, within minutes. If I weren't watching the news, my ability to respond quickly would be compromised.

STAFF VS. LINE POSITION

When I accepted the job at Thomson nine years ago, I passed up an opportunity to be the chief economist for a large regional bank. Although the immediacy of the work would have been less, in many respects the job would have been similarly focused. But there was one big difference between Thomson and the bank. At a bank, an economist is in a staff position. One supports trading activities, one sits on an asset/liability committee or the investment committee, one provides forecasts for the planning group—all important jobs, but none brings money into the bank on its own. At Thomson, the services to which I contribute are sold directly to clients who pay Thomson a monthly subscription fee to access our screens. I am the product, in other words. My salary depends on sales, which depend in large part on how well I and my colleagues analyze and write.

Being in a line position makes me an entrepreneur

as well as an economist. I created the screen-based Thomson Global Market's Fundamental Service nine years ago and have since designed, and redesigned, Economics 24:00, a global economics service. The creation of these products entailed the full spectrum of product development, from market research to prototype development to overseeing marketing and sales efforts. Thomson Global Markets has a very aggressive sales force, but generally members of our sales team are experienced in sales, not the financial markets. Therefore, I participate in the sales process in a variety of ways. Sometimes I'm passing along leads, sometimes I'm out visiting potential clients to facilitate

closing a deal. I travel often to supplement the electronic connection I have with clients. Even though my time is leveraged, allowing me to service thousands of clients quickly, each client has my phone number and e-mail address. After all, I have a bottom line to worry about.

Two things attracted me to Thomson nine years ago and has kept me here ever since: the opportunity to play the role of MASH economist for the financial markets and my dual role as economist and entrepreneur. It's a stressful life, but I thrive on the stress brought on by the need to assimilate quickly new information or the challenge to close another sale.

ABRAMSON AWARDS

On the recommendation of the Editorial Board of *Business Economics*, the Board of Directors of the National Association of Business Economists has given the following awards for articles published in *Business Economics* in the four issues ending with the July 1998 issue:

The A. G. Abramson Award for the best feature article:

Van Doorn Ooms, "Economic Growth, Budgetary Balance and 1997 Fiscal Policy," October 1997

A. G. Abramson plaques for outstanding feature articles:

Donald Anderson, "European Monetary Union in a Globalized World Economy: The Beginning of the End for Europe," January 1998

Guy D. Billoud, "Implications for International Business of European Economic and Monetary Unification," January 1998

Roger Chen, "An Analysis of China's Economic Development Policies and Prospects," July 1998

Richard D. Rippe, "The Impacts of a Balanced Budget on Financial Markets," October 1997

J. Fred Weston, Piotr S. Jawien and E. James Levitas, "Restructuring and Its Implications for Business Economics," January 1998

The Business Economist at Work: Macroeconomic Advisers LLC

By Joel L. Prakken*

Heading a successful economic consulting firm requires a disciplined allocation of a busy seventy-hour workweek. The first part of the day is spent reading the newspapers and responded to any overnight e-mail. The second task is the analysis of new economic data and sending this analysis to clients. Then comes responding to press inquiries, using a system to select which ones and in what order. The remainder of the time is spent primarily on client servicing and running the business. Travel is confined to four or five days in the middle of the month. Speaking engagements are carefully limited. Time to reflect on the quality and originality of our work as well as new product development must be done late in the day or over weekends.

IN 1982 I resigned my position as senior economist at IBM to travel to Saint Louis and become, along with Chris Varvares, a founding partner and Vice President of the consulting firm of Laurence Meyer & Associates, specializing in macroeconomic forecasting and policy analysis. My original contribution to this venture was that I built what was to become known as the Washington University Macro Model. And what a labor of love that was! Sixteen years later, when Larry Meyer left to become a Federal Reserve Governor, the name of the firm changed to Macroeconomic Advisers, and I became Chairman of the company.

When I left IBM my peers thought I was foolish to

take such an unabashed risk. They have all long since been downsized out of their jobs. But back then, I wasn't thinking much about either the risk or, notwithstanding our subsequent success, the reward of my decision. I was interested in pursuing my intellectual interests with people that I liked and respected, and simply trusted that somehow I could make a living doing it. In the beginning, there wasn't really a business, so I had all the time I wanted for that pursuit. Now I don't, and I miss it.

When I compare my fortunate state today to how things were in 1983, the one thing that strikes me as most different is the near-overwhelming task of getting so many different kinds of things done in a day that, alas, is still limited to just twenty-four hours. So, while I doubt my experiences are much different than many of yours, I've decided to tell you a little bit about how I decide to spend my professional time. And even though I knew it to be true beforehand, after finishing this piece I was nevertheless struck by how little time I have left these days to do what I love most — just being an economist.

TIME FOR SELF-EDIFICATION

My typical day at work begins when I slip out of the house a little after 6:00 a.m. while my family still sleeps. This early in the morning my drive to work takes all of four minutes if I hit the lights just right, six minutes otherwise. The trip home in the evening is only slightly longer. This is one real advantage of living and working in Saint Louis. The brief drive lengthens my effective five-day workweek by fifteen hours, compared to friends and clients I know working in the large coastal cities but living in the suburbs. It also lowers the psychological barrier to coming in on weekends, which lengthens my workweek another fifteen hours. Some years back my partners and I agreed that a fifty-hour workweek should be our norm, but in fact seventy hours is more typical. This is something to consider for any reader thinking about starting an economic consulting business. Now I can't help what I do because I'm addicted to it. I believe,

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however, that my level of time commitment is a prerequisite of success in this competitive business. My kind of harried professional life, which also mightily taxes my personal one, is definitely not for everyone.

Anyway, on the way to work I stop at my favorite coffee shop, then head for the office where I scoop up from the doorstep copies of *The New York Times*, *The Wall Street Journal* and the local *Saint Louis Post Dispatch*. Usually by 6:30 a.m. I'm spreading the papers out on our conference table, sipping coffee, and making the first big decision of the day: what to read. This may sound silly, but in fact it epitomizes my constant predicament of how best to spend a very scarce commodity—my time.

It would be nice to take an hour to read the papers, but I simply can't afford to. So, over the years I've stopped reading the Journal in detail. If I'm doing my job well, I already know most of the macroeconomic news that's relevant for me, and have already discussed it with someone—a colleague or client—more knowledgeable about it than the Journal's reporters. Decision: skip those stories. I used to read the Journal's guest editorials, but they are predictable enough that usually a glance at the headline and byline tells me what I really need to know. If the author is someone I know and/or respect already, I might read it, otherwise I skip it while making a mental note to bounce the topic off someone else during the day.

My total time spent on *The Wall Street Journal* usually comes to about five minutes. Some days I scan the news summaries on the front page in a minute and am done. The local paper I don't even open, since I long ago surrendered the delight of reading the sports pages. No, what I choose to read in that first peaceful part of the day is the noneconomic news in *The New York Times*. I think of this luxury as an exercise in self-education and as the responsibility of an informed citizen in a democracy. Usually by 7:00 a.m. I've read the papers, moved to my office, and checked and responded to any new e-mail. On the East Coast, our clients are filtering into their offices, having already spent an hour or more getting there. I'm ready for them.

TIME FOR THE PRESS

The first order of every day is to analyze any new macroeconomic data released that morning, usually at 8:30 a.m. eastern time. What were the numbers? Were they different than we expected? If so, why, and how do they change our view of where the economy is heading? We pull the data electronically, rearrange them into a palatable form, attach a brief written analysis, and distribute all that electronically to our clients. Time is critical, but inevitably in the middle of this push, the phone starts ringing. Sometimes it's a

client who can't wait for our analysis to come off the fax machine, but just as often it's a reporter wanting the very same information.

Now we used to be flattered by attention from the press, but over the years we've come to appreciate that dealing with the media is a business decision. As first Laurence Meyer & Associates and then Macroeconomic Advisers became better known, we get more calls from the press. In addition, the media's appetite has assumed voracious dimensions with the advent of twenty-four-hour electronic business coverage. If I chose to, I could spend most of most days talking to reporters.

Issues relating to the media are complex and contradictory. Obviously, the right kind of publicity is good for the firm, but we don't want clients who are paying for our analysis to see it first or in detail in the electronic press. So, as a general rule, I don't talk to reporters for the wire services until after our daily analysis has been delivered—if they're still interested. Print reporters don't mind being called back later, because they aren't in the same mad rush for a real-time story. But for that very reason, print reporters talk longer and, unlike the wire service reporters—who, if they talk to me, almost always quote me and mention the firm—sometimes don't use our material.

Based on my experience with individual reporters, I've developed a system for deciding which ones to call back and in what order. First, I take the known tendency of the reporter to mention the firm or my name in his or her report, divide that by the number of minutes I think the conversation is likely to take, and multiply that times my concept of that newspapers' business readership. The higher a reporter's score on this scale, the more willing I am to talk with him or her on a regular basis. It's a good system that keeps me sane. Oh, and one final rule: never turn down a national TV spot.

TIME FOR CLIENTS

If all goes smoothly, the response to our daily data is over and done by late morning, and the press has been satisfied. It would be nice if that left the rest of a twelve-hour day to "blue sky" about the economy or to pursue developmental work on the models we use to generate our forecasts every month. However, it seldom happens that way. One reason is clients call and, unlike when reporters call, there isn't the option of putting them off until later: clients always come first. You can't blame them for calling; after all, it is one of the things they pay us for. And indeed, this is a part of my day that, for the most part, I really enjoy. Why? First of all, I like our clients. They're great people working hard to get their jobs done well. If we can help them, it is personally satisfying. Second, every client knows something I don't, so during these

daily discourses I always learn something useful (this is why I don't have to read *The Wall Street Journal* anymore!) that later helps me help someone else. These conversations are important to building a web that first collects and then connects our clients into a happy family of subscribers. However, important and rewarding as they are, these calls come in sporadically and often at what seems like the worst possible time. This makes it next to impossible to develop any kind of rhythm during the day, or to spend protracted periods concentrating on a single task or project. It makes the day feel schizophrenic.

TIME TO RUN THE BUSINESS

And then there's the business to run. Yes, we have an Office Manager, a Director of Business Development, outside accountants, lawyers, and even investment advisers to help manage our pension fund. But in a shop our size, the complete divorce of business management and economic analysis is just not possible.

Recently, for example, we approached the end of a five-year lease and needed more space. During the term of the lease, rents shot up in the Saint Louis area. Our choices were to move upstairs to bigger offices in the same building, which we liked, or shop the deal to other buildings. Either way, we wanted to make the best arrangement for ourselves, and this required getting buildings in competition with each other for the privilege of having Macroeconomic Advisers as a tenant. We spent a lot of time looking at alternative spaces in different kinds of buildings in different parts of town and reviewing architectural plans of some spaces we especially liked. Then there were bids to review and final terms to negotiate, a process made interesting by our forecast that the economy will slow next year even and as some new buildings come on line in our neighborhood. We calculated present discounted values of the various proposals, all the while trying to factor in the nonpecuniary aspects of each location for the employees of the firm. It amazed me how much time all that took, and how disruptive it was to the continuity of my thinking about the economy. In order not to short-change our clients, it meant making up the time sometime else—usually late at night.

TIME FOR TRAVEL

At cocktail parties I'm always asked, "Do you have to travel very much?" My answer is always pretty much the same. I have to be in the office at the end and beginning of every month, because that's when we prepare our forecast and write our monthly report. I do travel maybe four or five days in the middle of each month, to meet with existing clients and to visit prospective ones. These trips, most of which are to the Northeast Corridor or the West Coast, just come with

the territory, and I like them. Clients always are glad to see me. Prospective clients usually are impressed with our products, and that's a rush. Furthermore, a four-hour flight to the West Coast is the best opportunity for an uninterrupted work session I ever get, especially if TWA has sent me some of those first-class upgrade certificates!

TIME FOR OUTSIDE APPEARANCES

What I really have gotten more cautious about, however, is speaking engagements. In the beginning, it seemed that the need to win exposure for the firm dictated the acceptance of almost any invitation to speak. Furthermore, I used to fall for the line that every organization tendering an invitation uses, i.e., that the audience is chock full of prospective clients. I think I can count on one hand the number of times I've made a speech to an outside group and subsequently had someone in attendance subscribe to one of our services as a result. In most instances, the audience's need for economic information is too casual to require a service like ours, aimed as it is at professional economists.

But I never want to flub a speech, so I prepare for each one assiduously. Then there's the time out of the office that sometimes can be several days. It gets to be costly and disruptive. So, a few years back I jacked up my appearance fee sharply, make no exceptions, and only take on appearances that get the firm maximum exposure while allowing me to conduct other business affairs at the same time. This was one of the best decisions I ever made. I do make fewer talks but not fewer fees and, most importantly, I get lots more done at home with the time I saved.

TIME FOR SERIOUS THINKING

At Macroeconomic Advisers we produce daily, weekly, monthly and quarterly hard copy and organize quarterly meetings on the economic outlook and public policy. Somehow or another these always get done. The constant challenge, however, is to find time to do the deeper thinking required to maintain the quality and originality of all those pieces we churn out, as well as to keep improving our econometric models and software that we and our clients use to generate forecasts.

Often towards the end of the day things quiet down a little around the office, especially after the East Coast goes home. Still, with clients on the West Coast who might call, I feel remiss heading home myself much earlier than 7:00 p.m.. The hours from 4:30 p.m. to 6:30 p.m. are ones that I sometimes can use to reflect on the economic outlook, plug away at some new development in our econometric model, or talk with someone about that topic I saw on the editorial page of the Journal early in the morning.

More often than not, however, such work occurs

on weekends. Our monthly forecast almost always takes shape over a weekend, because the GDP data usually are reported on a Friday, and our clients expect us to be done by Monday. There's no other time to do it, but this tacit arrangement works well. The relative and uninterrupted calm afforded by the weekend is the perfect time to get caught up on recent developments, build the new data bank, and run simulations with the

model to understand the econometrically identifiable forces at work on the economy. Weekends also are the only time to get much done on fundamental product development, and most of that occurs under pretty intense pressure every spring as we approach our Annual Model Conference at which we unveil new work on the our econometric model and the software that simulates it.

The Business Economist at Work: KPMG Peat Marwick LLP

By Jon D. Silverman*

Many authors of this column have discussed how they have redefined the role of the economist to make it less of an overhead position and more of a value-added function that provides benefit to their organizations. They have redefined the role of the economist so that the economist acts in the role of internal consultant to many different parts of the organization. But this is not a new phenomenon. Economists for consulting organizations like KPMG Economic Consulting Services have been doing this for many years, albeit at arms length, with the organizations and clients we serve. This article provides four case studies of how economists have used their specialized skills to provide concrete benefits to the organizations that we serve.

MANY OF THE ARTICLES that have appeared in this space have been written by corporate economists, who have redefined the role of the economist in their organizations so that the economist acts in the role of internal consultant to many different parts of the organization. This new perspective of the role of the economist as consultant is bound to have positive benefits for the economics profession as well as for our clients. But this is not a new phenomenon. Economists for consulting organizations like KPMG Economic Consulting Services (ECS) have been doing this for many years, albeit at arms-length. In the process, we have been constantly appraised of the value that we have added as reflected in our clients' willingness to

pay for our services and by the additional engagements we secure from repeat clients. These signals determine how we focus our services and invest our resources.

We do not typically perform work for other economists. I previously worked for a firm that specialized in doing just that – selling economic consulting services to other organizations' economists. Surprisingly, this was an easier job than selling economics expertise to those unschooled as economists. You did not always have to make your analysis relevant to the organization you were serving. This was viewed as the job of the economists for whom the analyses were developed. The fact that the analysis or data came from a model seemed justification enough for corporate economists to purchase these services. Frequently, these analyses sat on bookshelves, collecting dust, waiting to be used.

It was not that these analyses were poorly done or not relevant. On the contrary, they were developed by very knowledgeable, dedicated people. But they were prepared primarily for the wrong audience, i.e., other economists and not the decisionmakers within the organization. We depended on economists within these organizations to make these analyses relevant to their organizations. This was not the prescription for a successful consulting strategy. It generally conflicted with the problems that most companies began to face in the information age. It was not that they needed more information to make decisions; rather, they were deluged with information and faced the problem of distilling the important information from the enormous amount of data that poured into the firm. It was uncertain how to utilize that information to impact the corporate bottom line.

Turning, however, to the present and the future, let me share a few examples of the kind of work that we do at KPMG. These examples show how economists can use their skills to provide concrete benefits to all organizations.

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WHO WE ARE

KPMG's Economic Consulting Services Group is made up of 120 professionals. Approximately 25 percent of these have Ph.D. degrees, primarily in economics and fewer in statistics and operations research. Approximately 40 percent have M.B.A. degrees, with the majority of these having a focus in finance. We have a direct presence in KPMG offices in thirteen U.S. cities and in London and Amsterdam. We also have a more global presence due to the fact that KPMG has offices worldwide. Our practice focuses mainly on U.S.-based clients or the U.S. subsidiaries of foreign corporations.

WHAT WE DO

The services we provide cover a fairly wide area. The group started out in the late 1980s by providing economic analysis for transfer pricing issues. Assisting companies in complying with section 482 of the U.S. tax code regarding the transfer of tangible and intangible property is a natural area for economists to apply their skills, because the work requires a thorough understanding of markets. The group quickly began to branch into other areas as a means of diversifying the business and because of the special talents and focus of the personnel. The group has some very advanced skills in quantitative methods, especially econometrics, statistics and operations research. These skills have served as the foundation for practice areas in economic litigation, economic risk management, economic impact analysis, utility economics, securities litigation, economic value management (EVM) and pharmacoeconomics. We have developed an outstanding economic litigation services practice that differentiates us from other firms doing litigation work based on the quantitative and applied computer skills of our staff.

Let me describe some of the specific project work that we have done and explain why companies have found this work to be especially valuable. In all engagements that we enter, it is useful for us to keep in sharp focus the elements of our work that provide value. Sometimes, as trained economists, we take some basic things for granted that are highly valued by our clients. I think that some of these elements are embodied in the cases that are described below, and that is why they have been particularly successful engagements from the client's and our own perspective.

CASE I. RISK MODELING

In this engagement, we developed a model to help a credit insurance company price its insurance products. This model is used every day by the company's

sales agents in the field and back at the home office by the company's underwriters to develop price quotes for its insurance products. The company for whom we developed this model is in the credit insurance business. Credit insurance is a form of insurance that safeguards a business in case its customers do not fulfill their obligations to pay for their purchases that have been made on trade credit. The purchase of credit insurance is widely used as a risk management tool in Europe but less so in the United States.

The company for which we performed this work was seeking a means of pricing its policies in order to manage its losses and maximize its premium income, subject to the risk it was willing to accept. To do this, the company needed to understand how its customers are affected by downswings in economic activity and how the macro economy affects the industries to which it provided coverage. The pricing model we developed takes into account the different sensitivity of each industry to the general economy. It also takes into account the company's own historical experiences in each of the industries in which it does business. Its sales agents can use the model in the field to develop price quotes quickly by entering potential customers' receivables into a spreadsheet. The software provided not just a premium price but allowed the customer to select coverage tailored to its own risk management needs. For example, if a customer wanted to retain the risk associated with some particular debtors it held in its receivables portfolio, these debtors could be easily eliminated from the policy. Agents could also enter alternative deductibles and coinsurance terms, so that the customer could tailor the policy on the spot to their particular requirements.

The comprehensive model itself was developed as a Monte Carlo simulation model using a sophisticated econometrics and simulation package called Gauss. Because it was not feasible to turn anything this computationally intensive over to the field agents, we worked out some simple approximating theoretical distributions to estimate the empirical distributions that are derived from the Monte Carlo model. The large model is still used by the company's underwriters for large deals, but for smaller deals, which outnumber the large deals by far, the approximation tool is used.

The estimation procedures that we developed allowed us to provide a tool that could be used in the field. It was this extra step that added substantial value, because this allowed us to bring the results of our modeling efforts down to the operational level of the field agents. Although the sales representatives do not necessarily understand how their spreadsheet tool develops the loss distributions for their customers, they trust that it develops premium estimates that will be honored by the underwriters back at the home office. The use of this system significantly reduces the sales

cycle. Previously, it took much longer to provide price quotes, and the agents had little opportunity for negotiating with the customers. Now they can easily bring up a menu of choices of premium and coverage for their clients to select, expanding the value of their credit insurance product.

On a larger scale, we have also assisted the company in negotiating the reinsurance rates that it must pay to its reinsurance partners for assuming some of the risk that exists in the company's overall portfolio of receivables for all its customers. This work has involved applying our loss modeling methodology to the entire portfolio of approximately 250,000 receivables that the company insures at any one moment in time. By providing the company with estimates of expected loss to the portfolio and on the entire distribution of losses, it has been able to negotiate successfully reinsurance rates with its reinsurers that are favorable to all parties.

We are now in the process of applying similar simulation modeling techniques to the estimation of losses for portfolios of mortgages. These models assist us in the development of pricing tools that can be used to price mortgage reinsurance premium prices for mortgage insurance companies and commercial banks seeking to enter the reinsurance business.

CASE II. TELECOMMUNICATIONS DEMAND, PRICE, AND COST MODELING

In this engagement, a telecommunications company had an urgent need to refine a business plan that would assist it in persuading its lenders and investment bankers to provide it with additional debt and equity financing. The lenders required some concrete evidence that the assumptions and the financial projections the company was using were realistic. In addition, the lenders wanted to understand how sensitive the company projections might be to certain assumptions imbedded in the business plan.

We helped the company integrate its existing information and market research assets into a spreadsheet modeling system that its bankers could use to perform sensitivity analysis on the company's business plan. This involved an extensive effort of coordinating several ongoing modeling efforts that were designed to assess the company's expected costs of doing business in many different regions and in developing estimates of the demand for its services by people traveling around the globe. The company had been conducting a number of simultaneous market research and business surveys to assess the market for its communications services. It was receiving large amounts of data on an individual country, industry, and customer segment basis for the size of the potential market in each country and in the expected growth in these

markets. It was also collecting survey data on the price sensitivity of different customer groups to the entry fees and variable fees for its services, potential customers' travel patterns, and their expected usage of communications services.

This was a rather novel situation for an economist. In most cases, we spend much of our time trying to create reliable data sets from a variety of unrelated sources. In this case, rather than having too little data to work with, the company had lots of information but needed a way to put it all together and ensure that its business plan was built upon the solid foundation provided by its extensive investment in market research and data collection. Our job was to tie together literally hundreds of thousands of data records together into a model that reflected all the complexities of their business. Because they required that we capture many dimensions on market segments, countries, services and time, we had to be extremely creative in how we implemented a system that could capture the complexity of their business in the confines of the Excel spreadsheet program.

We met regularly with many different parts of the company, the company's lenders and the lenders' own "due diligence" consulting teams to explain the methodologies that we were using to make revenue projections for the company's services. Most importantly, we took our demand projections that were made on a country-by-country basis and the company's cost projections and developed a full set of financial statements (balance sheet, cash flow and income statements) for each of the company's entities. This allowed us to see the impacts of changes in assumptions down to the profit and loss level, which is ultimately what drives the lenders' decisions. Our ability to integrate quickly their large mass of data into a tool that could be used by many parts of the organization as well as by their lenders and investment bankers was instrumental in making this a successful engagement.

Although conceived as a model that was intended for the single purpose of assisting the company with the development of its business plan and as a means of educating its lenders, the model has subsequently taken on a life of its own within the company. It has become an important tool for the marketing, finance and strategic planning departments, who have come to see this model as a tool for producing financial forecasts and for analyzing strategic issues, such as competitive pricing, market entry and capacity planning.

CASE III. MODELING ASBESTOS LIABILITY

In this engagement, we developed a model to predict asbestos liability for a large manufacturing company. As part of the negotiations for a large class-action law suit involving several hundred thousand

current and future asbestos-related injury claimants, ECS economists developed a microsimulation model to predict the incidence of asbestos-related disease. The purpose of the model was to ascertain whether the financial structure of the negotiated class action settlement was consistent with expected current and future liabilities faced by the company. In addition, the research was used to help establish a trust fund, administered by the company to offset future claims.

The asbestos model simulates the life cycle of workers in selected occupations and industries that were potentially exposed to asbestos. The model captures:

1. The existing scientific literature on the dose/response relationship between the length and intensity of exposure to asbestos and the incidence of asbestos-related disease.
2. The industry, occupational, and demographic profiles of the exposed population.
3. A dynamic aging process that tracks the exposed population and their incidence of disease over time.
4. The pattern of historical claims by type of injury and the propensity to file claims against the company.

The model also includes a sophisticated cash flow module that allows the settlement attorneys and fund managers to conduct sensitivity analysis on the viability of the fund to changes in assumptions about the incidence and distribution of disease, the average value of claims, and changes in settlement costs. In addition, specialized facets of the class settlement agreement, such as splitting the fund into different investment tranches and controlling the timing and values of payouts, ensure future claimants that sufficient funds will be available to pay off claims that have yet to be filed.

The model served as an integral part of the evidence presented at the fairness hearings that occurred during the court's review of the proposed settlement.

CASE IV. INVENTORY SHRINKAGE FOR TAX LITIGATION

This engagement required that we develop statistical models of inventory shrinkage to defend a consumer retail chain against IRS attempts to impose millions of dollars of income adjustments against the company. For tax purposes, inventory shrinkage refers to the difference in the book and actual value of inventory as determined by a physical inventory count. Because shrinkage is a significant cost of doing business for retailers, shrinkage estimates can have substantial tax impacts. In this case, the IRS questioned the sales-based accrual method that the company was

using to estimate shrinkage during the period between the last physical inventory and the end of the tax year.

To provide an independent assessment of the accuracy of the company's approach to inventory shrinkage and compare it to the IRS method, ECS economists and statisticians collected sales and inventory data from each of the company's retail outlets. These data were used to reconstruct the inventory cycles of each of the outlets over the period 1984-92. For each of the company's four business chains, we simulated each inventory cycle and calculated shrinkage adjustments based upon the company's sales accrual method and the method required by the IRS. Statistical correlation between sales and shrinkage was also estimated. Statistical tests revealed a very strong correlation between sales and shrinkage. This information was used in conjunction with estimates derived from the retailer's sales-based accrual method of computing shrinkage and compared to shrinkage estimates generated using the IRS method.

This analysis confirmed the accuracy of the retailer's methodology by demonstrating the statistical probability of shrinkage occurrence in each period and the company's methodology as more accurate than that employed by the IRS. By demonstrating that the company's method was actually superior to the IRS method, and presenting this evidence in tax court, our work was instrumental in convincing the presiding judge to rule in favor of the company.

CONCLUSIONS

We have learned some important lessons from these engagements. The first is that we as economists have extremely valuable skills that are not easily substitutable. We work best in situations where we interact with other disciplines that seem to appreciate us more than we sometimes appreciate ourselves. In our case, we have found that we work well in the areas of tax, litigation, and risk management. Our quantitative abilities, analytical powers and knowledge about how markets function can be applied almost everywhere. Our clients appreciate the value of our skills as evidenced by their willingness to continue purchasing our services. Most importantly, in each and every engagement, we must imagine ourselves in the position of our clients and ask the question, "Do these services serve to reduce my costs, improve profits, or allow me to comply in the best manner with regulatory requirements?" If the answer is not immediately yes, then we as consulting economists ought to rethink our proposals or refine our deliverables.

Economics in the Workplace



Ellen Hughes-Cromwick, Senior Economist at Ford Motor Company describes what makes industry an exciting place to be for economists.

The application of economics in a business setting couldn't be more exciting and invigorating. The role of the economics group is closely aligned with the Company's consumer business groups. These consumer business groups have a geographic and product mix at their core. Our agenda stretches in new ways every year to anticipate emerging demand on the automotive business. Central to our mission is the development of vehicle stock and sales models that allow us to generate 10-year forecasts to support business and product planning for all markets.

The economists' comparative advantage is that we are able to examine structural changes in underlying demand for automotive products and services in the Company's major markets. For example, improved data sources in the U.S. and Europe have allowed our team to improve models of trend vehicle sales. Examples of these data are estimates of vehicle stocks by country. These models provide a better underpinning for product program decisions that extend out 5 to 10 years.

Another area of research is the development of vehicle stock models for emerging markets. Since these markets are expected to grow at a faster rate than the U.S. and Europe, it is critical for us to assess how fast these markets are able to grow. This provides useful input for our internal customers' assessment regarding geographic and product focus over the business planning horizon. Using a multi-market database including per capita income, transportation infrastructure, population, and vehicle data, this modeling effort was able to identify key thresholds for changes in the growth of the vehicle stock at different stages of economic development.

This approach to economics in the workplace is somewhat different from economists who practice in the financial services industry. In the latter, there is likely greater emphasis on short-term, indeed, daily movements in key variables and implications of these changes for portfolio and other valuation metrics. In contrast, a consumer company like Ford needs to assess long-run dynamics that are key ingredients to product investments. To be sure, our industry expertise is also used to provide an early signal



on near-term changes in the auto industry environment, and that requires sound analysis of consumer fundamentals.

Our interest in a key macroeconomic issue is very keen: If U.S. productivity growth can be sustained at a higher rate, then what does this imply in terms of the growth in spending for more and better features in a vehicle?

Finally, we are always searching for ways to use technology in order to enhance our customer service for the day-to-day information demands. Our internal website has given us tremendous scope to do just that. All of our forecasts, publications, and research studies are posted on a routine basis. Our customers from St. Louis to Bangkok can access our products and receive updates instantly.

It's an environment chocked full of learning and growth. We stay fresh with training, keep connected with our customers, and enjoy the enterprise!

Business and Economists... Mutual Benefits Abound

KEY POINTS

- *Connecting with the business is critical*
- *In terms of scope, our comparative advantage is to undertake research on underlying demand for automotive products and services in the Company's major markets*
- *Using technology efficiently to assist internal customers with day-to-day queries about the external environment is crucial*

Education Required for Business Economics

To work in the field of business economics, an individual should obtain a sound undergraduate education that includes training in economics and a number of related subjects. These include finance, cost and financial accounting, business administration, statistics, mathematics, and English. It is essential to be familiar and comfortable with the computer. A good college or university will be able to provide undergraduate training, but for advancement and long term success as a business economist, it is advantageous to pursue graduate study in economics and related subjects taught in graduate schools of business administration or in graduate departments of economics at the major universities.

If a person is able to finance full time graduate study and willing to postpone entry into the business world for a few years, he or she can go to graduate school directly from college. On the other hand, if an individual prefers not to delay work in the business world, he or she may be able to obtain a full time job as a junior business economist after completing undergraduate study, and carry on graduate work on a part time basis.

Because business economists are most often generalists rather than specialists, they should have a broad, rather than a narrow, education in economics and business administration. Given their broad foundation, an employer will have an easier time in teaching the particulars of the firm and industry.

Generally speaking, business economist should be familiar with as many of the major field of economics and business administration as possible. A recommended course of study for a master's degree in business economics would include the following courses:

- Microeconomic Theory (6 hours)
- Macroeconomic Theory (6 hours)
- Statistics/Econometrics (3-6 hours)
- Business Cycle Analysis/Forecasting (3-6 hours)
- History of Economic Thought/Economic History (3 hours)
- Monetary Policy (3 hours)
- Fiscal Policy (3 hours)
- International Economics (3-6 hours)
- Tax and Regulatory Issues (3 hours)
- Accounting (3-6 hours)
- Finance (3 hours)
- Marketing (3 hours)
- Organizational Behavior/Human Resource
Management/Operations Management (6 hours)

This is a demanding curriculum based on surveys of business economists who were asked to list courses they have found valuable, wish they had taken, and/or look for in the people they hire. In addition, aspiring business economics should look for ways to develop verbal and written communications skills, either through course work or constant practice.

Not all business economists need to specialize in statistical and mathematical techniques. Much of the quantitative work (like forecasting) is now done by consulting firms (employing many economists). In fact, for the majority of business economists, the ability to write clear, correct, and readable English is a more important asset than a highly technical knowledge of statistics and mathematics. Nevertheless, all business economists should have at least some knowledge of quantitative techniques.

In addition to the core subjects of economics and business administration, the business economics student would be well advised to include courses in history, political science,

psychology, and sociology, all of which help to understand society in broad terms. These courses can be taken as part of the undergraduate degree.

Like most of the professions--particularly those that require graduate study--business economics requires the mental ability and other skills normally associated with students who rank in the upper 25 percent of their high school class, and the upper 50 percent of their college class.

It usually happens that students who like certain subjects in high school, college or graduate school will be interested in a career that requires them. To state this principle another way, the process of choosing courses is really a self selection process by which students discover what subjects they like and in which they can do well.

Applying this principle to a career in business economics, we can say that a student who likes and does well in courses in economics and business administration is very likely to enjoy the work of a business economist. It may be, of course, that a student likes the world of business but finds it difficult to relate classroom studies to business activities. In instances of this kind, begin working in business and pursue studies on a part time basis. If you have business experience in your background, you will find that academic course work becomes more interesting and relevant.

Other Skills and Personality Traits

Besides a formal education, successful business economists should know how to communicate. Results are normally presented to others in the business firm, but economists must also communicate with people outside the firm--such as customers, legislators, stockholders, and the general public. Thus, business economists must know how to make the results of their work understandable to a wide range of people. Some persons are well versed in economic and business principles, but many are not.

This important communications function requires an ability to write and speak clearly, effectively, and concisely. Business economists must know how to phrase complicated economic concepts in standard language and how to use visual aids such as charts and graphs for presenting concepts, principles, and conclusions. Effective business economists must be easy to talk with and easily understood.

Business economists, like others in business, often work under pressure and must reach conclusions without as much research and analysis as they were taught in academia. Thus, the ability to handle many tasks at one time, meet deadlines, and supplement research with judgment and intuition are essential. In short, business economists must know how to analyze economic problems and communicate with others inside and outside the firm.

Salaries of Business Economists

As a group, business economists receive excellent salaries. A survey conducted by the National Association for Business Economics (NABE) in 2000 found that business economists had an average (median) base salary of \$85,000 per year. Nearly 43 percent of the respondents reported salaries between \$50,000 and \$100,000, with 38 percent reporting base salaries at \$100,000 or more. NABE also found that more than half of those business economists responding to the survey received additional compensation from their primary employment; the median amount reported was \$17,500. Even with three recessions and corporate downsizing in the late 1980s/early 1990s, the median base salary and additional compensation from primary employment of economists has doubled since 1980.

The 2000 survey also indicated that the largest employers of business economists were firms engaged in consulting, government (including central banks), and financial institutions and insurance. Economists in the securities and investments sector were the most highly paid with a median base salary of \$107,500 and additional compensation from primary employment of \$50,000. Economists in manufacturing followed with a median salary of \$103,000, with additional compensation of \$33,750. Economists in consulting followed with a median base salary of \$99,999 and additional compensation of \$19,000. The lowest salaries were recorded among economists in government and academia (with corresponding median base salaries of \$74,500 and \$70,000)

Education plays a significant role in explaining salaries. The greater the schooling, the higher the income: the median base salary of a Ph.D. economist was \$91,000 per year while economists with masters degrees earned an average \$80,000 per year. Experience also plays a large role in wages. The median base salary of economists who had up to four years of experience was \$60,000 in 2000, while those economists with 5-9 years experience earned a median salary of \$70,000; and those with 10-14 years experience earned \$81,650 per year.

New economists with a master's degree were most sought after in 2000. The median starting salary was \$44,995. Those with a bachelor's degree in economics could start at \$34,998, while new Ph.D.'s were able to command a starting salary of \$59,988.

Economists could reap further rewards. Many business economist move to managerial positions where they can employ their unique skills to evaluate the work of others and translate their findings into practical business policy.

The Future of the Business Economics Profession

More and more firms are becoming aware of the contribution that business economists can make in day-to-day decisions. One reason for this greater awareness is that a growing proportion of middle and top management has a master's degree in business or similar training that equips management to understand and utilize the professional work of economists. Another reason is the growing complexity of domestic and international economics.

Business economists are increasingly asked to work with other specialists in business-- investment bankers, lawyers, accountants, treasurers, engineers, and others--to assist in solving problems. This trend, too, indicates an expanding role for business economists.

Finally, the career of business economics is increasingly recognized as one of the routes to top management. In recent years, business economists have become presidents or senior officers of banks, insurance companies, trade associations, investment houses and industrial companies. Although not all business economists are capable or even desirous of advancing to a top management position, it is clear that economics is a business function of central importance and thus can be a pathway to the top. Indeed, economics is the second most likely undergraduate major (after engineering) that today's CEOs have. Interestingly, two NABE past presidents are currently presidents of federal reserve banks, one is president of a very large national bank and another, Alan Greenspan, heads the Board of Governors of the Federal Reserve System.

If you have inclinations toward government policy positions, never fear. Recently, among the top seven industrialized countries, the key central bank governor is an economist in Great Britain, Germany, Italy and the U.S. In France and Italy, the Finance Minister also holds an economics degree. Looking at twelve developing countries, all but one of the central bank governors holds an economics degree. Among the finance ministers, all but three hold economics degrees. Clearly, economics is a useful background for government policy.

NABE Mission Statement

Our mission is to provide leadership in the understanding and use of economics.

How Do I Benefit from NABE Membership?

Enjoy networking opportunities with colleagues in the field of economics as well as opportunities to meet world-class experts in new fields. Attend frequent meetings and seminars on relevant and timely topics. Be up-to-date on important economic issues. Continually improve with unique opportunities to hear the industry's top leaders.

What's Included With My Membership?

Periodically:

- Business Economics- NABE's prestigious quarterly journal
- NABE News- NABE's informational bi-monthly newsletter
- NABE Outlook - A quarterly macroeconomic survey.
- Industry Conditions- A quarterly industry survey
- Salary Survey - Compare your salary to others using this biennial survey
- IdeaLink- An informative e-newsletter sent every two weeks
- Continuing education courses
- Access to policy-makers, economic experts and scholars, and top-ranking officials
- Instant economic statistical information via the members-only section of Nabe.com

Every Year:

- Cutting-edge information at NABE's fall meeting and spring policy conference
- Opportunities to network by joining industry-specific roundtables
- NABE Membership Directory - a Who's Who in Business Economics

Plus:

- Answers to economic problems and issues
- Consultant's Registry - building your resources
- Positions Wanted - posting your resume to be seen by top employers in the field
- Employment Opportunities - current job listing

- Special discounts on economic-related products and services

And much, much more.

How Much are Membership Dues?

NABE Electronic Membership: Get all NABE publications via e-mail and on the "Member Only" section of the NABE Web site plus one FREE Roundtable

One Year	Two Years- save 10 percent!
\$125 Individual Member	\$225 Individual Member
\$80 Retiree Member	\$144 Retiree Member
\$50 Student Member	n/a

NABE Non-electronic membership: Have *Business Economics* mailed to you and get access to all NABE publications via e-mail and on the "Member Only" section of the NABE Web site plus join one Roundtable for FREE!

\$150 Individual Member	\$270 Individual
\$170 International Member (outside the US)	\$306 Individual
\$150 Retiree Member	\$270 Retiree
\$125 Student Member	n/a

All membership dues levels are current as of fall 2001. Please check www.nabe.com for current dues.

Who Can Join NABE?

Any person with an interest in business economics is eligible for membership including:

- Business leaders
- Corporate economists
- Statisticians
- Financial economists
- Consultants
- Product researchers
- Load forecasters

- Corporate strategists
- Sector analysts
- International specialists
- Pricing and cost analysts
- Government officials
- Educators
- Students

In addition to individual memberships, NABE offers Corporate and Group Affiliate memberships. These membership categories provide business firms, government agencies, academic institutions, non-profits and other organizations the opportunity to join NABE and to join NABE and receive discounts on membership and meeting fees, access to industry leaders, recognition, publicity, and more.

To Join NABE, or to find out more, please go to
<http://www.nabe.com>