

National Association for Business
Economics

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.

PHOTO

Alan Greenspan, Chairman of the Board of Governors, Federal Reserve System, with C. Mark Dadd, A T & T, at a recent NABE meeting. Both are past presidents of NABE.

WHAT BUSINESS ECONOMISTS DO

Business economists work in such a wide range of business organizations and on so many different problems that it is difficult to generalize about the scope and content of their activities. The following case studies of active business economists best describe the focus of jobs in private industry and the government (in their own words). You will see that jobs differ greatly even in the same industry. (Read the section on economists in government, which includes an economist at the Federal Reserve, a city planner and a specialist who works on the national income accounts.)

Job mobility is high; business economists move freely from one company to another and among business firms, academic and research institutions, and government. Read "A Career in Business Economics" to see how an economist shifted from banking to the energy sector and found herself shifting focus from macroeconomics to microeconomics. Or read "Business Economists are Adaptable" to see how flexibility allows an economist to keep pace with changing developments in the economic environment.

Some jobs cater to varied tastes and special skills. For example, those individuals who like to write can apply their communication skills to clarify economic analyses and jargon. (Read "The Job of an Economics Editor" and "Using Economics as a Financial Reporter".) Individuals interested in regulation and law can pursue these interests. (Read "Business Economists in Litigation Analysis".)

If you are quick on your feet and enjoy meeting deadlines, working in the financial markets with traders could be rewarding. (Read "An Economist on the Bond Trading Floor".) If instant analysis is not your strong suit, but you like to analyze macro economic conditions in a slower environment, consider banking. (Read "A Business Economist in a Bank Credit Division".) You need not stick to the banking industry for an interesting and challenging job. If you enjoy a variety of tasks, corporate economists in the construction and manufacturing industries tell about economic life in heavy industry. (Read "An Economist in the

Engineering-Construction Industry" and "A Business Economist in the Steel Industry".)

Not everyone who studies economics as an undergraduate student lands jobs with "economist" in its title. However, you will find that economics serves as a framework of analysis that is used in many different types of jobs including the not-for-profit sector ("Using Economic Analysis at a Philanthropic Foundation").

In this day and age, a booklet on careers in business economics would be incomplete without a consideration of the foreign sector. International economics has become more important to the U.S. since the start of the 1980s as exports and imports have constituted a larger portion of our GDP and financial markets have been globalized. (Read "A Business Economist in Paris".)

PHOTO

Lisa Guirl, of Macroeconomic Advisers LLC and a past president of the St. Louis Gateway Chapter of NABE, works on an econometric model.

A CAREER IN BUSINESS ECONOMICS

My career as a business economist has spanned more than 20 years. Most of that time was spent in commercial banking, but the last three years have been in a dramatically different environment: the oil sector.

I should emphasize that I have always worked in a staff department, which has no doubt influenced my view of the role of a business economist. Economists in a separate staff department tend to be given freer rein to choose which issues should be analyzed and to take on a longer-term focus, in contrast to economists in line departments. They are a more integral part of the day-to-day decision-making but have little choice in research topics.

My first job after earning a Master's degree in Economics was with a regional bank in Colorado. As remains true today, economists who work for such institutions spend most of their time on macroeconomic issues and forecasting, with a strong regional focus. I participated in and contributed to the planning effort by developing a "what if" model of the bank's financial statements. While remaining in this position for ten years, I was able to earn a Ph.D. in economics along the way.

I moved on in 1981 to become financial economist at large bank in Los Angeles, where life and work were full of new challenges. In this position, I was heavily involved in the bank's funding decisions and worked closely with bond traders for several years. In late 1985 I became Chief Economist of the institution -- managing a staff of nearly 40 people (at its peak) involved in financial markets, international credit risk, industry risk and regional research. This period proved to be both challenging and extremely rewarding. In addition to the publications and forecasting work, I served as a member of several key policy making committees of the bank: the Finance, Pension Fund, and Risk Management Committees.

In 1990 I accepted the position as Chief Economist of a large petroleum firm -- a chance to work for a truly multinational company and to learn first hand how economists can make a contribution in the nonfinancial world. And, indeed, I learned how very different the two worlds operate.

Financial institutions concern themselves primarily with the next year or two. Petroleum companies, on the other hand, focus on the next 10 to 20 years. Yes, people pay attention to next year's earnings, but investment decisions truly are based on long-term considerations.

Another key distinction in my current position is that microeconomics is understandably much more important than macroeconomics, and I am convinced this statement would apply not just to the petroleum industry but to the entire nonfinancial world. Energy and environmental policy issues, which absorb at least half of my time, are paramount in grasping the future potential for the industry. Comprehending the interplay of price and GDP elasticities is also of significance, as are techniques for dealing with uncertainty.

A final important contrast is that nonfinancial companies are more internally and technically focused than financial firms. They are willing to spend many more resources to understand an issue in-depth, but the flip-side is that they are not concerned with the broad range of issues that concern financial company management and, therefore, financial economists. In simplistic terms, financial economists must know (at least) a little about a wide range of issues, whereas nonfinancial economists must focus more carefully on the intricacies of their particular slice of the economy.

In looking back over my years as a business economist, I find that several guidelines come to mind that have helped me make solid contributions and have made my work much more enjoyable. I offer them as examples of ways economists can add value to their organizations.

Develop a clear understanding of how your company's business relates to the economy. Commercial bank economists know that loan losses rise during recessions and that certain industries tend to be hardest hit. They start giving signals early to slow the credit process. They study interest rate spreads (a key ingredient for profit margins for banks), and they enhance their understanding of financial markets in order to give advice on short-term versus long-term financing. At petroleum companies, economists must remind management that price elasticities may be close to zero in the short run, but they are substantial in the long run.

Play the role of the skeptic. At a commercial bank, when lending officers and/or management argue that the economy will go on booming (or declining) far past what a normal cycle would call for, the economist should ask why. At a petroleum company, when management believes that oil prices will rise persistently into the future, the economist should ask why. After all, an important role for economist is as guardian of the company's portfolio of assets/investments, and history's lessons should be brought to bear on decisions affecting that portfolio.

Serve on task forces organized by industry trade groups, such as the American Bankers Association or the American Petroleum Institute. Such involvement plays a powerful instructional role for an economist on industry-specific issues--making one better acquainted with industry concerns and better able to provide relevant advice to management.

Serve as ambassador for your company to the "outside world." Every business needs someone who has a broad worldview to explain why it acts in certain ways. Whether those explanations are for customers, Congress, or the general public, there is no substitute for such an ambassador.

The bottom line for success as an economist in a business environment is to be both relevant and realistic in the advice provided to one's firm. One must understand the firm's key drivers and strive to develop realistic, market-oriented solutions.

BUSINESS ECONOMISTS ARE ADAPTABLE

I began my career in business economics in 1963 as a Research Assistant with a consulting group in Los Angeles after earning a masters degree in economics. A year later I was the Industrial Analyst with the Department of Commerce for the Government of Guam. This job evolved into the economist for the Governor (who was a presidential appointee). The job involved designing and implementing a development plan for the Territory of Guam and required travel from Australia to Japan to Guam to Washington.

Two years later, I worked with a consulting group in Kansas City, but soon returned to California and joined a multinational company as Corporate Economist. The job duties included: forecasting product demand, prices and sales; conducting plant site location studies; managing special projects among divisions such as market research; and lobbying at the state and national level. The lobbying became formalized into the Tokyo GATT. Other duties included visits to Eastern Europe, Latin America and Asia. Along the way, I became an Associate Editor of *Business Economics*.

By the 1980s, my job title had changed to Manager, International Development, and I ran the international operations (factories and sales) of the corporation outside the U.S. and Canada.

A bout with the flu in China led to a relapse in Africa in the mid-1980s. A medical leave evolved into duties in Washington, DC, for the Uruguay GATT and NAFTA.*

*Editor's Note: The tools learned by economists are flexible enough that we can pursue different avenues when life conditions (medical reasons, family obligations) change.

A FEDERAL RESERVE BANK ECONOMIST

I am in charge of the research department at the Federal Reserve Bank of Cleveland. The Federal Reserve Banks are excellent places for the economists to confront their technical training with the practical problems generated by the ever-changing economy. Federal Reserve Bank research departments typically hire Ph.D. economists who are interested in developing and applying economic theory to address issues in monetary, financial, and regulatory policy, as well as to better understand fluctuations in the real economy.

The research staff consists of about 18 economists and 9 research assistants. We do a great deal of writing. The department publishes a Working Papers series and a quarterly Economic Review that is aimed at other economists. In addition, we publish the Economic Commentary twice a month and the Economic Trends monthly. These two publications discuss current public policy issues from an economic perspective and analyze current economic conditions from a theoretical viewpoint. Aside from these publications, the economists also publish regularly in professional journals, present papers at conferences, and talk about their work with interested non-professionals through speeches and other public programs.

One of the most important responsibilities of the department is to maintain an ongoing research program focused on the Bank President's responsibilities as a member of the Federal Reserve's chief policy making body, the Federal Open Market Committee. A small group of economists continuously monitors the Fed's operations and current policy issues, and a broader group studies basic issues in monetary and business cycle theories.

Economists can contribute to many important corporate decisions, not just those in the area of monetary policy. My job requires a broad knowledge of economics, an understanding of the many purposes and functions of the Federal Reserve System, a capacity to work with other people, and the ability to write and speak effectively to professional economists and non-economists alike. In addition to being responsible for the activities of the

research department, I also help supervise the Bank's Corporate Communications and Community Affairs Department. This part of the Bank is responsible for communicating the Bank's policy positions and providing information both internally and externally. It arranges speeches, tours conferences and other programs, interacts with the media, and participates in educational activities. In all of these endeavors, it is essential that the Bank's policy positions and interests be addressed.

I also participate in several other Bank management committees, including the Personnel Committee, the Credit Risk Management Committee, and the Information Security Committee. These groups, respectively, make personnel policy, monitor payments risks and make discount loans, and devise procedures to protect the Bank's information-based assets. Moreover, on an ad hoc basis, I am asked to participate in Bank Task Forces that study certain Bank functions, such as its compensation system, check processing operation or affirmative action plan. Since economists are skilled at determining costs and benefits and recognizing opportunity costs and are acquainted with the pitfalls of regulation, my participation in these activities brings a different and valuable perspective to Bank operations. To be effective in these activities, it is imperative that I am able to relate basic economic principles to these issues and be able to communicate with non-economists.

A BUSINESS ECONOMIST IN GOVERNMENT WORKING ON THE NATIONAL ACCOUNTS

The national accounts of the United States, which are prepared by the Commerce Department's Bureau of Economic Analysis (BEA), show the value and composition of the nation's output as measured by the gross domestic product (GDP) and the distribution of incomes generated in its production. Typically, a BEA economist who works on these accounts is responsible for estimating a major component of the GDP. This usually involves preparing estimates each month for that component from a variety of government and private data sources. The work also entails developing new estimating procedures, investigating new sources of data, and maintaining documentation of methods and procedures. Another important aspect of the work, particularly when BEA releases estimates, involves interactions with the public--answering questions about estimates and providing background information relating to the accounts. Finally, the economists working on the accounts share their expertise by conducting sessions as part of BEA's training program for national income accountants from around the world.

An example of how we prepare the monthly estimates for the largest component of both national income and personal income--wages and salaries--can be used to illustrate our work. As with most components, annual data form the "benchmarks" from which sub-annual estimates are extrapolated. The key source data for the annual estimates are quarterly tabulations from a Bureau of Labor Statistics (BLS) program based on workers covered by unemployment insurance; these data are available six months after the end of a quarter. In view of the need for more timely information on wages and salaries, we develop monthly (and quarterly) estimates using an indicator based on employment hours, and earnings data from a BLS monthly survey that samples nonfarm business establishments (including state and local governments); these data are available about a week after the end of the reference month.

The economist analyzes the month-to-month changes in wages and salaries by industry and, perhaps more important, the "contributions" to those changes from the separate effects of changes in employment, hours and earnings. Because the BLS survey data cover the pay period that

includes the 12th of the month, we must adjust the data if this period is not representative of the entire month because of strikes, unusual bonuses, severe weather conditions, holidays, etc. Similarly, we may adjust the data when there are no explanations for other unusual changes, especially if we think the data are likely to be revised as more complete information becomes available.

When the wage and salary estimates for the reference months are completed--about 2 weeks following receipt of the BLS data--we prepare a "package" that includes detailed estimates by industry, information on related series and an explanation of any adjustments that were made to the BLS data.

For the quarterly GDP estimates, the monthly estimates are aggregated and combined with estimates for other components. The complete GDP package is reviewed by senior officials of the Bureau in a "lock-up"--literally behind locked doors for security reasons--the day before GDP is scheduled for release. When the aggregate GDP estimate is finalized, BEA prepares the GDP news release, and a copy is hand-delivered after 5:00 pm to the Council of Economic Advisers for transmittal to the President.

On the morning of the GDP release, BEA staff who participate in the lock-up conduct briefings for policy officials at the Commerce Department, for the media, and for other BEA staff on the highlights and important factors underlying the estimate.

Working on the national accounts is a challenging experience. It is exciting to see the results of your work on nightly news and reports and in newspaper headlines. At the same time, you are always aware of the sensitive nature of the work and the serious responsibility for providing the best available information to both the public and private sectors so that sound economic policies can be developed.

A BUSINESS ECONOMIST IN GOVERNMENT THE CITY PLANNER

Economists can work in many different types of settings. I work for a local county government, Cobb County, Georgia. Cobb County is a suburban county; its county seat, Marietta, is about 20 miles northwest of downtown Atlanta. Although I am recognized as an economist, my official occupation is called a city planner.

City planners determine the best uses of land to promote livable communities. Land-use planning at its best is coordinated with plans for infrastructure (roads, water, sewer). This combination of land-use and infrastructure planning is known as comprehensive planning. Comprehensive planning is not only necessary to assure compatible uses of land, but it is also necessary to bring efficient investment. One must know how many roads and sewers to build. Too little expenditure may make communities unlivable, whereas too much expenditure wastes scarce tax dollars.

I am the designated research staff for the Cobb County Community Development Department. Traditionally, planners often have only modest training in economics and statistical methods, but the need for quantitative analysis in planning is increasing. I am one of the few people with Master's degrees in both City Planning and Economics. My undergraduate degree is in economics, and I taught economics full-time for several years at the college level. I still teach economics and statistics part-time at several Atlanta area colleges.

Most of my work in the Cobb County Planning and Zoning Department consists of responding to daily requests for information and undertaking special projects. Here are the various roles I play in the Planning Division:

LIAISON TO THE PUBLIC. This includes responding to daily requests for information such as Census or Bureau of Labor Statistics data. Many people use these data for market analysis. I help people choose the most appropriate data for their purpose. Sometimes people will need

countywide data; sometimes they will need data for a small portion of the county.

COMMITTEE ADVISER AND SPECIAL ANALYSIS. In addition to citizen inquiries, I also engage in special studies for various county departments. I worked with the Affordable Housing Task Force on a survey of county of employees and affordable housing. I also served on several committees of the Department of Transportation. My task on these committees was to advise on road projects and how new and widened roads would affect land use patterns. I also helped the library system pick a new library based not only on where the population of the county was increasing, but also on how convenient the library would be to reach.

AUTHOR OF DATA REPORT AND OTHER SPECIAL REPORTS. Each year I oversee the Planning Division's compilation of frequently requested data (as well as land-use, transportation and government services data) called the Cobb County Data Report. The book is not costly to prepare and is a valuable tool for those interested in market analysis. I also author a quarterly report on development in the county. One of the most important sections is information on building permits. Building permits are one important leading local economic indicator.

Another important responsibility I had was the writing of the population, housing, and economic base elements for both the county's and the incorporated cities' state-required *Comprehensive Plans*. Before any community can plan properly for future development, the community must assess current numbers and forecast the future numbers.

As policymakers in rapidly growing urban areas begin to act on the need to promote quality growth, there will be an increased demand for city planners. Those who are rigorously trained in quantitative skills, such as economists, have the skills and opportunity to increase their contribution to the city planning profession. Planning is a generalist's profession. Economics students interested in working on public policy issues and relating economics to other disciplines might want to consider becoming a planner.

THE JOB OF AN ECONOMICS EDITOR

If you are an economics major with a strong interest in the English language and a good background in English composition or journalism, you may be able to pursue a rewarding career editing and producing publications for a financial institution, government agency or public policy research organization. You can find jobs of this nature in commercial banks, research firms, Wall Street securities houses, mutual fund companies, public policy think tanks, U.S. government departments and agencies, and such economic institutions as the Federal Reserve, the International Monetary Fund, and the World Bank. Many trade associations and other nonprofit interest groups also produce publications that require editors with economic expertise. Also, some publishing houses employ book editors with an economics background to handle the acquisition and editing of economics, financial and business manuscripts.

As an economics editor in the private sector, your job is to help economists in your company communicate internally with staff and senior management and externally with clients, policymakers and the public. You are more than a copy editor or proofreader; you must make the material readable and see to it that the manuscript develops its theme with structure, brevity and clarity. And you must work quickly, often on rigid deadlines. You not only must serve as a guardian of the English language--ensuring correct style, usage and grammar--but you also have to read manuscripts for substantive content, raising questions about possible errors in economic and statistical analysis. You also have to understand principles of page layout and the graphic illustration of quantitative data. The job often involves a lot of rewriting, so you have to be a competent writer, even though you will not usually originate written material.

To work in this field, you will probably have to develop facility with a variety of computer software programs, including graphics, spreadsheet, word processing, desktop publishing, econometric and statistical packages. If you take an editorial job at a securities firm, you may also be asked to become certified as a Supervisory Analyst, so that you can review research publications for compliance with securities law and stock

exchange regulations. This certification requires an examination of your knowledge of economics, finance, accounting and securities law.

I launched my own career in this field by combining an undergraduate major in economics with course work in journalism and a variety of editorial jobs on my college newspaper. My career led over the years to senior editorial positions in the corporate economics group of a large commercial bank and in the external relations department of a major international economic agency. I currently work in the fixed income division of a leading investment bank, where I edit and produce research publications dealing with financial markets. The authors include economists, financial analysts, and Wall Street "rocket scientists" trained in mathematics, science and engineering.

A typical day on this job starts with the careful reading of drafts of a weekly or monthly periodical or perhaps a longer topical research paper. Throughout the day, I will also receive a constant stream of one or two-page trading bulletins for quick turnaround and distribution. For the periodicals and longer papers, I discuss problems of content, structure, and graphic illustration with the authors and ask for a revised draft, if necessary, before proceeding with line-by-line copy editing, production of charts and tables and page layout. At some point in the process, I review the manuscript for compliance and discuss potential problems, if any, with compliance lawyers.

If you like economics and have a taste for exacting work with the English language, consider combining your interests. It can start you down the road to a satisfying career as an economics editor.

USING ECONOMICS AS A FINANCIAL REPORTER

I decided to become a financial journalist my freshman year in college, when I discovered the only jobs available to female graduates of four-year economics programs were those at teller windows in banks.

I was enrolled in one of the most respected economics programs in the country and loved the work, particularly macroeconomics and its effect on public policy. Wanting desperately to remain in the field, and not the least bit interested in banking, I applied to take a second major in magazine journalism, thinking it would expand my career options.

Throughout that dual study, and for most of the rest of my career, I have enjoyed doing both mathematical and verbal analysis. At the end of the program I had a valuable combination: I was either an economist who

PHOTO

Financial reporters interview J. Alfred Broaddus, Jr., president of the Federal Reserve Bank of Richmond, at NABE's policy seminar in Washington, D.C.

could write, or a writer who understood economics and could make sense out of technical subjects.

I let the marketplace make the selection, and became a writer. My first job had nothing to do with economics. I chose to edit a monthly engineering magazine because it was offered as a graduate assistantship. I produced the magazine once a quarter, and in exchange for the work I was given a tiny salary and full tuition for any masters degree program of my choice. After two years I had a graduate degree in business and a portfolio full of magazines.

Those credits generated a number of offers from public relations firms and from businesses seeking in-house editors. I avoided those opportunities, because I wanted to be a "real" journalist writing about economic policy issues.

My first financial writing job came after I moved to the midwest and took a reporting job following agribusiness and the commodities markets for a national newspaper chain. I didn't know a thing about grain or farming, but I knew that the wheat trade was global and that food was at the heart of world politics, and I was too naive to be intimidated by commodity futures markets.

The job immediately threw me into an arena where I wrote daily about international trade, foreign exchange, interest rates, and policy. The great Soviet Grain Robbery was recent history, the industry was reeling from the effects of the Carter grain embargo, and U.S. food policy was in a state of flux.

Two years later I switched to writing exclusively about financial markets and monetary policy for an international wire service, and then went on to cover the stock market and stock index derivatives. Much of my time was spent talking to economists, traders, and corporate executives; I found my education gave me an edge over more general reporters.

I currently run my own business, write for one of the best known international business newspapers in the world, and also write on business and economic issues for a variety of magazines.

Daily financial reporting for a newspaper or wire service can be exhausting, but being a part of the flood of the world financial events makes the work worthwhile. Almost any major political event has an impact on world markets; and financial events, such as the 1987 stock market crash or the disintegration of the ERM, have a significant influence on politics.

Over the past decade, the demand for financial news and information has exploded, creating an urgent need for level-headed reporters schooled in economics and finance.

BUSINESS ECONOMISTS IN LITIGATION ANALYSIS

The expansion of regulation and the ensuing litigation in recent years have nurtured the application of economic analysis to litigation. In today's environment of widespread business regulation, the economic advisor is often retained simultaneously with the attorney.

A career in litigation analysis (sometimes called forensic economics) involves the prospect of a diverse work agenda that will use all skills learned during formal education. Litigation engagements are difficult to summarize, but in the course of a year, projects will include mathematical models, statistical analysis, critiques of existing literature and preparation of testimony for testifying experts, who are sometimes holders of the Nobel Prize in Economics. In short, diversity is a major characteristic of the work.

Litigation analysis involves special project teams consisting of economic consultants, legal advisors and senior management staff. The work groups are typically small, the time requirements are often tight, and the objective is to compile an analysis of a problem that may involve potential liabilities or investments in the billions of dollars for a major corporation.

The economic skills required are a solid foundation in all the basic tools of the business economist, a creative mind that can discern new analytic approaches when the traditional precedents do not fit a client's problems and the ability to complete the work within the tight time schedules imposed by regulations or by judges.

During a career in litigation analysis, one must be prepared to evolve continuously as an economist. Many of the "testifying experts" hold the Ph.D. degree. All successful litigation economists must remain acquainted with new developments in economic theory and methodology, as these are often used as a basis for arguments before regulatory agencies or courts.

Where are the employment opportunities for business economists?
Government agencies are often the entry point, including federal, state and

local agencies involved in antitrust, environmental, financial, health-care and other areas of regulation. Basically, if the law discusses "competition" or "prices" in its text, there will eventually be openings for business economists. Naturally, the economic consulting firms employ business economists for litigation projects. Law and accounting firms are adding positions for economists. Finally, many corporations may have litigation analysts in their corporate economic or legal departments.

AN ECONOMIST ON THE BOND TRADING FLOOR

I work as an economist on the bond-trading desk of a large Wall Street firm. In conjunction with three other economists, I am responsible for monitoring and analyzing the seemingly endless stream of economic information that confronts the bond market every day. The bond market processes this information about the economy, including the expected responses of policymakers, and reflects it in bond prices and interest rates. Our work falls into four major areas.

First, we develop forecasts of the various U.S. economic indicators (such as housing starts or employment) released by the government and certain private organizations. These indicators that are usually released at 8:30 and 10:00 each morning and "surprises" in the release relative to market expectations can alter investment decisions and interest rates very rapidly.

Second, we assemble forecasts of the borrowing needs of the Federal government, which issues securities every week in large quantities. As a primary dealer in government securities, our firm is required to maintain a constant and sizable presence at each Treasury debt auction. Knowledge of the upcoming supply can give our traders a sense of the relative issuance of securities along the yield curve. Our traders can then sell securities whose relative supplies are expected to increase (and whose prices are expected to fall) and buy those securities whose relative supplies are expected to decline (and whose prices are expected to increase).

Third, we constantly monitor the position of the Federal Reserve, the U.S. central bank. The Fed is the most important player in determining the interest rates of shorter-term securities, since it directly controls the federal funds rate, the rate banks pay for overnight lending. Most of the time, the daily changes in the fed funds rate are due to changes in technical factors, such as the banking system's seasonal need for cash (e.g., for Christmas spending), and have no policy significance. But sometimes the fed funds rate changes because of a change in policy, as the Fed has decided to raise rates to fight inflation or to lower rates to reinvigorate the economy. This means that all other short and

intermediate securities must be repriced accordingly. So a detailed forecast of daily Fed operations is needed to separate the technical changes from the policy ones.

Fourth, we must monitor and analyze the "soft" news information, which includes statements by White House officials, Fed policymakers, or well-known bond market gurus. Soft news is distinct from such "hard" news as the release of housing starts data. Soft news can also affect the market violently. Is a Fed official's statement a new position or a rehashing of old policy stands? So an important part of our job is to identify meaningful information.

We communicate our forecasts and views orally and in writing to our internal trading and sales personnel and their clients. Each afternoon, we assemble a daily sheet that presents the upcoming indicators for the next two days, monitors the Fed's daily operating position and reviews the events of the day. A weekly publication written on Friday provides our readership with a long-term perspective on the bond market. Both the daily and weekly publications are available on our internal computer systems and are faxed around the globe. We also present the same information orally in meetings that begin early every morning before the bond market opens for trading. In addition, an internal communication system (the "hoot and holler box") allows us to make oral comments on market developments to all our offices.

This is a great job for an economist who is equipped with solid analytical and communication skills and who wants to work in a fast-paced environment. Most trading desk economists have graduate degrees in economics, but there is no hard and fast rule regarding the right educational background. A successful economist in this position is a hard working, savvy team player with a lot of energy and drive. You are treated as a team member first and an economist second and are well rewarded for your efforts.

A BUSINESS ECONOMIST IN A BANK CREDIT DIVISION

I work in a commercial bank, one of the world's largest, that is headquartered in Japan. I am a member of the Credit Division for the Americas, which is located in New York. Together with my staff of eight analysts, I study the structure and developments of industries in the United States and Canada. We also study the companies within those industries that are or might become bank clients.

Our products are written reports that include creditworthiness ratings for both the industry and the company. Our clients are the General Manager of the Credit Division and his deputies, account officers in the bank's U.S. and Canadian branches and agencies and the head office staff in Tokyo.

One of our reports is required when a loan application is received from a borrower unfamiliar to the bank. We begin by reviewing the industry, explaining its structure, outlining issues it faces and expressing an opinion about the risk of lending to companies in this industry. Then we examine the company, its performance, its outlook, and how it compares in a number of key regards with its competitors. Finally, we rate the company much as a rating agency does, on the degree of confidence we have that a loan to the company will be repaid in full and on time.

I came to this post with a PhD in Economics and many years of experience in macroeconomic analysis and forecasting for a major U.S. commercial bank. Happily, I have found this background to be a very useful complement to the finance backgrounds of my staff. Knowledge of the business cycle is a valuable commodity in this role.

Compared with macroeconomics and forecasting, this work requires much more research into institutional details and technological developments. The work is tied directly into decision making and is less subject to forecasting errors -- although it is by no means free of them. Data are more readily available and more precise than much macroeconomic data.

One who works in this field will need to become familiar with the many data sources, be comfortable with financial reports and spreadsheets, have

the patience needed to dig through the regulations that seem to affect nearly every industry to one degree or another and demonstrate skill in writing clearly for an audience that has English only as a second language. I find it of great value to have access to the network of industry economists available through NABE.

The professional rewards include participation in decisions of major importance to the bank and the constant stimulation that comes from studying the changing industrial mix of the economy. It is a source of satisfaction to me as well to apply the principles of price theory and the theory of the firm learned in those now long ago graduate school years.

PHOTO

Michael Penzer and Maureen Maguire, Bank of America and Montgomery Securities in San Francisco respectively, are engaged in a financial markets discussion.

AN ECONOMIST IN THE ENGINEERING-CONSTRUCTION INDUSTRY

Three main forces shape the work of a business economist: his or her industry; the particular firm within the industry; and the individual's background, capabilities and predilections. Since all of these forces are changing continuously, so does the work of Bechtel's two corporate economists.

Bechtel's core business is complex, large, nonresidential projects-- particularly energy, natural resources and infrastructure in the U.S. and throughout the world. This wide scope of activities and the importance of the political dimension imply a need for political economists rather than technical specialists.

A fundamental trait of "heavy" construction is that each project has a unique combination of basic design, construction conditions, and political/ economic/ financial context. There is little that is amenable to precise analytic tools based on the assumption of continuously differentiable functions. Thus, the mind-set of the economist is much more important than the technical tool-kit.

A second fundamental trait is volatility and little relationship to short-run aggregate business fluctuations. Thus, the economists' emphasis in this industry is typically on growth and long-run structural change; yet we are also called upon to analyze the business implications of major events, such as the invasion of Kuwait.

What We Do: We prepare a quarterly update for the board of directors on the global economic and political outlook and its implications for Bechtel. The presentations cover the overall outlook and one or two special themes. Each month, we produce a two-page "Economic and Political Events of Interest to Bechtel" as background for Executive Committee meetings.

A major part of our work is special studies that may have fuses as short as a few hours or as long as several months. The topics can be anything that either: (1) require economic sophistication or (2) do not fall within anyone else's particular recognized talents. A few examples: determining

Bechtel's inherent vulnerability to severe cyclical forces, identifying the major economic, financial, political and technological forces that will affect our business over the next decade; evaluating the types of strategic alliances that we might enter; and developing metrics to assess the effectiveness of Bechtel's marketing and business development activities.

The various business entities frequently request studies varying from looking up a piece of economic data to major studies on the political and economic factors that will be important to Bechtel's success in a given market. Occasionally, we participate directly in bid preparation for engineering-construction projects, particularly in helping understand cost issues where Bechtel may be exposed to inflation or foreign exchange risks. While our major clientele are internal, we also occasionally engage in consulting services directly for customers. These usually involve overseas assignments of several weeks' duration. From time to time, we help prepare talks for senior executives to present to outside audiences.

How We Do It: We rely on a major forecasting service to provide information on the macroeconomic outlook for the U.S. and other countries. In addition, we spend roughly thirty percent of our time monitoring what goes on in the world through print media-newspapers, periodicals and special reports. Also, we have to try to keep close to the company's business activities to be sure that we are relevant to current concerns and can help anticipate those of the future. A key to success is the ability to understand, analyze and explain trends and events in the company context.

Our focus on long run, strategic issues make scenarios and contingencies as important as forecasts. In the future, we will continue to be called on to address new topics as Bechtel's markets and the way it does business change. It is a wonderful job for a certified eclectic. In the ten years I have been here, one thing that I have never had to worry about is boredom.

A BUSINESS ECONOMIST IN THE STEEL INDUSTRY

The steel industry was a pioneer among American manufacturers in establishing the staff functions of economic and market research. Economic research enters the picture as a means of providing an economic backdrop for the workings of the steel market. The lion's share of steel demand is tied to investment. That makes the steel industry extremely susceptible to the vagaries of investment cycles within the business cycle.

During my career in the steel industry, the economics/market research staff, then lodged in the Commercial Research Department, was responsible for preparing the sales forecast to present to top sales management. Its views were combined with those of line sales managers (who were closest to the customer) and those of product managers (who were closest to the markets) in order to generate a consensus forecast that then became an input to operating plans and to the budgeting process generally. Commercial Research had the further responsibility of evaluating supply and demand conditions within the steel industry by market and product line.

With the onset of the recession in 1982, the world changed but the steel industry changed even more dramatically. I had by then become Chief Economist and my major assignments had a long-term ring to them. By the time the steel industry supply/demand adjustment had taken place, steel capacity had been reduced by 30 percent. Product-market knowledge clarified the transformation. Visualizing the future called for unconventional approaches and led ultimately to the adoption of *scenario analysis* as a key tool in my forecasting kit.

In trying to meet my assignments, I supplemented my normal forecasting techniques by establishing and maintaining contact with such diverse people as design engineers, investment bankers, commercial bankers, representatives of customer companies, and fellow business economists involved in all areas of the economy.

Communicating results of studies and analysis was a major part of my work as Chief Economist. Twice a year, I prepared a fairly complete

review of the economic environment and presented my views to the top management group of the holding companies in a personal setting. These sessions were normally followed by presentations to the managements of the operating companies and to the planning staffs at all levels of the corporation. I prepared quarterly economic reviews in newsletter form for distribution to all officers and planning staff. I then worked with the corporate communications team to turn the quarterly review into a journalistic report for wider distribution through the company's publication.

We generally predicted all major entries of the national income accounts, along with the index of industrial production, inflation and steel industry parameters. We intended to explain what was happening in the outside world, not to predict the values of a set of numbers in advance of their publication within a specified range of accuracy. At all times, I had an economic outlook speech prepared and was ready to appear before management groups and customer trade associations.

Within the Corporate Planning Department, I worked with staff members who were involved in the preparation of the strategic and operating programs. I also worked on special assignments for senior management, for example, assisting the legal and public affairs staff in influencing legislation and administrative policy in such a way as to be favorable as possible for the company. As Chief Economist, I met with the press, security analysis, bankers, and civic groups to provide information on the economic outlook and steel industry prospects.

Finally, it was also part of my job to sift through the mountains of journals, publications, newspapers, and newsletters that characterize the business economist's in-basket. We always hope to find the one piece of information that will make our forecasts verge on clairvoyance. That never happens, but it is yet illustration of the nature of the job: the need for intellectual curiosity that drives it and makes it so rewarding.

USING ECONOMIC ANALYSIS AT A PHILANTHROPIC FOUNDATION

I am a program officer at a private philanthropic foundation that makes grants to non-profit organizations. The foundation has assets of approximately \$500 million and makes grants totaling \$17 million each year. As a program officer, I review proposals from non-profit organizations working in the field of economic development and oversee grants to these non-profits. An academic background in economics plays a large role in reviewing the viability of economic development projects, even in the non-profit sector. It provides a critical, analytic framework from which to assess the feasibility of proposed projects, to understand how supply and demand affect resources available, and to estimate potential cost and expected usage of services. It also provides an understanding of how national and international macroeconomic trends affect local and community economies.

Prior to joining the foundation, I completed an MBA in finance and was a banker for six years financing mergers and acquisitions. I started my career in the economics department of a major money market bank analyzing and forecasting economic trends for the lending as well as trading departments of the bank. Economics provides important analytical experience that can be useful and important to a wide range of applications and jobs.

THE BUSINESS OF INTERNATIONAL ECONOMICS

Growth of the global investment "village" has sharply increased the number of fund managers and their need to divine these markets' outlook by forecasting inflection points of economic growth, exchange rates and interest rates. The demand for international economic information and analysis has thus grown dramatically in the past decade. Our company, a securities firm, provides this service for international portfolio managers, much of it from our Paris office.

We find that the multimarket, multicurrency asset manager must focus primarily on (1) exchange rate risk, the single most volatile and potentially devastating/rewarding consideration for global investors; (2) short term interest rate changes; and (3) the economic environment for future corporate earnings. These factors count heavily in the weighting of different markets in overall portfolios, i.e., the market allocation process.

Daily contact with global managers has led us to focus on the medium term (beyond one quarter) exchange rate outlook, changes in the direction and rate of economic growth and inflation rates, interest rate trends (monetary pressure always being critical to markets' short term performance), and monetary-fiscal policy changes. National politics of the sort happening since the Berlin Wall fell are also high on the list.

Some of our principal information sources include the central banks, government ministries and statistical offices of the major market countries. We also look to the IMF and the European Community Commission.

In addition to personal contacts, our most valuable research resource is hundreds of country and subject files bulging with clippings and reports from all sources since the 1970s. We depend heavily on weekly economic indicators on fourteen major market countries compiled from numerous sources.

We rely on our full-time Tokyo economists' forecasts for Japan, and we conscientiously produce macroeconomic forecasts in Paris on Europe's

principal countries. Primary among the information and forecasting sources that we respect are the analyses and interlinked model forecasts of the OECD, the European Community Commission and the IMF.

Detailed macroeconomic analysis, while necessary to maintain credibility for one's own forecast, is not, however, welcomed by clients in written reports, telephone briefings and meetings (which mean three to four months of travel a year). Clearly, they prefer a judgmental and critical analysis of consensus, most likely, and "off the wall" scenarios. And clients appreciate personally annotated, data-intensive written products that focus on specific but changing international economic issues. Another well-received product is nutshell summaries of the political-electoral situation in some forty significant countries, accompanied by the timing of the next election and results of the last.

PHOTO

Diann Painter, Mobil Oil Corporation; John Greenwood, LGT Asset Management Inc; and James F. Smith, University of North Carolina, review the international outlook at a NABE meeting in Boston.

In our company, the international economist's internal role includes serving on the Investment Policy Committee, giving weekly views to senior colleagues from the Research, Sales, and Trading Divisions. A forum for developing ideas, tactics and strategies for the firm's investment policy posture, the Investment Policy Committee recommends portfolio asset allocations for a model U.S. portfolio and a "Buy list" of American and international equities.

The international economist speaks often with the U.S. and European press--a time consuming job, but rewarding for the firm's reputation. Speaking assignments are numerous at meetings of professional groups in the U.S. and Europe.

Having the world for your "beat" and Paris as your base is both enviable and intimidating. As global institutional investment grows, spreads into the smallest markets, and becomes ever more sophisticated, the complexity of counseling fund managers on market allocation, exchange and interest rate trends and economic forecasts grows more challenging and stimulating!

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 economists 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.

PHOTO

NABE members enjoy a networking break during a meeting in New Orleans.

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 1996 found that business economists had an average (median) base salary of \$73,000 per year. Nearly 60 percent of the respondents reported salaries between \$50,000 and \$100,000, with 27 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 \$15,000. 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 have nearly doubled since 1980.

The 1996 survey also indicated that the largest employers of business economists were firms engaged in business services and consulting, government, communications and utilities and banking. Economists in the securities and investments sector were the most highly paid with a median base salary of \$100,000 and additional compensation from primary employment of \$60,000. Economists in banking followed with a median salary of \$93,000, with additional compensation of \$20,000. Economists in nondurable manufacturing followed with a median base salary of \$87,000 and additional compensation of \$15,000. The lowest salaries were recorded among economists in government and nonprofit research (with corresponding median base salaries of \$60,000 and \$61,000)

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 \$85,000 per year while economists with masters degrees earned an average \$65,500 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 \$41,000 in 1996, while those economists with 5-9 years experience earned a median salary of \$62,500; and those with 10-14 years experience earned \$70,000 per year.

New economists with a master's degree were most sought after in 1996. The median starting salary was \$35,000. Those with a bachelor's degree in economics could start at \$29,000, while new Ph.D.'s were able to command a starting salary of \$45,000.

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.

PHOTO

Fannie Mae's David Berson discusses the impact of demographic changes on the housing market.

THE FUTURE OF THE PROFESSION OF BUSINESS ECONOMICS

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.

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MEMBERSHIP IN THE NATIONAL ASSOCIATION FOR BUSINESS ECONOMICS

The National Association for Business Economics offers both regular and student memberships. NABE was created in 1959 to meet the professional needs of the rapidly growing number of economists employed in the private and public sectors. Among the services it offers are:

- *Business Economics*, NABE's prestigious business journal published four times yearly
- *NABE News*, NABE's newsletter to members distributed bimonthly
- Placement assistance including *Employment Opportunities* for business economists and a resume listing service
- Reports on the results of the *NABE Outlook*, *Policy Survey* and *Industry Survey*
- Invitations to attend NABE's meeting and seminars
- *Annual Membership Directory*, listing of members both alphabetically and by company
- An opportunity to join Roundtables of your choice: International, Financial, Manufacturing, Regional/Utility, Corporate Planning, Health Economics, Technology, and Market Research.

NABE also has 44 active affiliated chapters located in Atlanta, Baltimore, Carolinas, Charlotte, Chicago, Cleveland, Columbus, Dallas, Denver, Detroit, El Paso, Hartford, Honolulu, Houston, Indianapolis, Jacksonville, Kansas City, Kentucky, Los Angeles-Long Beach, Little Rock, Lubbock, Midland TX, New Jersey, New Orleans, New York, Oklahoma City, Olympia, Omaha, Philadelphia, Phoenix, Pittsburgh, Portland, Richmond, Sacramento, Salt Lake City, San Antonio, San Francisco-Oakland, Seattle-Everett, Silicon Valley, South Bend, Southern Connecticut, St. Louis, Tulsa, and Wilmington.

MEMBERSHIP APPLICATION

NAME _____

TITLE _____

COMPANY or SCHOOL (if student) _____

MAILING ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____ FAX _____ EMAIL _____

ANNUAL DUES ENCLOSED:

_____ Regular, individual membership USA & CANADA	\$75.00
_____ Regular, individual membership, other countries	100.00
_____ Retired, individual membership	37.50
_____ Full time students (provide i.d.)	30.00
_____ Institutional; includes individual membership for four (4) persons. Attach list	400.00

TOTAL _____

Payment method:

Charge: Visa MasterCard American Express
Card Number _____

Expiration Date _____

Signature _____

Check is enclosed payable to NABE (payable in U.S. dollars and drawn on a U.S. bank.)

Contributions or gifts to NABE are not tax deductible as charitable contributions. However, dues payments may be deductible as ordinary and necessary business expenses.

Please send me information on:

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Send to: National Association for Business Economics
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