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Business and Managerial Occupations



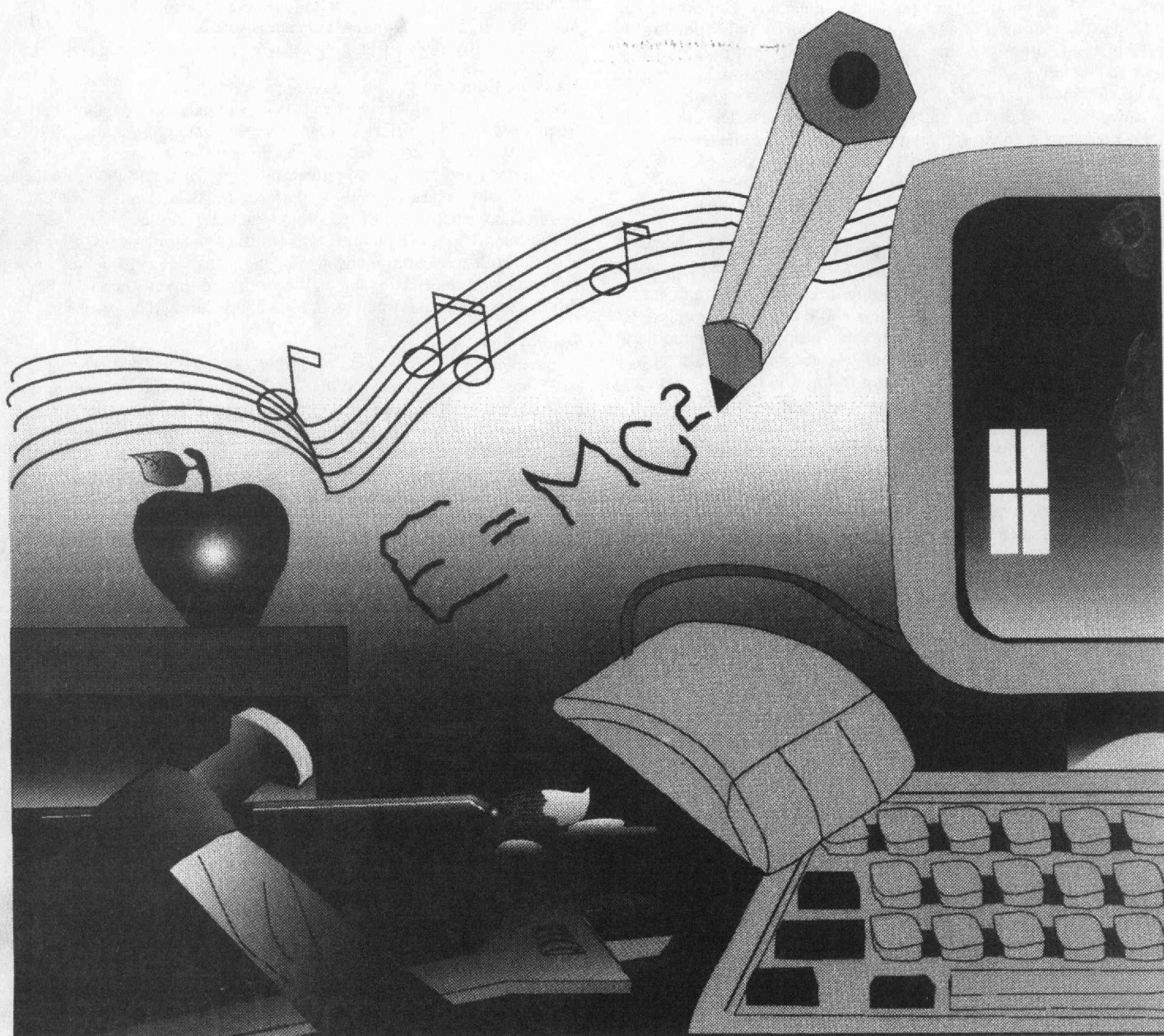
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Accountants and Auditors

(D.O.T. 160 through .167-042, and .267-014)

Nature of the Work

Managers must have up-to-date information in order to make important decisions. Accountants and auditors prepare, analyze, and verify financial reports that furnish this information to managers in all business, industrial, and government organizations.

Four major fields of accounting are public, management, and government accounting and internal auditing. Public accountants have their own businesses or work for accounting firms. Management accountants, also called industrial, corporate, or private accountants, record and summarize the financial information of their companies. Internal auditors verify the accuracy of their organization's records and check for mismanagement, waste, or fraud. Government accountants and auditors maintain and examine the records of government agencies and audit private businesses and individuals whose activities are subject to government regulations or taxation.

Within each field, accountants often concentrate on one phase of accounting. For example, many public accountants work primarily in auditing (examining a client's financial records and reporting to investors and authorities that the records have been prepared and reported correctly). Others concentrate on tax matters, such as preparing an individual's income tax returns and advising companies of the tax advantages and disadvantages of certain business decisions. Still others concentrate on consulting and offer advice on matters such as the design of companies' accounting and data processing systems and controls to safeguard assets. They might develop an accounting system for a new business or help a small business owner obtain financing.

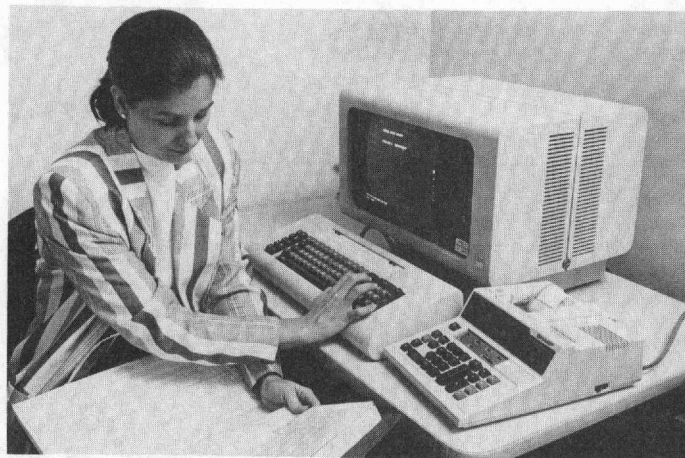
Management accountants provide the financial information corporate executives need to make sound business decisions. They prepare financial reports according to the public disclosure requirements of various stock exchanges, the Securities and Exchange Commission, and other regulatory bodies. Within accounting departments, they may work in areas such as taxation, budgeting, costs, or investments.

Internal auditing is rapidly growing in importance. As computer systems make information more timely and available, top management can base its decisions on actual data rather than personal observation. Internal auditors examine and evaluate their firms' financial and information systems, management procedures, and internal controls to ensure that records are accurate and controls are adequate to protect against fraud and waste. They also review company operations—evaluating their efficiency, effectiveness, and compliance with corporate policies and procedures, laws, and government regulations.

Accountants and auditors also work for Federal, State, and local governments. Government accountants see that revenues are received and expenditures are made in accordance with laws and regulations. Many persons with an accounting background work for the Federal Government as Internal Revenue Service agents or in financial management, financial institution examination, and budget administration.

In addition, a small number of persons trained as accountants teach and conduct research at business and professional schools. Some work part time as accountants or consultants.

Computers are widely used in accounting and auditing. With the aid of special computer software packages, accountants summarize transactions in standard formats for financial records, calculate projected financial ratios, or organize data in special formats for financial analysis. These accounting packages are easily learned and require few specialized computer skills, but greatly reduce the amount of tedious manual work associated with figures and records. Personal and portable computers enable accountants and auditors in all fields—even those who work independently—to use their clients' computer system and to extract information from large mainframe computers. Internal auditors may recommend controls for their orga-



Computers greatly reduce the amount of tedious work associated with analyzing financial records.

nization's computer system to ensure the reliability of the system and the integrity of the data. A growing number of accountants and auditors have extensive computer skills and specialize in correcting problems with software or developing software to meet unique data needs.

Working Conditions

Accountants and auditors work in offices, but public accountants may frequently visit the offices of clients while conducting audits. Self-employed accountants may be able to do part of their work at home. Accountants and auditors employed by large firms and government agencies may travel frequently to perform audits at clients' places of business, branches of their firm, or government facilities.

The majority of accountants and auditors generally work a standard 40-hour week, but many work longer, particularly if they are self-employed and free to take on the work of as many clients as they choose. Tax specialists often work long hours during the tax season.

Employment

Accountants and auditors held about 985,000 jobs in 1990. The various States licensed over 400,000 as Certified Public Accountants (CPA's) in 1990 and more than 19,000 as Public Accountants (PA's) or Registered Public Accountants (RPA's); the majority were unlicensed management and government accountants and auditors. Many accountants and auditors voluntarily earn professional designations that certify their professional competence in fields of accounting and auditing that are not State regulated: About 17,000 were Certified Internal Auditors, over 10,000 were Certified Management Accountants, about 7,000 were Certified Information Systems Auditors, and about 5,000 held certificates of accreditation in accounting or taxation awarded by the Accreditation Council for Accountancy and Taxation.

Most accountants and auditors work in urban areas where public accounting firms and central or regional offices of businesses are concentrated. About 10 percent of all accountants were self-employed and fewer than 10 percent worked part time.

Training, Other Qualifications, and Advancement

Most public accounting and business firms require applicants for accountant and internal auditor positions to have at least a bachelor's degree in accounting or a related field. Some employers prefer those with a master's degree in accounting or a master's degree in business administration with a concentration in accounting. Most employers also prefer applicants who are familiar with computers and their applications in accounting and internal auditing.

For beginning accounting and auditing positions in the Federal Government, 4 years of college (including 24 semester hours in accounting or auditing) or an equivalent combination of education and experience is required.

Previous experience in accounting or auditing can help an applicant get a job. Many colleges offer students an opportunity to gain experience through summer or part-time internship programs conducted by public accounting or business firms. Such training is invaluable in gaining permanent employment in the field.

Professional recognition through certification or licensure also is helpful. In the majority of States, CPA's are the only accountants who are licensed and regulated. Anyone working as a CPA must have a certificate and a license issued by a State board of accountancy. The vast majority of States require CPA candidates to be college graduates, but a few States substitute a certain number of years of public accounting experience for the educational requirement. Based on recommendations made by the American Institute of Certified Public Accountants and the National Association of State Boards of Accountancy, 17 States presently require that CPA candidates complete 150 semester hours of college coursework. This 150-hour rule requires an additional 30 hours of coursework beyond the usual 4-year bachelor's degree in accounting—for example, a 5-year bachelor's degree or a master's degree in accounting.

All States use the four-part Uniform CPA Examination prepared by the American Institute of Certified Public Accountants. The 2 1/2-day CPA examination is rigorous. Candidates are not required to pass all four parts at once, although most States require candidates to pass at least two parts for partial credit. Many States require all sections of the test to be passed within a certain period of time. Most States also require applicants for a CPA certificate to have some accounting experience.

The designations PA or RPA are also recognized by 38 States. With the dramatic growth in the number of CPA's, the majority of States are phasing out the PA and RPA designations by not issuing any more new licenses. Accountants who hold PA or RPA designations have similar legal rights, duties, and obligations as CPA's, but their qualifications for licensure are less stringent. The designation Accounting Practitioner is awarded by four States. It requires less formal training than a CPA license and covers a more limited scope of practice.

Nearly all States require both CPA's and PA's to complete a certain number of hours of continuing professional education before their licenses can be renewed. The professional associations representing

accountants sponsor numerous courses, seminars, group study programs, and other forms of continuing education.

Professional societies bestow other forms of credentials on a voluntary basis. Voluntary certification can attest to professional competence in a specialized field of accounting and auditing. It also can certify that a recognized level of professional competence has been achieved by accountants and auditors who acquired some skills on the job, without the amount of formal education or public accounting work experience needed to meet the rigorous standards required to take the CPA examination.

The Institute of Internal Auditors, Inc., confers the designation Certified Internal Auditor upon graduates from accredited colleges and universities who have completed 2 years' experience in internal auditing and who have passed a 4-part examination. The EDP Auditors Association confers the designation Certified Information Systems Auditor upon candidates who pass an examination and who have 5 years of experience in auditing electronic data processing systems. However, auditing or data processing experience and college education may be substituted for up to 3 years.

The Institute of Management Accountants (IMA), formerly the National Association of Accountants, confers the Certified Management Accountant (CMA) designation upon candidates who pass a uniform examination and meet specific educational and professional standards. The CMA program is administered through an affiliate of the IMA, the Institute of Certified Management Accountants. The Accreditation Council for Accountancy and Taxation of the National Society of Public Accountants awards a Certificate of Accreditation in Accountancy and a Certificate of Accreditation in Taxation to persons who have passed comprehensive examinations; there are no educational requirements to take these tests.

Persons planning a career in accounting should have an aptitude for mathematics, be able to analyze, compare, and interpret facts and figures quickly, and make sound judgments based on this knowledge. They must be able to clearly communicate the results of their work, orally and in writing, to clients and management.

Accountants and auditors must be good at working with people as well as with business systems and computers. Accuracy and the ability to handle responsibility with limited supervision are important. Perhaps most important, because millions of financial statement users rely on their services, accountants and auditors should have high standards of integrity.

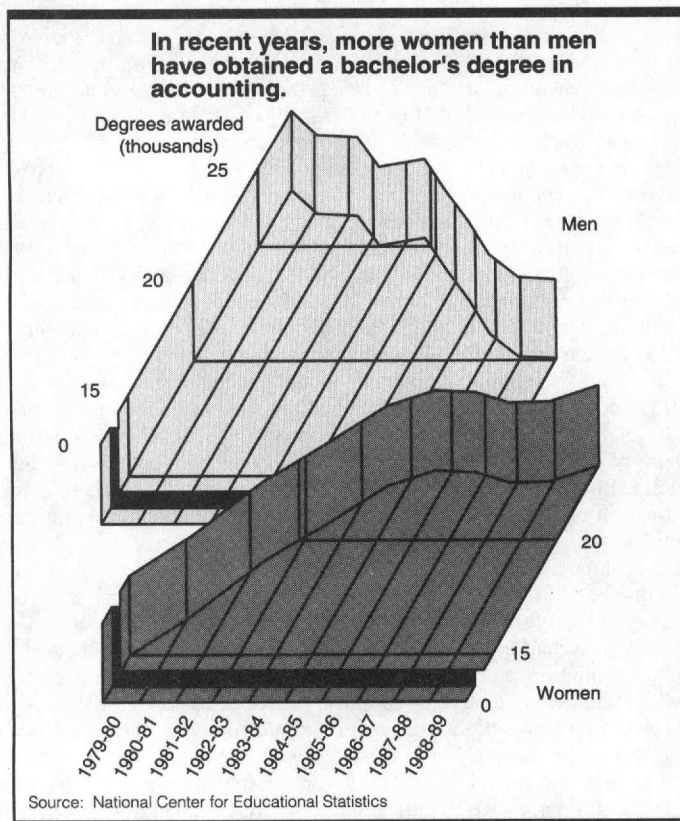
Capable accountants and auditors should advance rapidly; those having inadequate academic preparation may be assigned routine jobs and find promotion difficult. Many graduates of junior colleges and business and correspondence schools, as well as bookkeepers and accounting clerks who meet the education and experience requirements set by their employers, can obtain junior accounting positions and advance to more responsible positions by demonstrating their accounting skills on the job.

Beginning public accountants usually start by assisting with work for several clients. They may advance to positions with more responsibility in 1 or 2 years and to senior positions within another few years. Those who excel may become supervisors, managers, or partners, or transfer to executive positions in private firms. Some open their own public accounting firms.

Beginning management accountants often start as cost accountants, junior internal auditors, or as trainees for other accounting positions. As they rise through the organization, they may advance to accounting manager, chief cost accountant, budget director, or manager of internal auditing. Some become controllers, treasurers, financial vice presidents, or corporation presidents. Many senior corporation executives have a background in accounting, internal auditing, or finance.

Job Outlook

Employment of accountants and auditors is expected to grow faster than the average for all occupations through the year 2005, reflecting the key role these workers play in the management of all types of organizations. Although increased demand will generate many new jobs, most openings will result from the need to replace workers who leave the occupation or retire. While accountants and auditors tend to leave the profession at a lower rate than members of most other occu-



pations, replacement needs will be higher than for most occupations because the occupation is quite large.

As the economy grows, the number of business establishments increases, requiring more accountants and auditors to set up their books, prepare their taxes, and provide management advice. As these businesses grow, the volume and complexity of information developed by accountants and auditors on costs, expenditures, and taxes will increase as well. More complex requirements for accountants and auditors also arise from changes in legislation related to taxes, financial reporting standards, business investments, mergers, and other financial matters. Growing international competition is forcing many businesses to develop more cost information to help make their operations more efficient. Growth in demand for management advisory services may also contribute to growth for public accountants.

Many employers prefer graduates who have a broad background of education and experience. Computers now perform many accounting functions, allowing accountants and auditors to incorporate and analyze more information. This increasingly complex work requires greater knowledge of more specialized areas such as international business, current legislation, and computer systems.

Opportunities are expected to be favorable for college graduates seeking accounting and auditing jobs. While the demand for accountants and auditors is expected to continue to increase, the annual number of graduates with degrees in accounting has been virtually unchanged since the early 1980's. CPA's should have a wider range of job opportunities than other accountants. However, competition for jobs with prestigious accounting firms will remain keen; a master's degree in accounting would be an asset. Opportunities for accountants without a college degree will occur mainly in small businesses and accounting and tax preparation firms. The increasing use of computers in business should stimulate the demand for accountants and auditors familiar with their operation.

Accountants rarely lose their jobs when other workers are laid off during hard economic times. Financial information must be developed and tax reports prepared regardless of the state of the economy.

Earnings

According to a 1991 College Placement Council Salary Survey, bachelor's degree candidates in accounting received starting salary offers averaging \$26,600 a year; inexperienced master's degree candidates, \$31,100.

Beginning public accountants employed by public accounting firms averaged \$25,300 a year in 1990. The middle 50 percent had starting salaries ranging from \$23,900 to \$26,700. Salaries of junior public accountants who were not owners or partners of their firms averaged \$31,100, but some had salaries of more than \$45,600. Many owners and partners of firms earned considerably more.

The starting salary of management accountants in private industry averaged \$24,700 a year in 1990. The middle 50 percent had starting annual salaries ranging from \$22,300 to \$27,000. Salaries of non-supervisory management accountants averaged \$37,000 in 1990, and some of the most experienced had salaries of over \$80,000. Chief management accountants who direct the accounting program of a company or one of its establishments averaged \$55,700 a year. Their salaries ranged from over \$43,000 to more than \$74,000, depending upon the scope of their authority and the size of their professional staff.

Internal auditor trainees averaged \$28,600 a year in 1990. Experienced internal auditors averaged \$36,800, but some of the most experienced had salaries of more than \$53,000.

In the Federal Government, the starting annual salary for junior accountants and auditors was about \$17,000 in 1991. Candidates who had a superior academic record could begin at about \$21,000. Applicants with a master's degree or 2 years' professional experience began at \$25,700. Accountants and auditors employed by the Federal Government averaged about \$40,000 a year in 1990.

Related Occupations

Accountants and auditors design internal control systems and analyze financial data. Others for whom training in accounting is invaluable include appraisers, budget officers, loan officers, financial analysts,

bank officers, actuaries, underwriters, tax collectors and revenue agents, FBI special agents, securities sales workers, and purchasing agents.

Sources of Additional Information

Information about careers in certified public accounting and about CPA standards and examinations may be obtained from:

• American Institute of Certified Public Accountants, 1211 Avenue of the Americas, New York, NY 10036-8775.

Information on management and other specialized fields of accounting and auditing and on the Certified Management Accountant program is available from:

• Institute of Management Accountants, 10 Paragon Dr., Montvale, NJ 07645.

• National Society of Public Accountants and the Accreditation Council for Accountancy and Taxation, 1010 North Fairfax St., Alexandria, VA 22314.

• The Institute of Internal Auditors, 249 Maitland Ave., Altamonte Springs, FL 32701-4201.

• The EDP Auditors Association, 455 Kehoe Blvd., Suite 106, Carol Stream, IL 60188-0180.

For information on accredited accounting programs and educational institutions offering a specialization in accounting or business management, contact:

• American Assembly of Collegiate Schools of Business, 605 Old Ballas Rd., Suite 220, St. Louis, MO 63141.

Administrative Services Managers

(D.O.T. 162.117-014; 163.167-026; 169.167-034; 188.117-122, .167-106; 189.167-022, -030)

Nature of the Work

Administrative services managers work throughout private industry and government. They coordinate and direct supportive services such as secretarial and correspondence; preparation of payrolls; conference planning and travel; information processing; mail; materials scheduling and distribution; printing and reproduction; personal property procurement, supply, and disposal; data processing; library; food; and parking. They work within the same managerial hierarchy as other managers. Supervisory level administrative services managers report to their mid-level counterparts who, in turn, report to proprietors or top-level managers, such as the vice president or director of administration—who are included in the *Handbook* statement on general managers and top executives.

Supervisory level managers directly oversee supervisors or staffs involved in supportive services. Mid-level administrative services managers develop overall plans, set goals and deadlines, develop procedures to direct and improve supportive services, define supervisory level managers' responsibilities, and delegate authority. They are generally found in larger firms. Administrative services managers often are involved in the hiring and dismissal of employees but generally have no role in the formulation of personnel policy.

In small firms, one administrative services manager may oversee all supportive services. As the size of the firm increases, however, administrative services managers increasingly specialize in one or more of these activities. In some firms, supportive services may be directed by other managers and supervisors, some of whom are discussed in other *Handbook* statements. For example, administrative services managers may work as office managers, overseeing supervisors of large clerical staffs. In small firms, clerical supervisors—who are discussed in the *Handbook* statement on clerical supervisors and managers—perform this function. Administrative services managers also work as contract administrators, who direct the preparation, analysis, negotiation, and review of contracts related to the purchase or sale of equipment, materials, supplies, products, or services. However, procurement functions are generally directed by purchasing agents and managers, discussed in a separate *Handbook* statement.

Property management is divided into the management and use of personal property such as office supplies, an administrative services

management function, and real property management, a function of property and real estate managers—who are discussed elsewhere in the *Handbook*. Personal property managers acquire, distribute, and store supplies, and sometimes sell or dispose of surplus property. Some property managers are engaged solely in surplus property disposal, the resale of unneeded supplies and machinery, which is an increasingly important source of revenue for many organizations. In State governments, surplus property officers may acquire and then sell or dispose of Federal and State property.

In small firms, the allocation, use, and security of building space also is an administrative services management function, but is often the responsibility of facilities managers in larger companies. Other administrative services managers oversee unclaimed property disposal. In State government, this activity includes locating owners of unclaimed liquid assets—such as stocks, bonds, savings accounts, and the contents of safe deposit boxes—and in local government, locating owners or auctioning off unclaimed personal property—such as motor vehicles.

Working Conditions

Administrative services managers generally work in comfortable offices. However, in small firms, these managers may work alongside the supervisors and staffs they oversee, and the office area may be crowded and noisy. Since their duties involve a wide range of activities, they must maintain regular contact with personnel in other departments. Their work can be stressful, as they attempt to schedule work to meet deadlines. Although the 40-hour week is standard, uncompensated overtime is often required to resolve problems. Managers involved in contract administration, and personal property procurement, utilization, and disposal may travel extensively between home offices, branch offices, vendors' offices, and property sales sites.

Employment

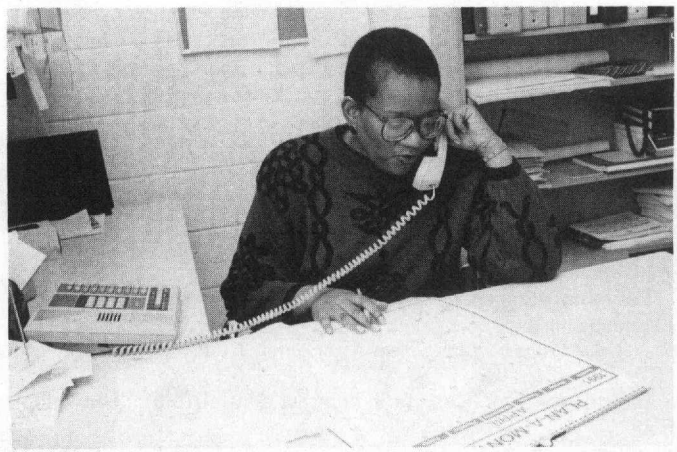
Administrative services managers held about 221,000 jobs in 1990. Over two-fifths worked in services industries, including management, business, social, and health services organizations. Others were found in virtually every other industry. A few run their own management services firms.

Training, Other Qualifications, and Advancement

Many administrative services managers advance through the ranks in an organization, acquiring several years' work experience in various administrative services before assuming supervisory duties. For example, managers who oversee clerical supervisors should be familiar with office procedures and equipment and have a working knowledge of word processing, communications, data processing, and recordkeeping. Managers of personal property acquisition and disposal need experience in purchasing and sales and knowledge of a wide variety of supplies, machinery, and equipment. Managers concerned with supply, inventory, and distribution must be experienced in receiving, warehousing, packaging, shipping, transportation, and related operations. Contract administrators may have worked as contract specialists, cost analysts, or procurement specialists. Managers of unclaimed property often have experience in claims analysis and records management.

Educational requirements vary widely. For supervisory level administrative services managers of secretarial, mail room, and related administrative support activities, many employers prefer an associate of arts degree in business or management, although a high school diploma may suffice. For managers of audiovisual, graphics, and other more technical activities, postsecondary technical school training is preferred. For managers of highly complex services such as contract administration, a bachelor's degree, preferably in business administration, is usually required. The curriculum should include courses in office technology, accounting, business mathematics, computer applications, and business law. Whatever the administrative services manager's duties, a manager's educational background must be accompanied by work experience reflecting demonstrated ability.

Persons interested in becoming administrative services managers should be able to communicate and establish effective working relationships with many different people—managers, supervisors, professionals, clerks, and blue-collar workers. They should be analytical,



Some administrative services managers need only a high school diploma, while others need a college degree.

detail-oriented, flexible, and decisive. The ability to coordinate several activities and to quickly analyze and resolve specific problems is important. Ability to work under stress and cope with deadlines is also important.

Advancement is easier in large firms that employ several levels of administrative services managers. A bachelor's degree enhances a supervisory level manager's opportunities to advance to a mid-level management position—such as director of administrative services—and eventually to a top-level management position—such as executive vice president for administrative services—in one's own or a larger firm. Those with the required capital and experience can establish their own management consulting or management services firm.

Job Outlook

Employment of administrative services managers is expected to grow about as fast as the average for all occupations through the year 2005. In addition, many job openings should result from the need to replace administrative services managers who transfer to other jobs or stop working.

An increase in demand for various administrative services should spur employment growth. Growth should occur in firms that employ administrative services managers to oversee the implementation and operation of sophisticated office systems, and in consulting firms to which administrative services are contracted out. Offsetting demand will be corporate attempts to reduce administrative costs by streamlining office and information handling procedures. The extent to which governments at all levels, particularly Federal, contract out for goods and services could affect demand for contract administrators and personal property managers.

As in other managerial jobs, the ample supply of competent, experienced workers seeking advancement should result in competition for administrative services management positions.

Earnings

According to a salary survey by the Administrative Management Society, the median annual salary of office/administrative services managers was \$33,000 a year in 1991. The lowest paid managers earned \$23,000 or less, while the highest paid managers earned \$50,000 or more.

In the Federal Government, contract administrators averaged \$39,200 a year in 1991; administrative officers, \$38,100; industrial property managers, \$36,800; property disposal officers, \$34,300; and support services administrators, \$29,600.

Similar to other managers, administrative services managers typically receive a range of fringe benefits such as vacation and sick leave, health and life insurance, and pension plans, among others.

Related Occupations

Administrative services managers direct and coordinate supportive services and oversee the purchase, use, and disposal of personal prop-

erty. Occupations with similar functions include administrative assistants, appraisers, buyers, clerical supervisors, contract specialists, cost estimators, procurement services managers, project directors, property and real estate managers, purchasing managers, marketing and sales managers, and personnel managers.

Sources of Additional Information

Information about careers in administrative and office services management is available from:

- Administrative Management Society, 1101 14th St. NW., Suite 1100, Washington, DC 20005.

For information about careers in personal property utilization management, contact:

- National Property Management Association, 220 Patricia Ave., Dunedin, FL 34698.

Information about careers in contract administration is available from:

- National Contract Management Association, 1912 Woodford Rd., Vienna, VA 22182.

For information about careers in facilities management, contact:

- International Facilities Management Association, 1 East Greenway Plaza, 11th Floor, Houston, TX 77046.

Budget Analysts

(D.O.T. 161.117-010 and 161.267-030)

Nature of the Work

Organizations develop budgets to plan, organize, and allocate limited resources efficiently among alternative uses. Budgets serve as a financial plan for controlling future operations and as a means of analyzing the organization's spending behavior. Budget analysis is an integral part of the decisionmaking process in most corporations and government agencies. Budget analysts play a primary role in the research, analysis, development, and execution of budgets.

Budget analysts work in both private industry and the public sector. In private industry, a budget analyst examines, analyzes, and seeks new ways to improve efficiency and increase profits. While analysts working in government generally are not concerned with profits, they too are interested in finding the most efficient distribution of funds and resources among various departments and programs.

The major responsibility of budget analysts is to provide advice and technical assistance in the preparation of annual budgets. At the beginning of the budget cycle, managers and department heads submit proposed operating and financial plans to budget analysts for review. These plans outline expected programs—including proposed program increases or new initiatives, estimated costs and expenses, and capital expenditures needed to finance these programs.

Analysts begin by examining the budget estimates for completeness, accuracy, and conformance with procedures, regulations, and organizational objectives. They review financial requests by employing cost-benefit analysis, assessing program trade-offs, and exploring alternative funding methods. They also examine past and current budgets, and research economic developments that affect the organization's spending. This process allows analysts to evaluate program proposals in terms of the organization's priorities and financial resources.

After this review process, budget analysts consolidate the individual department budgets into operating and financial budget summaries. The analyst submits preliminary budgets to senior management with comments and supporting statements to justify or deny funding requests. By reviewing different departments' operating plans, analysts gain insight into an organization's overall operations. This generally proves very useful when they interpret and offer technical assistance to officials approving the budget. At this point in the budget process, budget analysts help the chief operating officer, agency head, or other top managers analyze the proposed plan and devise

possible alternatives if the projected results are unsatisfactory. The final decision to approve the budget, however, is usually made by the organization head.

Throughout the rest of the year, analysts periodically monitor the operating budget by reviewing reports and accounting records to determine if allocated funds have been spent as specified. If deviations appear between the approved budget and actual performance, budget analysts may write a report explaining the causes of the variations along with recommendations for new or revised budget procedures. They suggest reallocation of excess funds or recommend program cuts to alleviate deficits. They also inform program managers and others within their organization of the status and availability of funds in different budget accounts. Before any changes are made to an existing program or a new one is started, a budget analyst assesses its efficiency and effectiveness. Analysts also may project budget needs, which is necessary for long range planning.

Because most organizations computerize their budgets, analysts can more easily enter and make use of data. Many calculations and formatting of reports are performed on the computer as well. This frees more time for the actual analysis of budget data.

Analysts also assist in developing procedural guidelines and policies governing the development, formulation, and maintenance of the budget. If necessary, they conduct training sessions for company personnel on new budget procedures.

Working Conditions

Budget analysts work in a normal office setting and generally work 40 hours per week. However, during the initial development and mid-year and final reviews of budgets, they often experience the pressure of deadlines and tight work schedules. The work during these periods can be extremely stressful, and analysts are usually required to work more than the routine 40 hours a week.

Budget analysts spend the majority of their time working independently, compiling and analyzing data and preparing budget proposals. However, their routine schedule can be interrupted by special budget requests, meetings, and training sessions. Others may travel to obtain budget details and explanations of variances from coworkers.

Employment

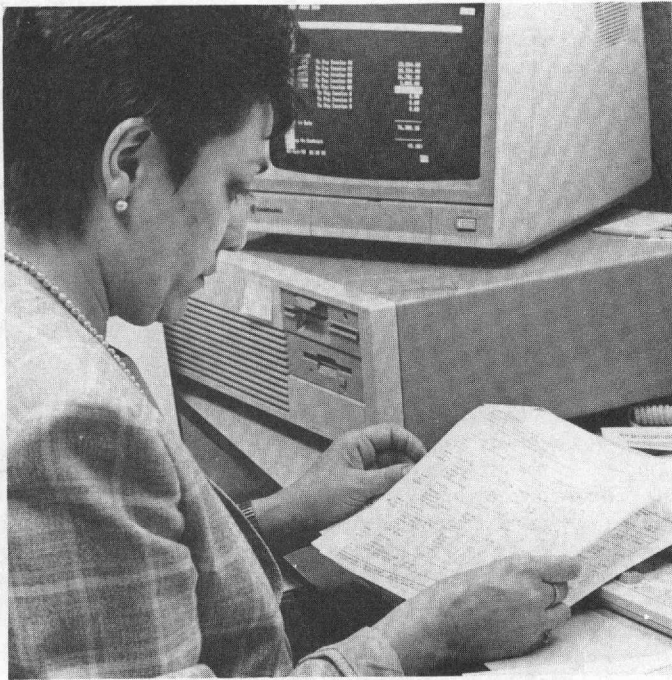
Budget analysts held about 64,000 jobs throughout private industry and government in 1990. Federal, State, and local governments accounted for 1 of every 3 budget analyst jobs. The Department of Defense employed 7 of every 10 budget analysts working for the Federal Government. Schools, hospitals, and manufacturers of transportation equipment, chemicals and allied products, electrical and electronic machinery, and industrial machines are other major employers of budget analysts.

Training, Other Qualifications, and Advancement

Most private firms and government agencies require candidates for budget analyst positions to have at least a bachelor's degree in accounting, finance, economics, or a field closely related to their industry such as engineering or public administration. A growing number of employers prefer that candidates possess a master's degree to ensure adequate analytical skills. However, financial experience can often be substituted for an advanced degree when applying for a budget analyst position. Some companies prefer to promote from within; therefore, competent accounting or payroll clerks and other clerical staff who have worked closely with the budget process can often advance to entry level budget analyst positions even if they do not meet the educational requirements.

Because developing a budget requires strong analytical skills, courses in mathematics, statistics, and computer science are highly recommended. Since most financial analysis performed by organizations is automated, a background in computers is particularly important. Knowledge of programming and familiarity with the financial software packages used by most organizations in budget analysis is generally required by employers.

In addition to analytical skills, those seeking a career as a budget analyst must also be able to work under strict time constraints. Analysts must also possess strong interpersonal skills because of the frequent interaction with others in their organization. They must have



One out of every 3 budget analysts works for Federal, State, or local government agencies.

strong oral and written communication skills to prepare and present budget proposals effectively.

Entry level budget analysts may receive some formal training when they begin their jobs. However, most employers feel that the best training is obtained by working through one complete budget cycle. During the cycle, analysts become familiar with all the steps involved in the budgeting process.

The Federal Government, on the other hand, offers extensive on-the-job and classroom training for entry level analysts. Some of the classes offered include budget execution, budget formulation, Federal budget process, and planning, programming, and budget systems. Analysts are encouraged to participate in the various classes offered throughout their careers.

Beginning analysts usually work under close supervision. Capable entry level analysts can be promoted into intermediate level positions within 1 to 2 years, and then into senior positions within a few more years. Progressing to a higher level means added budgeting responsibility and an increasingly supervisory role.

In the Federal Government, for example, beginning budget analysts compare projected costs with prior expenditures; consolidate and enter data prepared by others; and assist higher grade analysts by doing research on regulations concerning appropriate budget practices. As analysts progress, they begin to develop and formulate budget estimates and justification statements; perform in-depth analyses of budget requests; write statements supporting funding requests; and advise program managers and others on the status and availability of funds in different budget activities.

In many instances, analysts are able to capitalize on their close working relationships with top-level managers to advance into management positions within their organization. In addition, because financial and analytical skills are vital in any organization, analysts often are able to transfer to a related field in other organizations.

Job Outlook

Employment of budget analysts is expected to grow about as fast as the average for all occupations through the year 2005. Most job openings, however, will result from the need to replace experienced budget analysts who transfer to other occupations or leave the labor force.

Expanding use of automation may make analysts more productive, allowing them to process more data in less time. These computer-

induced productivity gains may be offset, however, by a greater demand for information and analysis. Easier manipulation of and accessibility to data provide management more considerations on which to base decisions. Also because of the growing complexity of business and the increasing specialization of functions within organizations, more attention is being given to planning and financial control. Many companies will continue to rely heavily on budget analysts to examine, analyze, and develop budgets to allocate labor, capital, and other resources efficiently among all parts of the organization. Managers will continue to use budgets as a vehicle to plan, coordinate, control, and evaluate activities within their organizations more effectively.

Despite the increase in demand for budget analysts, competition for jobs should remain keen because of the increasing number of qualified applicants. Job opportunities are usually best for candidates with a college degree, particularly a master's. In some cases, experience is more beneficial than a degree and can be used to offset a lack of education. People with backgrounds in finance and accounting generally are in a better position than those without these qualifications. A working knowledge of computer financial software packages can also enhance one's employment prospects in this field.

The financial work performed by budget analysts is an important function in every organization. Financial and budget reports must be completed even during periods of economic slowdowns. Therefore, employment of budget analysts generally is not adversely affected during economic slumps when other workers may be laid off.

Earnings

Salaries of budget analysts vary widely by experience, education, and employer. According to a 1990 survey of financial and data processing fields conducted by Robert Half International Incorporated, average annual starting salaries of budget and other financial analysts ranged from \$22,000 to \$25,000 for those working in medium-size firms, and from \$22,000 to \$26,000 for those employed by larger organizations. Analysts with 1 to 3 years of experience earned from \$25,000 to \$32,000 a year in medium-size firms and from \$27,000 to \$35,000 in larger companies. Senior analysts earned from \$30,000 to \$38,000 in smaller firms and from \$31,000 to \$40,500 in larger firms. Earnings of managers in this field ranged from \$37,000 to \$43,500 in medium-size firms to \$40,500 to \$57,000 in large organizations.

In the Federal Government, budget analysts generally started at \$16,900 a year in 1991. Candidates with a master's degree or 1 year of financial experience began at \$21,000. The average salary of all budget analysts employed by the Federal Government was approximately \$35,000 in 1990.

Related Occupations

Budget analysts analyze, review, and interpret financial data; make recommendations for the future; and assist in the implementation of new ideas. Workers who use these skills in other occupations include accountants and auditors, credit analysts, economists, financial analysts, financial managers, and loan officers.

Sources of Additional Information

Information about career opportunities as a budget analyst may be available from your State or local employment service.

Persons interested in working as a budget analyst in the Federal Government can obtain information from

■ U.S. Office of Personnel Management, 1900 E St. NW., Washington, DC 20415.

Construction Contractors and Managers

(D.O.T. 182.167 except -022)

Nature of the Work

Construction contractors and managers assume various levels of responsibility and are known by a wide range of job titles that are often used interchangeably—for example, constructor, construction

superintendent, general superintendent, production manager, project manager, general construction manager, executive construction manager, general contractor, contractor, and subcontractor. Construction contractors and managers may be owners or salaried employees of a construction contracting firm or individuals under contract with the owner, developer, contractor, or management firm overseeing the construction project.

This *Handbook* statement uses the term "construction manager" broadly to encompass all supervisory-level salaried and self-employed construction managers who oversee construction supervisors and workers. Supervisory level managers report to mid-level and top-level construction managers, who are included in the *Handbook* statement on general managers and top executives.

Within the construction industry, the term "construction manager" is used more narrowly to denote the firm or individual involved in a special form of control to perform a construction management function. A construction manager (CM) frequently acts as the owner's or developer's consultant regarding the scheduling and coordination of all design and construction processes over the life of the project.

On many small construction projects, such as remodeling a home, self-employed construction contractors directly oversee their employees in all phases of the work. However, large construction projects like an industrial complex are too complicated for one person to supervise. These projects are divided into many segments: Site preparation, including land clearing and earth moving; sewage systems; landscaping and road construction; building construction, including excavation and laying foundations, erection of framework, floors, walls, and roofs; or building services, including carpentry, electrical, plumbing, air-conditioning, and heating. Construction managers may be in charge of one or more of these activities, and may have several subordinates, such as crew supervisors, reporting to them.

Construction contractors and managers plan, budget, and direct the construction project. The planning, often in collaboration with design professionals, requires sophisticated scheduling techniques with flow charts, bar charts, and other graphic presentations. They often use computers to evaluate various construction methods and to determine the most cost-effective plan. They determine the appropriate construction methods and schedule all required construction site activities into logical, specific steps, leading to an intermediate or final objective. They budget the time required to complete each step of the project according to established deadlines, determine labor requirements, and supervise or monitor the hiring and dismissal of workers.

On the job, construction contractors and managers direct construction supervisors and monitor the progress of construction activities including the delivery and use of materials, supplies, tools, machinery, equipment, and vehicles. They are responsible for all necessary permits and licenses and, depending upon the contractual arrangements, direct or monitor compliance with building and safety codes and other regulations.

They regularly review engineering and architectural drawings and specifications and confer with design professionals to monitor progress and ensure compliance with plans and specifications. They meet with cost estimators in order to keep track of construction costs and to avoid cost overruns. Based upon direct observation and reports by subordinate supervisors, these managers may prepare daily reports of progress and requirements for labor, material, and machinery and equipment at the construction site. Construction managers meet regularly with owners, other contractors and managers, and design professionals to monitor and coordinate all phases of the construction project.

Working Conditions

Construction contractors and managers work out of a main office from which the overall construction project is monitored or out of a field office at the construction site. Management decisions regarding daily construction activities are usually made at the job site. Managers may have to travel when the construction site is in another State or when the manager is responsible for activities at two or more sites. Overseas projects usually entail temporary residence in another country.

Construction contractors and managers are "on call" to deal with accidents, delays, or bad weather at the site. The standard 40-hour

week is rare. Indeed, construction may proceed round-the-clock for days, even weeks to meet special project deadlines.

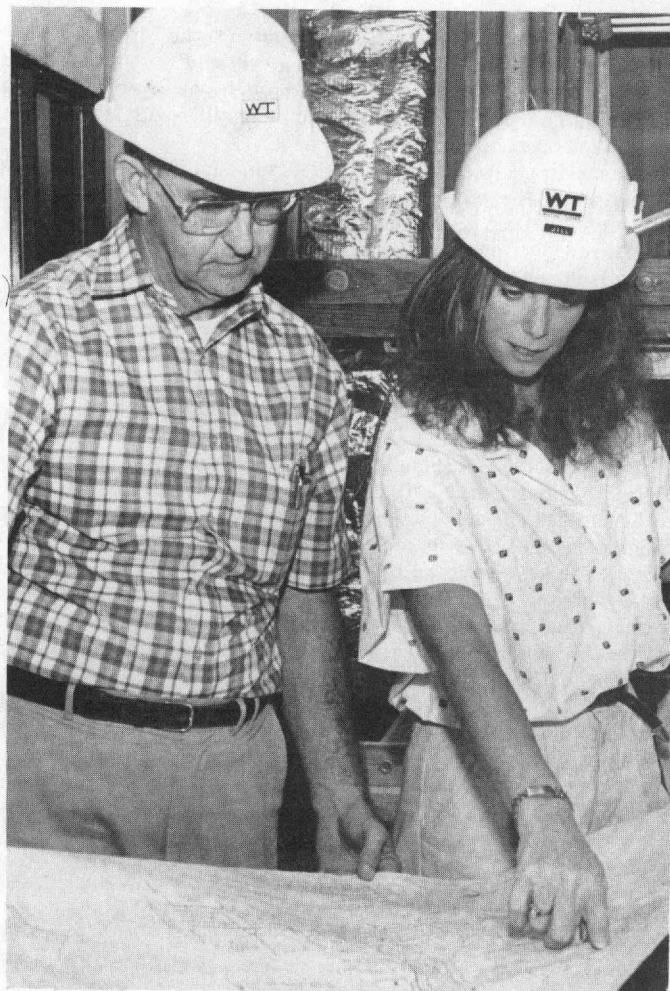
Although the work generally is not considered dangerous, construction contractors and managers must be careful while touring construction sites, especially when machinery, equipment, and vehicles are being operated. Because of the rapid pace of construction activities, they must always be prepared to quickly answer questions, establish priorities, and assign duties. This requires the contractor or manager to observe job conditions and to be alert to potential problems and to ways to make the work go faster, easier, and safer. Due to the inherent dangers involved in construction, the manager in the field must be alert to and actively manage the safety aspects of jobsite operations.

Employment

Construction contractors and managers held about 183,000 jobs in 1990. Nine of every 10 were employed in the construction industry, primarily by special trade contractors—for example, plumbing, heating and air-conditioning, and electrical—and general building contractors. Others were employed by local governments, educational institutions, real estate developers, and engineering, architectural, surveying, and construction management services firms.

Training, Other Qualifications, and Advancement

A growing number of entrants into this occupation have a strong academic background. Completion of a bachelor's degree program in construction science with emphasis on construction management can greatly enhance one's opportunities. In 1990, over 125 colleges and universities offered 4-year degree programs. These programs include



Construction contractors and managers ensure compliance with engineering and architectural plans.

courses in project control and development, site planning, building design, construction methods, construction materials, value analysis, cost estimating, scheduling, contract administration, building codes and standards, inspection procedures, and electives in engineering and architectural sciences, mathematics, statistics, and computer science. Recent graduates from 4-year degree programs in construction usually are hired as assistants to project managers, field engineers, schedulers, or cost estimators. A growing number of graduates in related fields—engineers, architects, and cost estimators—also enter construction management, often after having had substantial experience on construction projects.

About 30 colleges and universities also offer a master's degree program, and one, the University of Florida, offers a doctoral degree program in this field. Master's degree recipients, especially those with experience, typically become construction managers in very large construction companies. Doctoral degree recipients generally become college teachers.

Many contractors and managers have substantial experience as construction craft workers—for example, carpenters, masons, plumbers, or electricians—and proven supervisory ability. Many managers have worked as construction supervisors or as independent contractors overseeing workers in one or more construction trades—for example, structural steel, roofing, or excavation. Many have also attended training and educational programs sponsored by industry associations, usually in collaboration with postsecondary institutions. In 1990, over 200 2-year colleges offered construction management or construction technology programs.

Persons interested in becoming a construction contractor or manager should be adaptable and be able to work effectively in a fast-paced environment. They should be decisive and able to quickly select among alternative courses of action. The ability to coordinate several major activities at once, while being able to analyze and resolve specific problems is imperative, as is the ability to understand engineering, architectural, and other construction drawings. They must be able to establish a good working relationship with many different people—entrepreneurs, other managers, construction professionals, supervisors, and craft workers.

Advancement depends upon the size of the construction company. In large companies, they may become mid-level and eventually top-level managers. Highly experienced individuals may become consultants; some serve as expert witnesses in court or as arbitrators in disputes. Those with the required capital may establish their own firms and offer construction management services. Others may establish their own general contract construction firms that oversee construction projects from start to finish—including project planning, design, and construction.

Job Outlook

Employment of construction contractors and managers is expected to increase faster than the average for all occupations through the year 2005 as the number of construction projects continues to grow. In addition, many openings should result from the need to replace workers who leave the occupation or retire. Prospects are expected to be particularly favorable—especially in rapidly growing construction management services firms—for experienced construction managers with a bachelor's degree in construction science with emphasis on construction management.

Increased spending on the Nation's infrastructure—highways, bridges, dams, schools, subways, airports, water and sewage systems, and electric power generation and transmission facilities—will be the primary stimulus to the demand for construction contractors and managers. Additional jobs will be created by growth in less rapidly expanding construction activities as well. The need to build more residential housing, commercial and office buildings, and factories, as well as maintenance and repair of all kinds of existing structures will stimulate further demand for these workers.

In addition to growth in the level of construction activity, the increasing complexity of construction projects will lead to more jobs being created. Advances in building materials and construction methods and the growing number of multipurpose buildings, electronically operated "smart" buildings, and energy-efficient structures will

require the expertise of more construction managers. In addition, the proliferation of laws setting standards for buildings and construction materials, worker safety, energy efficiency, and environmental pollution has further complicated the manager's job and should increase demand for these workers.

Employment of construction contractors and managers is sensitive to the short-term nature of many construction projects and cyclical fluctuations in construction activity. During periods of diminished construction activity—when many construction workers are laid off—many construction contractors and managers remain employed in their own or other firms planning, scheduling, or estimating costs of future construction projects. When these downturns occur, some self-employed contractors may merge operations or dissolve their business and seek salaried employment with other contractors.

Earnings

Earnings of salaried construction managers and incomes of self-employed contractors vary depending upon the size and nature of the construction project, its geographic location, and economic conditions. Based on limited information, starting salaries of construction managers in 1990 were about \$28,000; annual earnings of most experienced managers ranged from \$35,000 to \$100,000. Many salaried construction managers receive fringe benefits such as bonuses, liberal motor vehicle allowances, and per diem allowances. The income of self-employed contractors varies even more widely than that of salaried managers. The failure rate of small, newly formed construction firms is higher than that of other newly established small businesses.

Related Occupations

Construction contractors and managers participate in the conceptual development of a construction project and organize, schedule, and oversee its implementation. Occupations with similar functions include architects, civil engineers, construction supervisors, cost engineers, cost estimators, developers, electrical engineers, industrial engineers, landscape architects, and mechanical engineers.

Sources of Information

For information about careers for construction managers contact:

- American Institute of Constructors, 9887 North Gandy Blvd., St. Suite 104, Petersburg, FL 33702.
- Associated Builders and Contractors, 729 15th St. NW., Washington, DC 20005.
- Associated General Contractors of America, 1957 E St. NW., Washington, DC 20006.
- Construction Management Association of America, 1893 Preston White Dr., Suite 130, Reston, VA 22091.

Information on construction science and management program accreditation requirements is available from:

- American Council for Construction Education, 901 Hudson Lane, Monroe, LA 71201.

Cost Estimators

(D.O.T. 160.267-018; 221.362-018, .367-014, .387-022, .482-014, .484-010)

Nature of the Work

Being able to predict the cost of future projects is vital to the economic survival of any business. Cost estimators develop this information for owners or managers to use in making bids for contracts, in determining if a new product will be profitable, or in determining if the organization is getting good value for its money.

Regardless of industry, estimators compile and analyze data on all the factors that can influence costs—materials, labor, location, and special machinery, including computer hardware and software. Actual job duties vary widely depending upon the type and size of the project. On a large construction project, for example, the estimating process begins with the decision to submit a bid. After reviewing the

architect's drawings, specifications, and other bidding documents, the estimator visits the site of the proposed construction project to gather information on access to the site and availability of electricity, water, and other services, as well as surface topography and drainage. If the project is a remodeling or renovation job, the estimator might consider the need to control noise and dust and to perform work in such a way that occupants can continue to carry out their activities as normally as possible. The information developed during the site visit generally is recorded in a signed report that is made part of the project estimate.

After the site visit is completed, the estimator must determine the quantity of materials and labor that the firm will have to furnish. This process, called the quantity survey or "takeoff," is completed by filling out standard estimating forms that provide spaces for the entry of dimensions, number of units, and other information. A cost estimator working for a general contractor, for example, will estimate the costs of the items the contractor must provide. Although subcontractors will estimate their costs as part of their own bidding process, the general contractor's cost estimator often analyzes bids made by subcontractors as well. Allowances for the waste of materials, inclement weather, shipping delays, and other factors that may increase costs are made as the takeoff proceeds. In large construction organizations with several estimators, it is common practice for them to specialize. For instance, one person may estimate only electrical work, whereas another may concentrate on excavation, concrete, and forms. Also during the takeoff process, the estimator must make decisions concerning equipment needs, sequence of operations, and crew size.

On completion of the quantity surveys, a total project cost summary is prepared by the chief estimator that includes the cost of labor, equipment, materials, subcontracts, overhead, taxes, insurance, markup, and any other costs that may affect the project. The chief estimator then prepares the bid proposal for submission to the developer.

In manufacturing and other firms, cost estimators generally are assigned to the engineering or cost department. In manufacturing, their job may begin with a request by managers to estimate the costs associated with a major redesign of an existing product or the development of a new product or production process. For example, to develop a new product, the estimator, working with engineers, first reviews blueprints or conceptual drawings to determine the machining operations, tools and gauges, and materials that would be required for the job. The estimator then must prepare a parts list and determine whether it is more efficient to produce or to purchase the parts. To do this, the estimator must initiate inquiries for price information from potential suppliers. The next step is to determine the cost of manufacturing each component of the product. Some high technology products require massive amounts of computer programming during the design phase. The cost of software is one of the fastest growing and most difficult activities to estimate. Some cost estimators now specialize in estimating computer-related costs.

The cost estimator then prepares time-phase charts and learning curves. The former indicate the time required for tool design and fabrication, tool "debugging" (finding and correcting all problems), manufacturing of parts, assembly, and testing. Learning curves represent graphically the rate at which performance improves with practice. These curves are commonly called "problem-elimination" curves because many problems, such as engineering changes, rework, parts shortages, and lack of operator skills, diminish as the number of parts produced increases, resulting in lower unit costs.

Using all this information, the estimator then calculates the standard labor hours necessary to produce a predetermined number of units. Standard labor hours are then converted to dollar values, to which are added factors for waste, overhead, and profit to yield the unit cost in dollars. Then the estimator compares the cost of purchasing parts with the firm's cost of manufacturing them to determine which is cheaper.

Computers are widely used because cost estimating may involve complex mathematical techniques—parametric analysis, for example. Although computers cannot be used for the entire estimating process, they can relieve estimators of much of the drudgery associated with routine, repetitive, and time-consuming calculations. This leaves estimators with more time to study and analyze projects and can lead to

more accurate estimates. (Details on various cost estimating techniques are available from the organizations listed under Sources of Additional Information below.)

Working Conditions

Estimators spend most of their time in an office. Nevertheless, construction estimators must make frequent visits to work sites that are dirty and cluttered with debris. Likewise, estimators in manufacturing must spend time on the factory floor where it can be hot, noisy, and dirty. Cost estimators usually operate under pressure, especially when facing deadlines, because inaccurate estimating can cause a firm to lose out on a bid that would have been profitable or to take on a job that proves to be unprofitable. Although estimators usually work a 40-hour week, much overtime is often required. In some industries, frequent travel between the parent firm and its subsidiaries or subcontractors is required. Government and other estimators often visit firms to substantiate bids or prices.

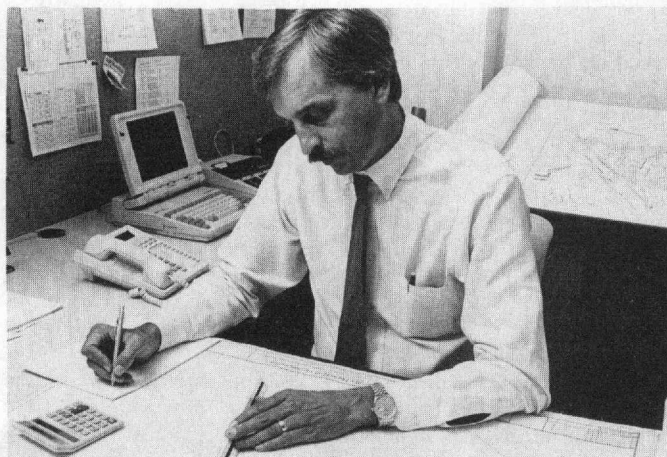
Employment

Cost estimators held about 173,000 jobs in 1990, primarily in construction industries. Others worked for manufacturing industries. Some worked for engineering and architectural services firms, business services firms, and a wide range of other industries. Construction analysts in the Department of Housing and Urban Development and operations research, production control, cost, and price analysts in the Departments of Defense and Energy may do significant amounts of cost estimating in the course of their regular duties. (For more information, see the statement on operations research analysts elsewhere in the *Handbook*.)

Cost estimators work in all parts of the country, usually in or near major industrial, commercial, and government centers and in cities and suburban areas undergoing rapid change or development where large amounts of construction are taking place.

Training, Other Qualifications, and Advancement

Entry requirements vary by industry. In construction, employers prefer applicants with a thorough knowledge of construction materials, costs, and procedures in areas ranging from heavy construction to electrical work, plumbing systems, or masonry work. In fact, most construction estimators have experience as a construction craft worker or as a contractor. Persons who combine this experience with some postsecondary training in construction estimating or a bachelor's or associate degree in civil engineering, architectural drafting, or building construction have the edge in landing jobs. Those with an academic background who lack work experience qualify for some jobs, but are at a distinct disadvantage when competing for jobs with experienced applicants. In manufacturing, employers prefer persons with a degree in engineering, science, operations research, mathematics, or statistics, or in accounting, finance, business, or a related subject. In high-technology industries, great emphasis is placed on experience



Cost estimators analyze data on all factors that influence costs.

involving quantitative techniques. Computer literacy and, in some cases, programming capability are required.

Regardless of background, estimators receive much training on the job. Working with an experienced estimator, they become familiar with each step in the process. Those with no experience reading construction specifications or blueprints first learn that aspect of the work. Then they may accompany an experienced estimator to the construction site or the shop floor where they observe the work being done, take measurements, or perform other routine tasks. As they become more knowledgeable, they learn how to tabulate quantities and dimensions from drawings and how to select which material prices are to be used.

Cost estimating is included as part of the civil engineering, industrial engineering, and construction management or construction engineering technology curriculums in many colleges and universities. In addition, many technical schools, junior colleges, and universities offer courses and programs in cost estimating techniques and procedures. Master's degree programs in cost analysis are offered by the Air Force Institute of Technology in Dayton, Ohio, and the University of Toledo. In addition, cost estimating is a significant part of the master's degree program in construction management offered by many colleges and universities. Organizations that represent cost estimators, such as the American Association of Cost Engineers, the American Society of Professional Estimators, the Society of Cost Estimating and Analysis, and the International Society of Parametric Analysts also sponsor educational programs. These programs help students, estimators-in-training, and experienced estimators stay abreast of changes affecting the profession.

Professional recognition through certification is valuable, because it is a mark of the estimator's competence and experience. In order to become certified, estimators generally must have between 3 and 7 years of estimating experience and must pass both a written and an oral examination. In addition, certification requirements may include publication of at least one article or paper in the field.

Cost estimators should have an aptitude for mathematics, be able to quickly analyze, compare, and interpret detailed and sometimes poorly defined information, and be able to make sound and accurate judgments based on this knowledge. Assertiveness and self-confidence in presenting and supporting their conclusions are important.

For most estimators, advancement takes the form of higher pay and prestige. Some move into a management position, such as project manager for a construction firm or manager of the industrial engineering department for a manufacturer. Others may go into business for themselves as consultants, providing estimating services for a fee to government or construction and manufacturing firms.

Job Outlook

Employment of cost estimators is expected to increase about as fast as the average for all occupations through the year 2005. Most job openings, however, will arise from the need to replace experienced estimators who transfer to another occupation or leave the labor force.

Employment of cost estimators is dependent primarily upon the level of construction and manufacturing activity. Growth of the construction industry, where most cost estimators are employed, will be the driving force behind the rising demand for these workers. The fastest growing sectors of the construction industry will be those associated with spending on the Nation's infrastructure. Construction and repair of highways and streets, bridges, and construction of more subway systems, airports, water and sewage systems, and electric powerplants and transmission lines will stimulate demand for many more cost estimators. In addition, spending on hotels, office and other commercial buildings, and construction of residential units, will add to the demand for cost estimators to predict the costs of these projects. Job prospects should be best for those workers who have substantial experience in various phases of construction or a specialty craft or those with a degree in construction management, engineering, or architectural drafting.

Employment of cost estimators in manufacturing should expand as output increases and as more firms use the services of cost estimators to reduce their operating costs. In manufacturing, experienced persons with degrees in engineering, science, mathematics, business administra-

tion, or economics and who have computer expertise should have the best job prospects. Certification is an asset in all instances.

Regardless of industry setting, employment growth is not expected to keep pace with the increase in output because of the growing use of improved computer software packages that significantly increase cost estimators' efficiency.

Earnings

Salaries for cost estimators vary widely by experience, education, size of firm, and industry. According to limited data available, most starting salaries in the construction industry for those with limited training ranged from \$16,000 to \$20,000 in 1990. College graduates in fields such as engineering or construction management that provide a strong background in cost estimating can start at \$30,000 or more. Highly experienced individuals earned \$75,000 or more. Starting salaries and annual earnings in the manufacturing sector were somewhat higher, on the average.

Related Occupations

Other workers who quantitatively analyze information based upon relatively imprecise data include appraisers, cost accountants, cost engineers, economists, evaluators, financial analysts, loan officers, operations research analysts, underwriters, and value engineers.

Sources of Additional Information

Information about career opportunities, certification, schools, and continuing education programs in cost estimating in the construction industry may be obtained from:

- American Society of Professional Estimators, Inc., 6911 Richmond Hwy., Suite 230, Alexandria, VA 22306.
- American Association of Cost Engineers, P.O. Box 1557, Morgantown, WV 26507-1557.

Similar information about cost estimating in government and manufacturing and other industries is available from:

- Society of Cost Estimating and Analysis, 101 S. Whiting St., Suite 313, Alexandria, VA 22304.
- International Society of Parametric Analysts, P.O. Box 1056, Germantown, MD 20874-1056.

Employment Interviewers

(D.O.T. 166.267-010)

Nature of the Work

Whether you are looking for a job or trying to fill one, you could find yourself turning to an employment interviewer for help. Sometimes called personnel consultants, account representatives, coordinators, customer service representatives, manpower development specialists, employment brokers, or head hunters, employment interviewers have two principal duties: They help jobseekers find employment and help employers find qualified staff.

Working largely in private personnel supply firms or State employment security offices (also known as Job or Employment Service centers), employment interviewers act as brokers, putting together the best combination of applicant and job. To accomplish this, they obtain information from employers as well as jobseekers.

Being a private industry employment interviewer is a sales job. Counselors pool together a group of qualified applicants and try to sell them to many different companies. Often a consultant will call a company that has never been a client (cold-calling) with the aim of filling their employment needs.

Employers generally pay private (but not public) agencies for finding them workers. The employer places a "job order" with the agency describing the opening and listing requirements such as education, licenses or credentials, and experience. Employment interviewers often contact the employer to determine their exact personnel needs. Jobseekers are asked to fill out forms or present resumes that detail their education, experience, and other qualifications. They may be interviewed or tested and have their background, references, and credentials checked. The employment interviewer then reviews the job

requirements and the jobseeker qualifications to determine the best possible match of employer and employee. This process is usually done with the aid of a computer data base.

Maintaining good relations with employers is an important part of the employment interviewer's job since this helps assure a steady flow of job orders; being prepared to fill an opening quickly with a qualified applicant is the best way to impress an employer and retain them as a client.

Besides helping firms fill job openings, employment interviewers help individuals find jobs. The services they provide depend upon the company or type of agency they work for and the clientele it serves.

Employment interviewers in personnel supply firms who place permanent employees are generally called counselors. They usually place job applicants who have the right qualifications but lack knowledge of the job market for their desired position. Counselors in these firms do, however, offer tips on personal appearance, suggestions on presenting a positive picture of oneself, background on the company with which an interview is scheduled, and recommendations about interviewing techniques. Many firms specialize in placing applicants in particular kinds of jobs—secretarial, word processing, engineering, accounting, law, or health, for example. Counselors in such firms usually have 3 to 5 years of experience in the field into which they are placing applicants.

Some employment interviewers work in temporary help services companies. These companies send out their own employees to firms that need temporary help. Employment interviewers take job orders from client firms and match their requests against a list of available workers. The employment interviewer selects the best qualified worker available and assigns him or her to the firm requiring assistance.

Regular evaluation of employee job skills is an important part of the job for those interviewers working in temporary help services companies. Initially, interviewers evaluate or test new employees' skills to determine their abilities and weaknesses. The results, which are kept on file, are referred to when filling job orders. In some cases, the temporary help company will offer training to employees to improve their skills. Periodically, the interviewer may reevaluate or retest employees in an effort to identify any new skills they may have developed.

The duties of employment interviewers in Job Service centers are somewhat different because applicants may lack marketable skills. In these centers, applicants present resumes and fill out forms that ask for educational attainment, job history, skills, awards, certificates, and licenses. An employment interviewer reviews these forms and asks the applicant about the type of job sought and salary range desired. Applicants sometimes have exaggerated expectations. Employment interviewers must be tactful, but persuasive, if an applicant's job or salary requests are unreasonable.

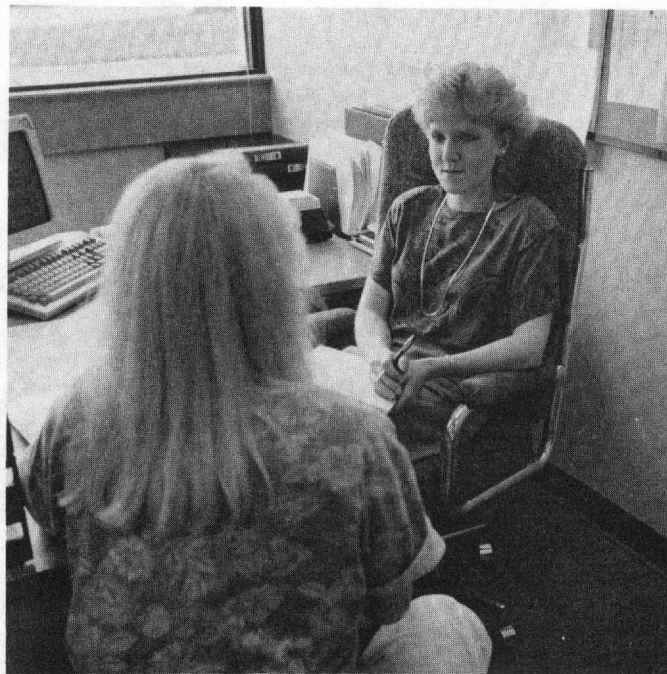
Applicants may need help identifying the kind of work for which they are best suited. The employment interviewer evaluates the applicant's qualifications and either chooses an appropriate occupation or class of occupations, or refers the applicant for vocational testing.

Once an appropriate type of job has been identified, the employment interviewer searches the file of job orders seeking a possible job match, and refers the applicant to the employer if a match is found. If no match is found, the interviewer shows the applicant how to use listings of available jobs.

Some applicants are hindered by problems such as poor English language skills, no high school diploma, a history of drug or alcohol dependency, or a prison record. The amount and nature of special help for such applicants vary from State to State. In some States, it is the employment interviewer's responsibility to counsel hard-to-place applicants and refer them elsewhere for literacy or language instruction, vocational training, transportation assistance, childcare, and other services. In other States, specially trained counselors perform this task.

Working Conditions

Employment interviewers usually work in comfortable, well-lighted offices. Some interviewers may spend much of their time out of their office interviewing clients. The work can be hectic, especially in tem-



Employment interviewers must have strong interpersonal skills.

porary help service companies which supply clients with immediate help for short periods of time. Some overtime may be required and use of personal transportation may be necessary to make employer visits. The private placement industry is competitive, so there is pressure on counselors to give their client companies the best service.

Employment

Employment interviewers held about 83,000 jobs in 1990. Three out of 5 worked for employment firms or temporary help services companies in the private sector. Most of the rest worked for State employment security agencies.

Employees of career consulting or outplacement firms are not included in these estimates. Workers in these firms help clients market themselves; they do not act as job brokers, nor do they match individuals with particular vacancies.

Training, Other Qualifications, and Advancement

Although most public and private agencies prefer to hire college graduates for interviewer jobs, a degree is not always necessary. Hiring requirements in the private sector reflect a firm's management approach as well as the placements in which it specializes. Firms that place highly trained individuals such as accountants, lawyers, engineers, physicians, or managers prefer their interviewers to have some training or experience in the field in which they are placing workers. Thus, a bachelor's or even a master's degree may be a prerequisite for interviewers in some firms. However, even with the right education, sales ability is still required to succeed in the private sector.

Firms placing secretaries, word processing operators, and other clerical personnel do not ordinarily stress educational background for their interviewers. In these positions, qualities such as energy level, telephone voice, and sales ability take precedence over educational attainment.

Entry level employment interviewer positions in the public sector are generally filled by college graduates, even though a bachelor's degree is not always a formal requirement. Some States allow substitution of suitable work experience for college education. "Suitable work experience" is generally defined as public contact work or time spent at other jobs (including clerical jobs) in a Job Service office. In States that permit employment interviewers to engage in counseling, course work in counseling may be required.

Most States and many large city and county governments use some form of merit system for hiring interviewers. Applicants may take a written exam, undergo a preliminary interview, or submit records of

their education and experience for evaluation. Those who meet the standards are placed on a list from which the top-ranked candidates are selected for later interviews and possible hiring.

Other desirable qualifications for employment interviewers include good communications skills, a desire to help people, office skills, and adaptability. A friendly, confidence-winning manner is an asset since personal interaction is a large part of this occupation. Because computers are increasingly being used as a tool by employment interviewers, knowledge of computers is helpful.

Advancement as an employment interviewer in the public sector is often based on a system providing regular promotions and salary increases for those meeting established standards. Advancement to supervisory positions is highly competitive. Advancement in personnel supply firms generally takes the form of greater responsibility and higher income. Successful individuals may form their own businesses.

Job Outlook

Employment in this occupation is expected to grow about as fast as the average for all occupations through the year 2005. Most new jobs will be in temporary help or personnel supply firms. Relatively little growth is anticipated in State Job Service offices because of budgetary problems and the increasing use of computerized job matching and information systems. Additional job openings will result from replacement needs, which are substantial because of the relatively high turnover in this field.

Expansion of firms supplying temporary help will be responsible for much of the growth in this occupation. Businesses of all types are turning to temporary help services companies for additional workers during busy periods, for handling short-term assignments or one-time projects, and for launching new programs.

Expansion of the personnel supply industry will also spur job growth. Job orders will increase as the economy expands and new businesses are formed; this is expected to heighten demand for employment interviewers. Firms that lack the time or resources to develop their own screening procedures are likely to turn to personnel firms.

While little job growth is foreseen in the State Job Service centers, employment opportunities in private placement firms should be good. Entry to this occupation is relatively easy for college graduates (or people who have had some college courses) except in those positions specializing in placement of lawyers, doctors, and engineers. A relatively high turnover rate, due to job stress, will provide many opportunities in addition to those generated by very rapid growth in demand.

Employment interviewers may lose their jobs during recessions because employers reduce or eliminate new hiring during downturns in the economy, greatly reducing the need for personnel supply services and thus for employment interviewers. Also, during periods of high unemployment, employers have fewer problems finding the type of workers they need, so they turn less to employment agencies for help. Those who place permanent or temporary personnel are more susceptible to layoffs than State Job Service employment interviewers.

Earnings

Earnings in private firms vary, in part because the basis for compensation varies. Workers in personnel supply firms generally are paid on a commission basis while those in temporary help service companies receive a salary.

When workers are paid on a commission basis (or salary plus commission), total earnings depend on how much business they bring in. This is usually based on the type as well as the number of placements. Those who place more highly skilled or hard-to-find employees earn more. An interviewer or counselor working strictly on a commission basis often makes around 30 percent of what he or she bills the client, although this varies widely from firm to firm. Some work on a salary-plus-commission basis because they fill difficult or highly specialized positions requiring long periods of search. The salary, usually small by normal standards, guarantees these individuals security through slow times while the commission provides the incentive and opportunity for higher earnings.

Some personnel supply firms employ new workers for a 2- to 3-month probationary period during which they draw a regular salary. This is intended to provide new workers time to develop their skills and acquire some clients. At the end of the probationary period, the new employees are evaluated, and are either let go or switched to a commission basis.

According to the limited data available, average earnings of interviewers or counselors in personnel supply and temporary help services firms ranged from about \$17,000 to \$25,000 in 1991; some earned considerably more. Salaries for those placing professional workers are usually higher than those placing clerical workers.

Starting salaries for employment interviewers in State Job Service centers vary from State to State and ranged from about \$12,000 to \$24,000 a year in 1991.

Related Occupations

Employment interviewers serve as intermediaries for jobseekers and employers. Workers in several other occupations do similar jobs.

Personnel officers screen and help hire new employees but their major concern is the hiring needs of the firm; they never represent individual jobseekers. Personnel officers may also have additional duties in areas such as payroll or benefits management.

College career counselors help students and alumni find jobs, but their primary emphasis is career counseling and decisionmaking, not placement.

Counselors in community organizations and vocational rehabilitation facilities help clients find jobs, but they also provide assistance with drug or alcohol dependencies, housing, transportation, childcare, and other problems that stand in the way of finding and keeping a job.

Sources of Additional Information

For information on a career as an employment interviewer/counselor, contact:

• National Association of Personnel Consultants, 3133 Mt. Vernon Ave., Alexandria, VA 22305.

For information on a career as an employment interviewer in State employment security offices, contact:

• Interstate Conference of Employment Security Agencies, 444 North Capitol St. NW., Suite 126, Washington, DC 20001.

Engineering, Science, and Data Processing Managers

(D.O.T. 003.167-034 and -070; 005.167-010 and 022; 007.167-014; 008.167-010; 010.161-014 and -018; 011.161-010; 012.167-058 and -062; 018.167-022; 019.167-014; 022.161-010; 029.167-014; 162.117-030; 169.167-030; and 189.117-014)

Nature of the Work

Engineering, science, and data processing managers plan, coordinate, and direct technical, scientific, and computer related activities. They supervise a staff of engineers, scientists, technicians, computer specialists, data processing workers, and support personnel.

Engineering, science, and data processing managers determine scientific and technical goals within broad outlines provided by top management. These goals may include the redesign of an industrial machine, improvements in manufacturing processes, the development of a large computer program, or advances in basic scientific research. Managers make detailed plans for the accomplishment of these goals—for example, they may develop the overall concepts of new products or identify problems standing in the way of project completion. They forecast costs and equipment and personnel needs for projects and programs. They hire and assign scientists, engineers, technicians, computer specialists, data processing workers, and support personnel to carry out specific parts of the projects, supervise their work, and review their designs, programs, and reports.

Managers coordinate the activities of their unit with other units or organizations. They confer with higher levels of management; with financial, industrial production, marketing, and other managers; and with contractors and equipment suppliers. They also establish working and administrative procedures and policies.

Engineering managers direct and coordinate production, operations, quality assurance, testing, or maintenance in industrial plants; or plan and coordinate the design and development of machinery, products, systems, and processes. Many are plant engineers, directing and coordinating the maintenance, operation, design, and installation of equipment and machinery in industrial plants. Others manage research and development activities that produce new products and processes or improve existing ones.

Natural science managers oversee activities in agricultural science, chemistry, biology, geology, meteorology, or physics. They manage research and development projects and direct and coordinate testing, quality control, and production activities in industrial plants.

Electronic data processing managers direct, plan, and coordinate data processing activities. Top level managers direct all computer-related activities in an organization. Others manage computer operations, software development, or data bases. They analyze the data processing requirements of their organization and assign, schedule, and review the work of systems analysts, computer programmers, and computer operators.

Some engineering, science, and data processing managers head a section of perhaps 3 to 10 or more scientists, engineers, or computer professionals. Above them are heads of divisions composed of a number of sections, with as many as 15 to 50 scientists or engineers. A few are directors of large laboratories or directors of research.

Working Conditions

Engineering, science, and data processing managers spend most of their time in an office. Some managers, however, may also work in laboratories or industrial plants, where they normally are exposed to the same conditions as research scientists and may occasionally be exposed to the same conditions as production workers. Most work at least 40 hours a week and may work much longer on occasion to meet project deadlines. Some may experience considerable pressure to meet technical or scientific goals within a short time or within a tight budget.

Employment

Engineering, science, and data processing managers held about 315,000 jobs in 1990. Although these managers are found in almost all industries, almost half are employed in manufacturing, especially in the industrial machinery and equipment, electrical and electronic equipment, transportation equipment, and chemicals industries. They also work for engineering, management, and computer and data processing services companies; as well as for government, colleges and universities, and nonprofit research organizations. The majority are engineering managers, often managing industrial research, development, and design projects.



Data processing managers review the work of staff members.

Training, Other Qualifications, and Advancement

Experience as an engineer, mathematician, natural scientist, or computer professional is the usual requirement for becoming an engineering, science, or data processing manager. Consequently, educational requirements are similar to those for scientists, engineers, and data processing professionals.

Engineering managers start as engineers. A bachelor's degree in engineering from an accredited engineering program is acceptable for beginning engineering jobs, but many engineers increase their chances for promotion to manager by obtaining a master's degree in engineering or business administration. A degree in business administration or engineering management is especially useful for becoming a general manager.

Natural science managers usually start as a chemist, physicist, biologist, or other natural scientist. A large proportion of natural scientists have a Ph.D. degree, especially those engaged in basic research, although some in applied research and other activities have lesser degrees. First-level science managers are usually specialists in the work they supervise. For example, the manager of a group of physicists doing optical research is almost always a physicist who is an expert in optics.

Most data processing managers have been systems analysts, although some may have experience as programmers or in other computer specialties. There is no universally accepted way of preparing for a job as a systems analyst, but a bachelor's degree is usually required. A graduate degree often is preferred. Many systems analysts have degrees in computer or information science, computer information systems, or data processing and have experience as computer programmers. A typical career advancement progression in a large organization would be from programmer to programmer/analyst, to systems analyst, and then to project leader or senior analyst. The first real managerial position might be as project manager, programming supervisor, systems supervisor, or software manager.

In addition to educational requirements, scientists, engineers, or computer specialists generally must have demonstrated above-average technical skills to be considered for promotion to manager. Superiors also look for leadership and communication skills, as well as managerial attributes such as the ability to make rational decisions, to manage time well, to organize and coordinate work effectively, to establish good working and personal relationships, and to motivate others. Also, a successful manager must have the desire to manage. Many scientists, engineers, and computer specialists want to be promoted but actually prefer doing technical work.

Some scientists and engineers become managers in marketing, personnel, purchasing, or other areas or become general managers.

Job Outlook

Employment of engineering and science managers is expected to increase faster than the average for all occupations through the year 2005. Employment growth of each type of manager is expected to correspond closely with growth of the occupation they supervise. (See the statements on natural scientists, engineers, computer programmers, and systems analysts elsewhere in the *Handbook*.)

Underlying much of the growth of managers in science and engineering is the expected continued growth of research and development as companies update and improve products more frequently. Increased research and investment in plants to expand output of goods and services and to raise productivity also will add to employment requirements for science and engineering managers involved in research and development, design, and the operation and maintenance of production facilities. The development of new technologies in new areas such as superconductivity, medical diagnostics, and advanced materials also will help to develop newer, higher quality products. Employment of data processing managers will increase as the economy expands and as advances in technology lead to broader applications for computers.

Despite growth in employment, most job openings will result from the need to replace workers who leave the occupation.

Because many engineers, natural scientists, and computer specialists are eligible for management and seek promotion, there usually is substantial competition for these jobs.

Earnings

Earnings for engineering, science, and data processing managers vary by specialty and level of management. Salaries in 1990 ranged from about \$40,000 for first level data processing managers to well over \$100,000 for the most senior managers in large organizations, according to the limited data available. Managers often earn about 15 to 25 percent more than those they directly supervise, although there are cases where some employees are paid more than the manager who supervises them.

In addition, engineering, science, and data processing managers, especially those at higher levels, often are provided more fringe benefits than non-managerial workers in their organizations. Higher level managers often are provided with expense accounts, stock option plans, and bonuses.

Related Occupations

The work of engineering, science, and data processing managers is closely related to that of engineers, natural scientists, computer personnel, and mathematicians. It is also related to the work of other managers, especially general managers and top executives.

Sources of Additional Information

Contact the sources of additional information on engineers, natural scientists, and systems analysts that are listed in statements on these occupations elsewhere in the *Handbook*.

Farm Operators and Managers

(D.O.T. 180.117, .161, .167 except -014, -022, -050, -054; 401.161; 402.161; 403.161; 404.161; 405.161, .361; 407.161; 410.161; 411.161; 412.161; 413.161; 421.161; and 446.161)

Nature of the Work

American farm operators and managers direct the activities of one of the world's largest and most productive agricultural sectors. They produce enough food and fiber to meet the needs of our Nation and to export huge quantities to countries around the world.

Farm operators. Farm operators may be farmer owners or tenant farmers (renters). Their specific tasks are determined by the type of farm they operate. On crop farms—farms growing grain, fiber, fruit, and vegetables—farm operators are responsible for planning, tilling, planting, fertilizing, cultivating, spraying, and harvesting. After the harvest, they make sure that the crops are packaged, loaded, and promptly marketed or stored for resale. On livestock, dairy, and poultry farms, farm operators must plan, feed, and care for the animals and keep barns, pens, coops, and other farm buildings clean and in repair. They also oversee breeding, some slaughtering, and marketing activities. On horticultural specialty farms, farm operators oversee the production of ornamental plants, nursery products—such as flowers, bulbs, shrubbery, and sod—and fruits and vegetables grown in greenhouses.

Farm operators must make many managerial decisions. Their farm output is strongly influenced by the weather, disease, fluctuations in prices of domestic and foreign farm products, and, in some cases, Federal farm programs. Farm operators must determine the best time to seed, fertilize, cultivate, harvest, and market. They must carefully plan the combination of crops they grow so that, if the price of one crop drops, they will have sufficient income from another to make up for it. Also, prices of crops and livestock change from one month to another, and farm operators who plan ahead may be able to store their crops or keep their livestock to take advantage of better prices later in the year. Farm operators may have to secure loans from credit agencies to finance the purchase of machinery, fertilizer, livestock, and feed. They also keep extensive financial and inventory records of the farm operation and train and supervise workers in the use of equipment and the performance of farm work.

Farm operators perform tasks ranging from setting up and operating machinery to erecting fences and sheds. The size of the farm often determines which of these tasks operators will handle them-

selves. Operators of large farms have employees who do much of the physical work that small-farm operators do themselves. Although employment on most farms is limited to the farm operator and one or two family workers or hired employees, some large farms have 100 or more full-time and seasonal workers. Some of these workers are in nonfarm occupations, such as truckdriver, sales representative, bookkeeper, and computer specialist.

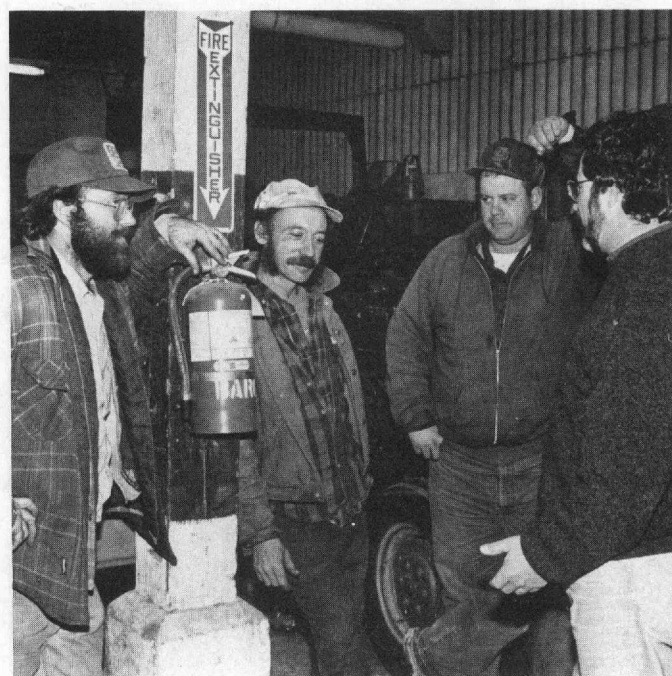
Farm managers. The duties and responsibilities of farm managers vary widely. For example, the owner of a very large livestock farm may employ a farm manager to oversee a single activity such as feeding livestock. When managing a small crop farm for an absentee owner, on the other hand, the farm manager may assume all functions from planning the output to participating in planting and harvesting activities. Farm management firms and corporations involved in agriculture employ highly trained professional farm managers who may manage some or all farm operations or oversee tenant operators of several farms. In these cases, farm managers may establish output goals, determine financial constraints, and monitor production and marketing.

Working Conditions

The topography of the land and the climate of an area generally determine the type of farming that is done. For example, wheat, corn, and other grains are most efficiently grown on large farms on level land where large and sophisticated machinery can best be used. Thus, these crops are ideal for the prairies of Iowa and Illinois or the plains of Nebraska and Kansas. Crops that require longer growing seasons, such as cotton, tobacco, and peanuts, are grown chiefly in the South. Most of the country's fruits and vegetables come from California, Texas, and Florida. Many dairy herds are found in the areas of good pastureland, such as Wisconsin, New York, and Minnesota. Livestock production requires large tracts of land for grazing and feed grain production and thus is concentrated in Texas, Nebraska, Iowa, and some Western States.

Many types of farming are seasonal in nature. Although many farm operators and managers on crop farms work from sunup to sundown during the planting and harvesting seasons, they often work on the farm only 6 to 7 months a year, and many have second jobs off the farm.

On farms that raise animals for meat or dairy products, work goes on constantly throughout the year. Because animals must be fed and watered every day and cows must be milked twice daily, operators of these farms rarely get the chance to be away.



Farm managers exchange ideas on harvesting methods.

Farm work can be hazardous. Farmers may be injured by planting and harvesting machinery. In addition, they are subject to illnesses and diseases from improper handling and breathing of dangerous pesticides and chemicals.

On very large farms, farm operators spend substantial time meeting with farm managers or farm supervisors in charge of various activities. Professional farm managers overseeing several farms may divide their time between traveling to meet with farm operators and planning and scheduling farm operations while in their offices.

Employment

Farm operators and managers held about 1,223,000 jobs in 1990. Most managed crop production activities while others managed livestock production. A relatively small number were involved in agricultural services such as contract harvesting and farm labor contracting.

Training, Other Qualifications, and Advancement

Growing up on a family farm and participating in agricultural programs for young people sponsored by the National FFA Organization or the 4-H youth educational programs are important sources of training for those interested in pursuing agriculture as a career. However, modern farming requires increasingly complex scientific, business, and financial decisions. Thus, even young people who have lived on farms must acquire a strong educational background. High school training should include courses in mathematics and the sciences. Completion of a 2-year and preferably a 4-year program in a college of agriculture is becoming increasingly important.

Not all people who want to become a farm manager grew up on a farm. For these people, a bachelor's degree in agriculture is essential. In order to qualify for a farm manager position, they will need several years' work experience in many different phases of farm operation.

Students should select the college most appropriate to their specific interests and location. All States have land-grant universities that include a college of agriculture; their major programs of study include areas such as dairy science, agricultural economics and business, horticulture, crop and fruit science, soil science, and animal science. Also, colleges usually offer special programs of study concerning products important to the area in which they are located,

such as animal science programs at colleges in the Western and Plains States. Whatever one's interest, the college curriculum should include courses in farm management and in business, finance, and economics.

Professional status can be acquired through certification as an accredited farm manager (AFM) by the American Society of Farm Managers and Rural Appraisers. Applicants must have several years' farm experience and the appropriate academic background—a bachelor's degree or preferably a master's degree in a field of agricultural science—and must pass courses and examinations relating to business, financial, and legal aspects of farm management.

It is necessary to keep abreast of continuing advances in farming methods both in the United States and abroad. Farm operators should be willing to try new processes and adapt to constantly changing technologies to produce their crops or raise their livestock more efficiently. Keeping abreast of changing foreign agricultural policies and international exchange rates is important to operators of farms producing internationally traded crops and livestock. Operators also must have enough technical knowledge of crops and growing conditions and plant and animal diseases to be able to make decisions that ensure the successful operation of their farms. Knowledge of the relationship between farm operations—for example, the use of pesticides—and environmental conditions is essential. They also must have the managerial skills necessary to organize and operate a business. Mechanical aptitude and the ability to work with tools of all kinds also are valuable skills for the operator of a small farm, who often must maintain and repair machinery or farm structures. A basic knowledge of accounting and bookkeeping can be helpful in keeping financial records, and a knowledge of credit sources is essential. Familiarity with computers is important, especially on large farms, since computers are used for recordkeeping and business analysis. For example, some farmers use personal computers connected to telephones to get the latest information on prices of farm products and other agricultural news.

Job Outlook

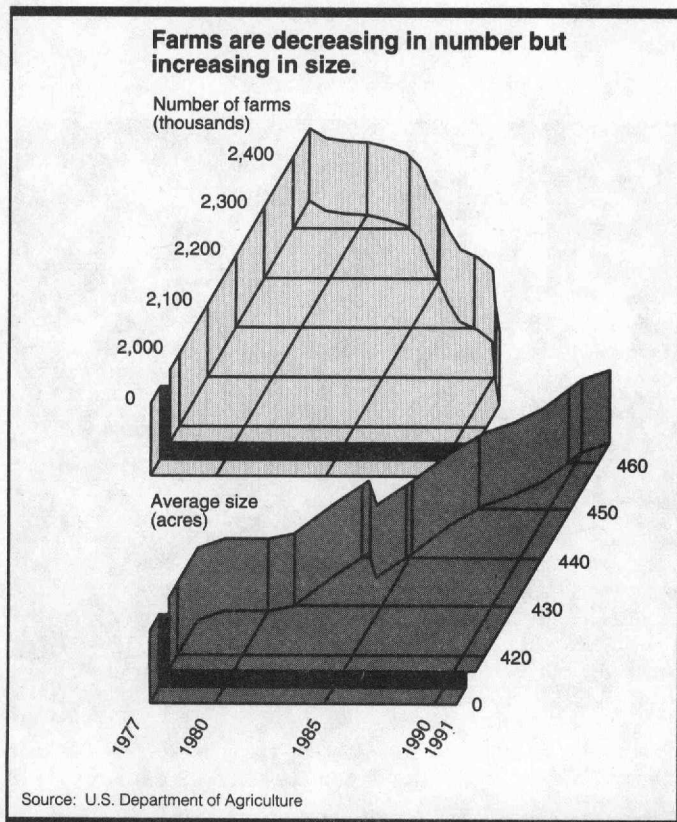
The expanding world population is increasing the demand for food and fiber. However, increasing productivity in the highly efficient U.S. agricultural sector is expected to easily meet domestic and export requirements. Although requirements for machinery and equipment will remain stable or increase slightly, land and labor requirements in the agricultural sector will decrease. Thus, employment of farm operators and managers combined is expected to continue to decline through the year 2005, but at a slower rate than in the past. The overwhelming majority of job openings will result from the need to replace farmers who retire or leave the occupation for economic or other reasons.

The trend toward fewer and larger farms, primarily through mergers, is expected to continue to reduce the number of jobs for farm operators. A farm can be acquired by inheritance; however, purchasing a farm is expensive and requires substantial capital. In addition, sufficient funds are required to withstand the adverse effects of climate and price fluctuations upon farm output and income and to cover operating costs—livestock, feed, seed, and fuel. Also, the complexity of modern farming and keen competition among farmers leave little room for the marginally successful farmer or the "gentleman" farmer who considers farming a hobby rather than a necessity. Small and medium-size farms, many of which do not generate sufficient income to support the desired standard of living, are expected to decrease in number. However, the small but increasing number of horticultural farms may provide some employment opportunities.

The increase in the average size of farms and in the complexity of farming are expected to spur demand for highly trained and experienced farm managers. Additional demand will come from the increasing number of absentee owners who, rather than work their farms, often hire farm managers to run the farm or oversee tenant farmers.

Earnings

Farmers' incomes vary greatly from year to year, since prices of farm products fluctuate depending upon weather conditions that influence the amount and quality of farm output. A farm that shows a large



profit in one year may show a loss in the following year. Many farmers—primarily small—have off-farm income often several times larger than their farm income.

Farm income also varies greatly depending upon the type and size of farm. According to the U.S. Department of Agriculture, vegetable and melon, cotton, horticultural specialty, and rice farms generated an average income of over \$100,000 in 1990. On the other hand, cattle, general crop, corn, tobacco, and other livestock farms generated less than \$15,000 in income, on the average. Generally, large farms generate more income than small farms. Exceptions include some specialty farms producing low-volume but high-value horticultural and fruit products.

Farm managers' incomes also vary substantially. According to limited information, most farm managers earned between \$15,000 and \$32,000 in 1990.

Farmers and self-employed farm managers make their own provisions for fringe benefits. As members of farm organizations, they may derive benefits such as group discounts on health and life insurance premiums. Salaried farm managers may receive the usual fringe benefits such as paid vacations and health insurance.

Related Occupations

Farmers and farm managers strive to improve the quality of agricultural products and the efficiency of farms. Workers with similar functions include agricultural engineers, animal breeders, animal scientists, county agricultural agents, dairy scientists, extension service specialists, feed and farm management advisors, horticulturalists, plant breeders, and poultry scientists.

Sources of Additional Information

For general information about farming and agricultural occupations, contact:

- National FFA Organization, Box 15160, 5632 Mt. Vernon Memorial Hwy., Alexandria, VA 22309.
- American Farm Bureau Federation, 225 Touhy Ave., Park Ridge, IL 60068.

For information about certification as an accredited farm manager, contact:

- American Society of Farm Managers and Rural Appraisers, 950 South Cherry St., Suite 106, Denver, CO 80222.

For general information about farm occupations and 4-H activities, contact your local County Extension Service office.

For information about agricultural education, contact:

- National Postsecondary Agricultural Student Organization, Box 279, Cobleskill, NY 12043.
- Higher Education Program, Cooperative State Research Service, U.S. Department of Agriculture, 14th St. and Independence Ave. SW., Washington, DC 20250.

Financial Managers

(D.O.T. 161.117-018; 186.117-014, -038, -066, -070, -078; .167-022, -026, -054; and 189.117-038)

Nature of the Work

Practically every firm—whether in manufacturing, communications, finance, education, or health care—has one or more financial managers—treasurer, controller, credit manager, cash manager, and others—who prepare the financial reports required by the firm to conduct its operations and to satisfy tax and regulatory requirements. Financial managers also oversee the flow of cash and financial instruments and develop information to assess the present and future financial status of the firm.

In small firms, treasurers' duties usually include all financial management functions. However, in large firms, treasurers or chief financial officers oversee all financial management departments. In these instances, treasurers help top managers develop financial and economic policy and establish procedures, delegate authority, and oversee the implementation of these policies.

Highly trained and experienced financial managers head each financial department. Controllers direct the preparation of all finan-

cial reports—for example, income statements, balance sheets, and special reports such as depreciation schedules. They oversee the accounting, audit, or budget departments. Cash and credit managers monitor and control the flow of cash receipts and disbursements and other financial instruments to meet the business and investment needs of the firm. For example, cash flow projections are needed to determine whether loans must be obtained to meet cash requirements, or whether surplus cash may be invested in interest-bearing instruments. Risk and insurance managers oversee programs to minimize risks and losses that may arise from financial transactions and business operations undertaken by the institution. Credit card operations managers establish credit rating criteria, determine credit ceilings, and monitor their institution's extension of credit. Reserve officers review their institution's financial statements and direct the purchase and sale of bonds and other securities to maintain the asset-liability ratio required by law. User representatives in international accounting develop integrated international financial and accounting systems for the banking transactions of multinational organizations. A working knowledge of the financial systems of foreign countries is essential.

Financial institutions—such as banks, savings and loan associations, credit unions, personal credit institutions, and finance companies—may serve as depositories for cash and financial instruments and offer loans, investment counseling, trust management, and other financial services. Some institutions specialize in specific financial services. Financial managers in these institutions include vice presidents—who may head one or more financial departments—bank branch managers, savings and loan association managers, consumer credit managers, and credit union managers, for example.

Financial managers in financial institutions make decisions in accordance with Federal and State laws and regulations and policy set by the institution's board of directors. They must have detailed knowledge of industries allied to banking—such as insurance, real estate, and securities—and broad knowledge of business and industrial activities. With growing domestic and foreign competition, promotion of an expanding and increasingly complex variety of financial services is becoming a more important function of financial managers in banks and other financial institutions and in other corporations. Besides supervising financial services, they may advise individuals and businesses on financial planning.

Working Conditions

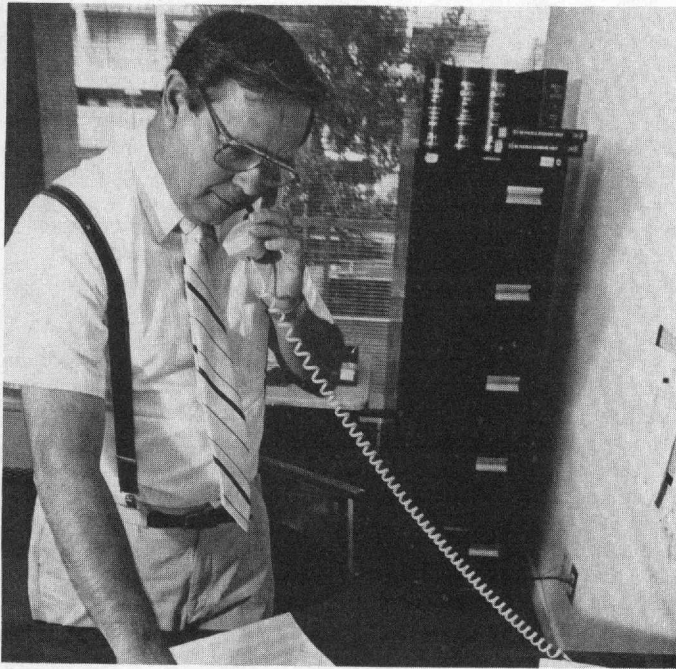
Financial managers are provided with comfortable offices, often close to top managers and to departments which develop the financial data these managers need. Although overtime may sometimes be required, financial managers typically work a 40-hour week. Attendance at meetings of financial and economic associations and similar activities is often required. In very large corporations, some traveling to subsidiary firms and to customer accounts may be necessary.

Employment

Financial managers held about 701,000 jobs in 1990. Although these managers are found in virtually every industry, about one-third were employed by financial institutions—banks, finance companies, credit unions, insurance companies, securities dealers, and real estate firms, for example. Another third were employed by services industries, including business, health, social, and management services.

Training, Other Qualifications, and Advancement

A bachelor's degree in accounting or finance, or in business administration with an emphasis on accounting or finance, is suitable academic preparation for financial managers. A Master of Business Administration (MBA) degree in addition to a bachelor's degree is increasingly valued by employers. Many financial management positions are filled by promoting experienced, technically skilled professional personnel—for example, accountants, budget analysts, credit analysts, insurance analysts, loan officers, and securities analysts—or accounting or related department supervisors in large institutions. In small firms, where the number of positions is limited, advancement to a financial management position may come slowly. In large firms, promotions may occur more quickly.



Financial managers assess the financial status of their firms.

Although experience, ability, and leadership are emphasized for promotion, advancement may be accelerated by special study. Firms often provide opportunities for workers to broaden their knowledge and skills and encourage employees to take courses at local colleges and universities or attend conferences sponsored by the company. In addition, financial management, banking, and credit union associations, often in cooperation with colleges and universities, sponsor numerous national or local training programs. Their schools, located throughout the country, each deal with a different phase of financial management. Persons enrolled prepare extensively at home, then attend sessions on subjects such as accounting management, budget management, corporate cash management, financial analysis, international banking, and data processing and management information systems. Many firms pay all or part of the costs for those who successfully complete courses.

Persons interested in becoming financial managers should like to work independently, deal with people, and analyze detailed account information. The ability to communicate, both orally and in writing, with top managers is increasingly important. They also need tact, good judgment, and the ability to establish effective personal relationships to oversee supervisory and professional staff members.

Financial analysis and management have been revolutionized by technological improvements in personal computers and data processing equipment. Knowledge of their applications is vital to upgrade managerial skills and to enhance advancement opportunities.

Because financial management is critical for efficient business operations, well-trained, experienced financial managers who display a strong grasp of the operations of various departments within their organization are prime candidates for promotion to top management positions. Some financial managers transfer to closely related positions in other industries. Those with extensive experience and access to sufficient capital may head their own consulting firms.

Job Outlook

Employment of financial managers is expected to increase faster than the average for all occupations through the year 2005. The need for skilled financial managers, illustrated by the recent crisis among banks and savings and loan institutions, should be spurred by the increasing variety and complexity of services, including financial planning, offered by financial institutions; increased interstate and international banking; more domestic and foreign competition; changing laws regarding taxes and other financial matters; and greater

emphasis on accurate reporting of financial data. At the same time, expanding automation—such as use of computers for electronic funds transmission and for data and information processing—makes financial managers more productive. Most job openings will result from the need to replace those who transfer to other fields, retire, or leave the occupation for other reasons.

As in other management occupations, qualified applicants can expect to face competition for financial management positions. Familiarity with a range of financial services—for example, banking, business credit, credit unions, insurance, real estate, and securities—and with data processing and management information systems may enhance one's chances for employment. Developing expertise in a rapidly growing industry, such as health care, may also prove helpful.

Financial managers generally are less subject to layoffs than many other workers because cyclical swings in the economy seem to have less immediate effect on financial management than on many other activities.

Earnings

The median annual salary of financial managers was \$35,800 in 1990. The lowest 10 percent earned \$18,300 or less, while the top 10 percent earned over \$68,000. Some experienced financial managers earn substantially higher salaries. The salary level depends upon the size and location of the organization, and is likely to be higher in large organizations and cities. Many financial managers in private industry receive additional compensation in the form of bonuses, which also vary substantially by size of firm.

Financial managers generally receive fringe benefits typically offered other managers—vacations, sick leave, health and life insurance, and pensions, for example.

Related Occupations

Financial managers combine formal education with experience in one or more areas of finance—such as asset management, lending, credit operations, securities investment, or insurance risk and loss control. Workers in other occupations which require similar training and ability include accountants and auditors, budget officers, credit analysts, loan officers, insurance consultants, pension consultants, real estate advisors, securities consultants, and underwriters.

Sources of Additional Information

For information about careers in consumer finance, contact:

- American Financial Services Association, 919 18th St. NW., Washington, DC 20006.

For information about financial management careers, contact:

- Financial Executives Institute, Academic Relations Committee, P.O. Box 1938, Morristown, NJ 07962-1938.

- National Corporate Cash Management Association, 7315 Wisconsin Ave., Suite 1250 W, Bethesda, MD 20814.

For information about financial management careers in banking and related financial institutions, contact:

- American Bankers Association, Reference Librarian, 1120 Connecticut Ave. NW., Washington, DC 20036.

For information about financial management careers in credit unions, contact:

- Credit Union Executives Society, P.O. Box 14167, Madison, WI 53714.

For information about financial management careers in savings and loan associations and related financial institutions, contact:

- Institute of Financial Education and Financial Managers Society, 111 E. Wacker Dr., Chicago, IL 60601.

For information about financial careers in business credit management, contact:

- National Association of Credit Management (NACM), and Credit Research Foundation, the education and research affiliate of NACM, 8815 Centre Park Dr., Columbia, MD 21045-2117.

For information about financial management careers in the health care industry, contact:

- Healthcare Financial Management Association, Suite 700, Two Westbrook Corporate Center, Westchester, IL 60154.

Information about careers with the Federal Reserve System is available from:

- Board of Governors, The Federal Reserve System, Human Resources Man-

agement Division, Washington, DC 20551, or from the human resources department of the Federal Reserve bank serving each geographic area.

State bankers' associations can furnish specific information about job opportunities in their State. Or write directly to a particular bank to inquire about job openings. For the names and addresses of banks and savings and related institutions, as well as the names of their principal officers, consult one of the following directories.

• *The American Financial Directory* (Norcross, Ga., McFadden Business Publications).

• *Polk's World Bank Directory* (Nashville, R.L. Polk & Co.).

• *Rand McNally Credit Union Directory* (Chicago, Rand McNally & Co.).

• *The U.S. Savings and Loan Directory* (Chicago, Rand McNally & Co.).

General Managers and Top Executives

(List of D.O.T. codes available upon request from the Chief, Division of Occupational Outlook, Bureau of Labor Statistics, Washington, DC 20212.)

Nature of the Work

Chief executive officer, executive vice president for marketing, department store manager, financial institution president, brokerage office manager, college president, school superintendent, and police chief—these are examples of general managers and top executives who, at the upper end of the management hierarchy, formulate the policies or direct the operations of the Nation's private firms or government agencies. (Top executives who formulate policy in public administration are discussed in detail in the *Handbook* statement on government chief executives and legislators.)

The fundamental objective of private organizations is to maintain efficiency and profitability in the face of accelerating technological complexity, economic interdependence, and domestic and foreign competition. Government agencies must effectively implement programs subject to budgetary constraints and shifting public preferences. In response to these trends, successful organizations have broadened their activities, grown in size and complexity, and expanded their management hierarchy.

An organization's general goals and policies are established by the chief executive officer in collaboration with other top executives, usually executive vice presidents, and with the board of directors. In a large corporation, a chief executive officer may frequently meet with top executives of other corporations, government, or foreign countries to discuss matters affecting the organization's policies. Although the chief executive officer retains ultimate authority and responsibility, the chief operating officer may be delegated the authority to oversee executive vice presidents who direct the activities of various departments and are responsible for implementing the organization's goals.

The responsibilities of executive vice presidents depend greatly upon the size of the organization. In large corporations, their duties may be highly specialized. For example, they may oversee the activities of general managers of marketing, sales promotion, purchasing, finance, personnel, training, industrial relations, administrative services, electronic data processing, property management, transportation, or legal services. (Some of these and other general managerial occupations are discussed elsewhere in this section of the *Handbook*.) In smaller firms, an executive vice president might be responsible for a number of these departments.

General managers, in turn, direct their individual department's activities within the framework of the organization's overall plan. With the help of supervisory managers and their staffs, general managers oversee and strive to motivate workers to achieve their department's goals as rapidly and economically as possible. In smaller organizations, such as independent retail stores or small manufacturers, a general manager may be responsible for purchasing, hiring, training, quality control, and all other day-to-day supervisory duties.

Working Conditions

General managers in large firms or government agencies are provided with offices close to the departments they direct and to the top execu-

tives to whom they report. Top executives may be provided with spacious offices and often meet and negotiate with top executives from other corporations, government, or other countries. Long hours, including evenings and weekends, are the rule for most top executives and general managers, and business discussions may occupy most of their time during social engagements.

Substantial travel is often required. General managers may travel between national, regional, and local offices. Top executives may travel to meet with their counterparts in other corporations in the country or overseas. Perquisites such as reimbursement of an accompanying spouse's travel expenses help executives cope with frequent or extended periods away from home. Meetings and conferences sponsored by industries and associations occur regularly and provide invaluable opportunities to meet with peers and keep abreast of technological and other developments.

In large corporations, job transfers between the parent company and its local offices or subsidiaries, here or abroad, are common.

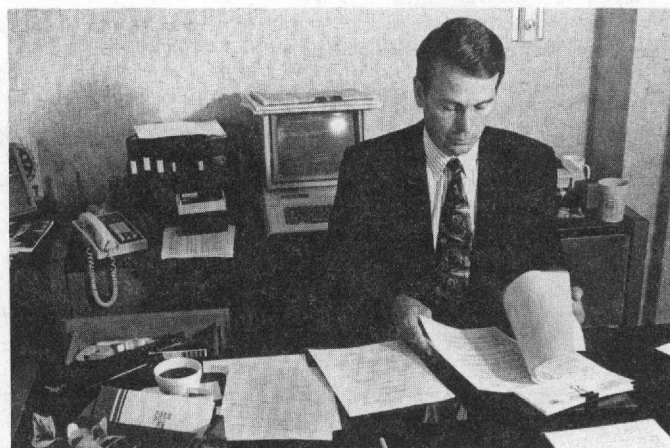
With increasing domestic and international competition, general managers and top executives are under intense pressure to attain, for example, even higher production and marketing goals. In addition, they often find themselves in situations over which they have limited influence—for example, when meeting with government officials, private interest groups, or competitors, or negotiating with foreign governments.

Employment

General managers and top executives held about 3.1 million jobs in 1990. They are found in every industry—residential building construction firms, grocery stores, data processing services firms, and automotive manufacturers, for example.

Training, Other Qualifications, and Advancement

The educational background of managers and top executives varies as widely as the nature of their diverse responsibilities. Most general managers and top executives have a bachelor's degree in liberal arts or business administration. Their major often is related to the departments they direct—for example, accounting for a general manager of finance or computer science for a general manager of data processing. Graduate and professional degrees are common. Many managers in administrative, marketing, financial, and manufacturing activities have a master's degree in business administration. Managers in highly technical manufacturing and research activities often have a master's or doctoral degree in an engineering or scientific discipline. A law degree is mandatory for general managers of corporate legal departments, and hospital administrators generally have a master's degree in health services administration or business administration. (For additional information, see the *Handbook* statement on health services managers.) College presidents and school superintendents generally have a doctorate, often in education administration; some have a law degree. In some



General managers and top executives are among the highest paid workers.

industries, such as retail trade, competent individuals without a college degree may become general managers.

Most general managers in the public sector have a liberal arts degree in public administration or in one of the social sciences such as economics, psychology, sociology, or urban studies. For others, experience is still the primary qualification. For park superintendents, a liberal arts degree also provides a suitable background. Police chiefs are graduates of police academies; in addition, a degree in police science or a related field is increasingly important. Similarly, fire chiefs are graduates of fire academies; in addition, a degree in fire science is gaining in importance. For harbor masters, a high school education and experience as a harbor pilot are sufficient.

In an effort to determine the physical and intellectual qualifications of applicants, many organizations now administer health, psychological, and competency screening examinations to candidates for general manager and top executive positions.

Most general manager and top executive positions are filled by promoting experienced, lower level managers who display the leadership, self-confidence, motivation, decisiveness, and flexibility required by these demanding positions. In small firms, where the number of positions is limited, advancement to a higher management position may come slowly. In large firms, promotions may occur more quickly.

Advancement may be accelerated by participation in company training programs to broaden knowledge of company policy and operations. Attendance at national or local training programs sponsored by numerous industry and trade associations and continuing education, normally at company expense, in colleges and universities can familiarize managers with the latest developments in management techniques. Every year, thousands of senior managers, who often have some experience in a particular field such as accounting, engineering, or science, attend executive development programs to facilitate their promotion from functional specialists to general managers. In addition, participation in interdisciplinary conferences and seminars can expand knowledge of national and international issues influencing the manager's firm.

Persons interested in becoming general managers and top executives must have highly developed personal skills. A highly analytical mind able to quickly assess large amounts of information and data is very important. The ability to consider and evaluate the interrelationships of numerous factors and to select the best course of action is imperative. In the absence of sufficient information, sound intuitive judgment is crucial to reaching favorable decisions. General managers and top executives also must be able to communicate clearly and persuasively with customers, subordinates, and other managers in their firm.

General managers may advance to top executive positions, such as executive or administrative vice president, in their own firm or to a corresponding general manager position in a larger firm. Similarly, top-level managers may advance to peak corporate positions—chief operating officer and, finally, chief executive officer. Chief executive officers, upon retirement, may become members of the board of directors of one or more firms. Some general managers and top executives with sufficient capital establish their own firms.

Job Outlook

Employment of general managers and top executives is expected to increase about as fast as the average for all occupations through the year 2005 as businesses grow in number, size, and complexity. However, in the face of intense competition, many firms are improving operating efficiency by establishing a leaner corporate structure, with fewer management positions—thus moderating employment growth.

Because this is a large occupation, many job openings will occur each year as managers and executives transfer to other positions, start their own businesses, or retire. However, many of these highly coveted jobs will be filled by other experienced managers and executives. Thus, lower level managers should expect keen competition for high paying, prestigious general manager and top executive positions. Outstanding individuals whose accomplishments reflect strong leadership qualities and the ability to improve the efficiency or competitive position of their organization will have the best job opportunities.

Projected employment growth of general managers and top executives reflects projected industry growth. For example, rapid growth is expected in most services industries, such as health, business, and social services. On the other hand, more moderate employment growth is expected in wholesale and retail trade. Little or no change or even a decline in employment is projected in many manufacturing industries.

Earnings

General managers and top executives are among the highest paid workers in the Nation. However, salary levels vary substantially depending upon the level of managerial responsibility, length of service, and type, size, and location of the firm.

At the highest level, chief executive officers (CEO) are extremely well paid. According to a survey by Fortune magazine, CEO's at 200 major companies averaged \$2.4 million in 1990, including bonuses and stock awards, which are often tied to performance. Salaries of managers and executives are related to the size of the corporation. A top-level manager in a very large corporation can earn significantly more than a counterpart in a small firm.

Salaries also vary substantially by industry and geographic location. According to a survey sponsored by the Society for Human Resource Management, top international human resources managers earned about \$96,000 in 1990. A survey by Network World Newsweekly revealed that computer networking managers earned \$59,000 that year. Salaries in manufacturing and finance are generally higher than those for corresponding positions in State and local governments. In addition, salaries in large metropolitan areas such as New York City are normally higher than those in small cities and towns.

Company-paid insurance premiums, physical examinations, executive dining rooms, use of company cars, paid country club memberships, and expense allowances are among the benefits enjoyed by some general managers and top executives in private industry. Similar to their subordinates, general managers and top executives receive other benefits such as paid vacations, sick leave, and pensions.

Related Occupations

General managers and top executives plan, organize, direct, control, and coordinate the operations of an organization and its major departments or programs. The members of the board of directors and supervisory managers are also involved in these activities. Occupations in government with similar functions are governor, mayor, postmaster, commissioner, director, and office chief.

Sources of Additional Information

For information on educational programs for general managers and top executives, contact:

- American Management Association, Management Information Service, 135 West 50th St., New York, NY 10020.
- National Management Association, 2210 Arbor Blvd., Dayton, OH 45439.

Information about general managers and top executives in specific industries may be obtained from organizations listed under a number of headings—for example, administration, administrators, directors, executives, management, managers, and superintendents—in various encyclopedias or directories of associations in public libraries.

Government Chief Executives and Legislators

Nature of the Work

Go to school. Pay your taxes. Register for the draft. Stop at the stop sign. It seems as though the Government is always telling us what to do. Who, then, tells the Government what to do? Chief executives and legislators at the Federal, State, and local level do the telling. They are elected or appointed officials who strive to meet the needs of their constituents with an effective and efficient government.

Chief executives are officials in charge of units of government who carry out and enforce laws. They include the President and Vice President of the United States, State governors and lieutenant governors, county commissioners, township supervisors, mayors, and city managers. All except city and county managers are elected; managers are appointed by the city council and the county commission.

Government chief executives, like corporation presidents and other chief executives, have overall responsibility for the performance of their organizations. In coordination with legislators, they establish goals and objectives, then organize programs and formulate policies to attain these goals. They appoint people to head departments, such as highways, health, police, recreation, economic development, and finance. Through these department heads, chief executives oversee the work of civil servants, who carry out programs and enforce laws enacted by the legislative bodies. They prepare budgets, which specify how government resources will be used. They insure that resources are being used properly and that programs are carried out as planned by holding staff conferences, requiring work schedules and periodic performance reports, and by conducting personal inspections.

Chief executives meet with legislators and constituents to solicit their ideas, discuss programs, and encourage their support, and confer with leaders of other governments to solve mutual problems. They encourage business investment and economic development in their jurisdictions and seek Federal or State funds. Chief executives nominate citizens for government boards and commissions—to oversee government activities or examine and help the government solve problems such as drug abuse, crime, deteriorating roads, or inadequate public education.

They also solicit bids from and select contractors to do work for the government. Chief executives of large jurisdictions rely on a staff of aides and assistants, while those in small ones often do much of the work themselves. City and town managers, although appointed officials, may act as or share responsibility with chief executives.

Legislators are the elected officials who make laws or amend existing ones in order to remedy problems or to promote certain activities. They include U.S. Senators and Representatives, State senators and representatives (called assemblymen or delegates in some States), county legislators, and city and town council members (called aldermen, selectmen, trustees, clerks, supervisors, magistrates, and commissioners, among other titles).

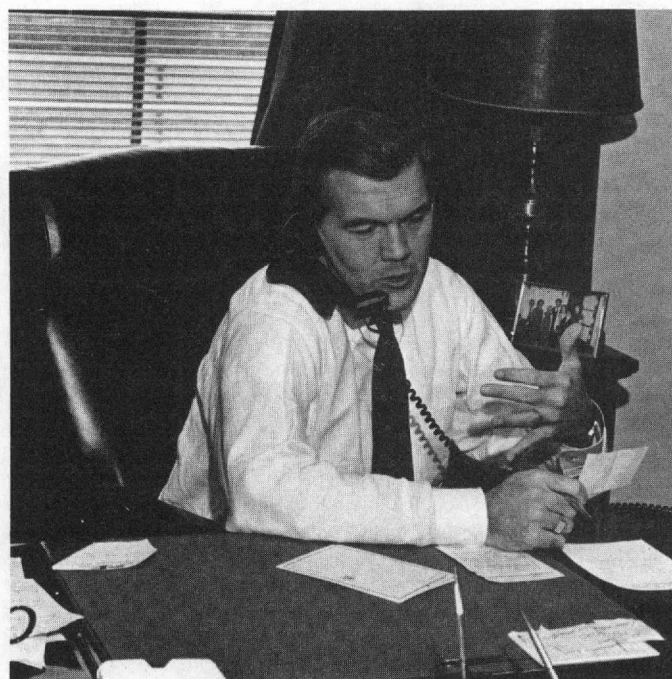
Legislators introduce bills in the legislative body and examine and vote on bills introduced by other legislators. In preparing legislation, they read reports and work with constituents, representatives of interest groups, members of boards and commissions, the chief executive and department heads, consultants, and legislators in other units of government. They also approve budgets and the appointments of department heads and commission members submitted by the chief executive. In some jurisdictions, the legislative body appoints a city or county manager. Many legislators, especially at the State and Federal levels, have a staff to help do research and prepare legislation and resolve constituents' problems.

In some units of government, the line between legislative and executive functions is not clear. For example, mayors and city managers may draft legislation and conduct council meetings, while council members may oversee the operation of departments.

Both chief executives and legislators perform ceremonial duties—they open new structures and businesses; make proclamations, welcome visitors, and lead celebrations.

Working Conditions

Working conditions of chief executives and legislators vary depending on the size of the government unit. Hours range from meeting once a month for a local council member to 60 or more hours per week for a legislator. U.S. Senators and Representatives, governors and lieutenant governors, and chief executives and legislators in some large local jurisdictions work full time year round, as do almost all county and city managers. Some city and town managers work for several small jurisdictions. Most State legislators work full time while legislatures are in session—usually for a few months a year and part time the rest of the year. Local elected officials in most jurisdictions usually work part time; however, in some cases, while the job is



Most government chief executives and legislators are elected by the public.

officially designated part time, incumbents actually work a full-time schedule.

In addition to their regular schedules, chief executives are generally on call at all hours to handle emergencies.

Some jobs require only occasional out-of-town travel, while others involve more frequent travel—normally to attend sessions of the legislature or to meet with officials of other units of government. Officials in districts covering a large area may drive long distances to perform their regular duties.

Employment

Chief executives and legislators held about 71,000 jobs in 1990. About 5 of 6 worked in local government; the rest worked in the Federal and State governments. The Federal Government had 535 Senators and Representatives. There were about 7,500 State legislators and, according to the International City Management Association (ICMA), about 11,000 city managers. Executives and council members for local governments made up the remainder.

Officials who do not hold full-time, year-round positions generally work in a second occupation as well—commonly the one they held before being elected—are retired from another occupation, or have household responsibilities. Business owner or manager, teacher, and lawyer are common second occupations, and there are many others as well.

Training, Other Qualifications, and Advancement

Because most chief executives and legislators are elected, the voters determine whether an individual who meets the minimum age, residency, and citizenship requirements of the position is fit to hold it. Therefore, the question is not "How does one become qualified" but "How does one get elected?"

Successful candidates generally have a record of accomplishment in paid and unpaid work. Many have business, teaching, or legal experience, but others come from a wide variety of occupations. In addition, many have served as volunteers on school boards or zoning commissions; with charities, political action groups, and political campaigns; or with religious, fraternal, and similar organizations.

Work experience and public service help develop the planning, organizing, negotiating, motivating, fundraising, budgeting, public speaking, and problem-solving skills needed to run a political campaign. Candidates must be decisive, quickly making fair decisions with little or contradictory information. They must have confidence

in themselves and their employees, being able to inspire and motivate their constituents and their staff. They must also be sincere and candid, presenting their views thoughtfully and convincingly. Additionally, they must know how to negotiate and hammer out compromises with colleagues and constituents. National and statewide campaigns also require a good deal of energy, stamina, and fund raising skills.

City and county managers are appointed by the council or commission. Managers come from a variety of educational backgrounds. A master's degree in public administration—which would include courses such as public financial management and legal issues in public administration—is widely recommended but not required. Virtually all city and county managers have at least a bachelor's degree.

Generally, a city or county manager in a smaller jurisdiction is required to have some expertise in a wider variety of areas, while those who work for larger jurisdictions concentrate on financial, administrative, or personnel matters. For all managers, communication skills and the ability to get along with others are essential.

Advancement opportunities for most elected public officials are not clearly defined. Because elected positions generally require a period of residency and because local public support is critical, officials can usually advance to other offices only in the jurisdictions where they live. For example, council members may run for mayor or for a position in the State government, and State legislators may run for governor or for Congress. Many officials are not politically ambitious, however, and do not seek advancement. Others lose their bids for reelection or voluntarily leave the occupation.

City managers have a more well-defined career path. They generally obtain a master's degree in public administration, then gain experience as management analysts or assistants in government departments working with councils and mayors and learning about planning, budgeting, civil engineering, and other aspects of running a city. After several years, they may be hired to manage a town or a small city and may eventually become manager of progressively larger cities.

Job outlook

Little change in employment of government chief executives and legislators is expected through the year 2005. Few, if any, new governments are likely to be formed, and the number of chief executives and legislators in existing governments rarely changes. Some small increase may occur as growing communities—in the rapidly growing South and West, for example—become independent cities and towns and elect a chief executive and legislators and, perhaps, appoint a town manager. A few new positions may also develop as cities and counties without managers hire them and as unpaid offices—which are not counted as employment—are converted to paid positions. On the other hand, attempts by governments to cut costs and streamline operations could reduce the number of paid positions, particularly at the local level.

The number of State legislators may increase or decline slightly when States, as required by law, complete their decennial redistricting. In addition, some States are considering a shift from a bicameral legislature—House of Representatives and Senate—to a unicameral legislature which, presumably, could reduce the number of legislators.

Elections provide the opportunity for newcomers to unseat incumbents or to fill vacated positions. In many elections, there is substantial competition, although the level of competition varies from jurisdiction to jurisdiction and from year to year. Generally, there is less competition in small jurisdictions, which have part-time positions offering relatively low salaries and little or no staff to help with tedious work, than in large jurisdictions, which have full-time positions offering higher salaries, more staff, and greater status. In some cases, usually in small jurisdictions, an incumbent is unopposed or an incumbent resigns and there is only one candidate.

Earnings

Earnings of public administrators vary widely, depending on the size of the government unit and on whether the job is part time, full time year round, or full time for only a few months a year. Salaries range from little or nothing for a small town council member to \$200,000 a year for the President of the U.S.

According to the International City Management Association, the average annual salary of mayors was about \$9,400 in 1990. In cities with a population under 2,500, they averaged about \$1,900; in cities with a population over 1 million, over \$80,000.

ICMA data also indicate that the average annual salary of city managers was over \$57,000 in 1990. Salaries ranged from \$33,000 in towns with fewer than 2,500 residents to \$125,000 in cities with a population over 1 million.

According to *Book of The States, 1990-91*, published by the Council of State Governments, the average salary for legislators in the 40 States that paid an annual salary was about \$21,000 in 1990. In 10 States, legislators just received a per diem while legislatures were in session. Salaries and per diem were generally higher in the larger States.

Data from *Book of the States, 1990-91* also indicate that gubernatorial annual salaries ranged from \$35,000 in Arkansas to \$130,000 in New York. In addition to a salary, most governors received perquisites such as transportation and an official residence. Lieutenant governors averaged over \$47,000 annually, according to a 1989 survey conducted by the National Conference of Lieutenant Governors.

Related occupations

Related occupations include managerial positions that require a broad range of skills in addition to administrative expertise.

Sources of Additional Information

For more information on careers in public administration, consult your elected representatives and local library.

Information on State governments can be obtained from:

• Council of State Governments, P.O. Box 11910, Iron Works Pike, Lexington, KY 40578.

Information on county governments can be obtained from:

• The National Association of Counties, 440 First St. NW., Washington, DC 20001.

Information on all local government appointed officials can be obtained from:

• International City Management Association, 777 North Capitol St. NE., Suite 500, Washington, DC 20002.

Health Services Managers

(D.O.T. 074.131-010; 075.117-014, -022, -026, and -030; 079.117-010, -131-010, -137-010, and -167-014; 187.117-010, -018, -058, -062, and -167-090; 188.117-082 and -167-058; and 195.167-042)

Nature of the Work

Health care is a business, albeit a special one. Like every other business, it needs good management to keep it running smoothly. Health services manager is an inclusive term for individuals in many different positions who plan, organize, coordinate, and supervise the delivery of health care. Health services managers include both generalists—the administrators managing or helping to manage an entire facility—and health specialists—the managers in charge of specific clinical departments or services that are found only in the health industry.

The top administrator or chief executive officer (CEO) and the assistant administrators without specific titles are health care generalists. Although their titles may vary by type and size of institution, these managers set the overall direction of the facility. They also are concerned with community outreach, planning, policymaking, response to government agencies and regulations, and negotiating. Their range of knowledge is necessarily broad, including developments in the clinical departments as well as in the business arena. They often speak before civic groups, promote public participation in health programs, and coordinate the activities of the organization with those of government or community agencies. CEOs make long term institutional plans by assessing the need for services, personnel, facilities, and equipment and recommending changes such as opening a home health service. CEO's need leadership ability as well as tech-

nical skills in order to respond effectively to the community's requirements for health care while, at the same time, satisfying demand for financial viability, cost containment, and public and professional accountability.

CEO's have to be ready for the extensive oversight and scrutiny to which health facilities are subjected. Both past performance and plans for the future are subject to review by a variety of groups and organizations, including consumer groups, government agencies, professional oversight bodies, insurance companies and other third-party payers, business coalitions, and even the courts. Preparing for inspection visits by observers from regulatory and accrediting bodies and submitting appropriate records and documentation are generally time consuming as well as technically demanding.

Some facilities may have one or more assistant administrators to aid the CEO and to handle day-to-day management decisions. There may be directors responsible for clinical areas such as nursing services or medical affairs and for other nonhealth areas such as finance, personnel, and information management. (Because the nonhealth departments are not directly related to health care, these managers are not included in this statement. For information about them, see the statements on managerial occupations elsewhere in the *Handbook*).

Health specialists provide the day-to-day management of departments like surgery, rehabilitation therapy, nursing, medical records, and so on. These managers have more narrowly defined responsibilities than the generalists to whom they report and have specific training and/or experience in the field. For example, a director of physical therapy must have experience as a staff physical therapist; a medical records administrator needs a bachelor's degree regardless of the amount of experience he or she possesses. These managers establish and implement policies, goals, objectives, and procedures for their departments; evaluate personnel and work; develop reports and budgets; and coordinate activities with other department heads, the top administrator, and professional colleagues.

Although there are many common elements involved in running a health facility, there are significant differences among settings that affect job duties. For example, hospital and nursing home management differ in important aspects. The chief hospital administrator works with the governing board in establishing general policies and an operating philosophy and provides direction to assistant administrators and department heads who carry out those policies. Nursing home administrators need many of the same management skills but are much more involved in detailed management decisions than hospital administrators. Administrative staffs in nursing homes are typically much smaller than those in hospitals—nursing home administrators often have only one or two assistants, sometimes none. Nursing home administrators directly manage personnel, finance, operations, and admissions. They analyze data and make daily management decisions in all of these areas. Because many nursing home residents are long term—staying for months or even years—administrators must try to create an environment that nourishes residents' psychological, social, and spiritual well-being, as well as tending to their health care needs. This long-term residency allows the nursing home administrator to have direct contact with the patients, something that few hospital administrators are able to do unless a problem arises.

In the growing field of group practice management, managers need to be able to work effectively with the physicians who own the practice. Specific job duties vary according to the size of the group. While an office manager handles business affairs in very small medical groups, leaving policy decisions to the physicians themselves, larger groups generally employ a full-time administrator to advise on business strategies and coordinate the day-to-day management of the practice.

A small group of 10 or 15 physicians might employ a single administrator to oversee personnel matters, billing and collection, budgeting, planning, equipment outlays, advertising, and patient flow, whereas a large practice of 40 or 50 physicians requires a chief administrator and several business assistants, each responsible for a different functional area of management. In addition to providing overall management direction, the chief administrator is responsible for assuring that the practice maintains or strengthens its competitive position. Assuring competitiveness might entail market research to

analyze the services the practice currently offers and those it might offer; negotiating contracts with hospitals or other health care providers to gain access to specialized facilities and equipment; or entering joint ventures for the purchase of an expensive piece of medical equipment such as a magnetic resonance imager. Health services managers in health maintenance organizations (HMO's) perform all of the functions of those in large medical group practices.

Some health services managers oversee the activities of several or many facilities in multi-facility health organizations.

Working Conditions

Health services managers often work long hours. Facilities such as nursing homes and hospitals operate around the clock, and administrators and managers may be called at all hours to deal with emergencies. The job also may include travel to attend meetings or to inspect satellite health care facilities.

Employment

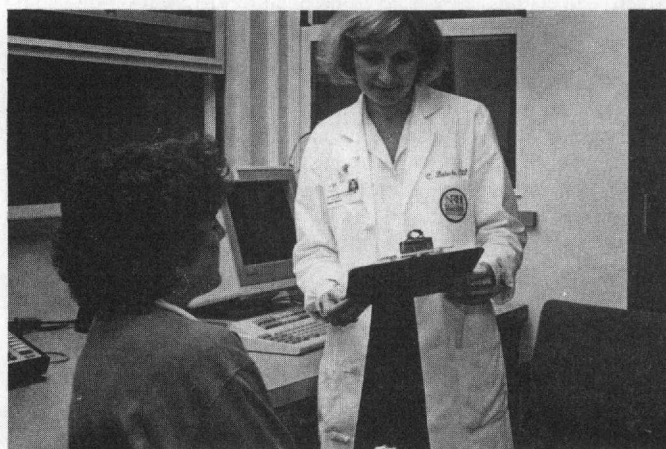
Health services managers held about 257,000 jobs in 1990. Nearly three-fifths of all jobs were in hospitals. About a quarter of health services managers worked in nursing and personal care facilities and in offices of physicians. The remainder worked in other health and allied services, home health agencies, medical and dental laboratories, and offices of dentists and other practitioners.

Training, Other Qualifications, and Advancement

Knowledge of management principles and practices is the essential requirement for a position in this field, and such knowledge often is gained through work experience. Nonetheless, formal educational preparation is important, especially for those who wish to advance in the profession. For many chief administrative positions, a graduate degree in health services administration, nursing administration, or business administration is a decided asset. For all health specialist positions and some generalist positions, employers seek applicants who have had clinical experience (as nurses or therapists, for example) as well as academic preparation in business or health services administration.

Many hospitals are setting up separate ventures such as outpatient surgical centers, alcoholism treatment centers, and home health care services. To operate and manage these subsidiary companies, hospitals look for managers with well-established skills in marketing and finance. Nonetheless, graduate education in health services administration remains a prerequisite for many upper level administrative positions within hospitals and their subsidiaries.

Academic programs in health administration, leading to a bachelor's, master's, or doctoral degree, are offered by colleges, universities, and schools of public health, medicine, allied health, public administration, and business administration. The various degree programs provide different levels of career preparation. The master's degree—in hospital administration, health administration, health sciences, public health,



Employers may seek health services managers with clinical as well as administrative experience.

public administration, or business administration—is regarded as the standard credential for many positions in this field. Educational requirements vary with the size of the organization and the amount of responsibility involved. Generally, larger organizations require more specialized academic preparation than smaller ones do.

In 1991, 29 colleges and universities offered bachelor's degree programs in health services administration. Sixty schools had accredited programs leading to the master's degree in health services administration, according to the Accrediting Commission on Education for Health Services Administration.

To enter graduate programs, applicants must have a bachelor's degree. Some schools seek students with undergraduate degrees in business or health administration; however, many programs prefer those students with a liberal arts or social science background. Competition for entry to these programs is keen, and applicants need above-average grades to gain admission. The programs generally last between 2 and 3 years. They include up to 1 year of supervised administrative experience, undertaken after completion of course work in such areas as hospital organization and management, accounting and budget control, personnel administration, strategic planning, and management of health information systems.

New graduates with master's degrees in health or hospital administration may be hired by hospitals as assistant administrators. Others may start as managers of nonhealth departments, like finance, and work up to top administrative positions. Postgraduate residencies and fellowships are offered by hospitals and other health facilities; these are normally staff jobs.

Growing numbers of graduates from master's degree programs are also taking jobs in HMO's, large group medical practices, clinics, and multifacility nursing home corporations. Students should be aware, however, that mid-level job transfers from one setting to another may be difficult. Employers place a high value on experience in similar settings because some of the management skills are unique to each setting.

New recipients of bachelor's degrees in health administration usually begin as administrative assistants or assistant department heads in larger hospitals, or as department heads or assistant administrators in small hospitals or in nursing homes.

The Ph.D. degree usually is required for positions in teaching, consulting, or research. Nursing service administrators are usually chosen from among supervisory registered nurses with administrative abilities and advanced education.

Licensure is not required in most areas of health services management, except for nursing home or long-term care administration. All States and the District of Columbia require nursing home administrators to pass a licensing examination, complete a State-approved training program, and pursue continuing education. Most States have additional specific requirements, so persons interested in nursing home administration should contact the individual agencies of the State in which they wish to work for information.

Health services managers are often responsible for millions of dollars of facilities and equipment and hundreds of employees. To make effective decisions, they need to be open to different opinions and good at sifting through contradictory information. To motivate subordinates to implement their decisions, they need strong leadership qualities. Interpersonal skills are important in all settings, but nowhere more so than in medical groups, where success depends on developing a good working relationship with the physician-owners. Tact, diplomacy, and communication skills are essential.

Like their counterparts in other kinds of organizations, health services managers need to be self-starters. In order to create an atmosphere favorable to good patient care, they must like people, enjoy working with them, and be able to deal effectively with them. They also should be good at public speaking.

Health services managers may advance by moving into more responsible and higher paying positions within their own institution; advancement occurs with promotion to successively more responsible jobs such as assistant or associate administrator and, finally, CEO. Health services managers sometimes begin their careers in small hospitals in positions with broad responsibilities, such as assistant administrator. Managers also advance by shifting to another health care facility or organization.

Job Outlook

Employment of health services managers is expected to grow much faster than the average for all occupations through the year 2005 as health services continue to expand and diversify. Hospitals will continue to employ the greatest number of health services managers, although the number of jobs will not be growing as fast as in other areas. Opportunities for managers in hospitals should be best in large hospitals with subsidiaries that provide such services as ambulatory surgery, alcohol and drug abuse rehabilitation, hospice facilities, or home health care.

Employment in home health agency and nursing and long-term care facilities will be growing the fastest. This is due to an increased number of elderly who will need care. Demand in medical group practices will grow, too. As medical group practices become larger and more complex, more job opportunities for clinical department heads like director of nursing services should emerge. Moreover, the increased complexity of group practices should also increase the number of associate administrators.

Health services managers in hospitals will face very keen competition for upper level management jobs, a reflection of the pyramidal management structure characteristic of most large and complex organizations.

In nursing homes and other long-term care facilities, where a graduate degree in health administration is not ordinarily a requirement, job opportunities for individuals with strong business or management skills will continue to be good.

Earnings

The type and size of the facility greatly affects the earnings of administrators. For example, the Medical Group Management Association reported that the median salary for administrators in group practices was \$58,000 in 1990. The median salary for those in small group practices—with net revenues of \$2 million or less—was \$40,200; for those in very large group practices—with net revenues over \$10 million—\$96,000.

According to the American Hospital Association, half of all hospital CEO's earned \$121,500 or more in 1991. The lowest 10 percent earned less than \$71,000; the top 10 percent earned \$203,400 or more.

Clinical department heads' salaries varied too. According to a survey by *Modern Healthcare* magazine, average salaries in 1991 for heads of the following clinical departments were: Medical records, \$41,700; imaging/radiology, \$46,600; physical therapy, \$47,100; rehabilitation services, \$51,000; and nursing services, \$59,700.

Management incentive bonuses based on job performance are increasingly commonplace in executive compensation packages.

Related Occupations

Health services managers have training or experience in health and in management. Other occupations that require knowledge of both fields are public health directors, social welfare administrators, directors of voluntary health agencies and health professional associations, and underwriters in health insurance companies and HMO's.

Sources of Additional Information

Information about health administration and academic programs in this field is available from:

- American College of Healthcare Executives, 840 North Lake Shore Dr., Chicago, IL 60611.
- Association of University Programs in Health Administration, 1911 North Fort Myer Dr., Suite 503, Arlington, VA 22209.

For a list of accredited graduate programs in health services administration, contact:

- Accrediting Commission on Education for Health Services Administration, 1911 North Fort Myer Dr., Suite 503, Arlington, VA 22209.

Information about health administration and job opportunities in group medical practices is available from:

- Medical Group Management Association, 104 Inverness Terrace East, Englewood, CO 80112-5306.

For information about career opportunities in long-term care, contact:

- American College of Health Care Administrators, 325 S. Patrick St., Alexandria, VA 22314.

Hotel Managers and Assistants

(D.O.T. 187.117-038, .167-046, -078, -106, -110, -122; and 320)

Nature of the Work

Across the Nation, hotels and motels are a welcome haven for weary travelers. For vacationing families and persons whose jobs take them out of town, a comfortable room, good food, and a helpful hotel staff can make being away from home an enjoyable experience. They may be guests overnight at a roadside motel, spend several days at a towering downtown convention hotel, or a week at a large resort complex with tennis courts, a golf course, and a variety of other recreational facilities. At each, hotel managers and assistant managers work to insure that guests' visits are pleasant.

Hotel managers are responsible for the efficient and profitable operation of their establishments. In a small hotel, motel, or inn with a limited staff, a single manager may direct all aspects of operations. However, large hotels may employ hundreds of workers, and the manager may be aided by a number of assistant managers assigned among departments responsible for various aspects of operations. The *general manager* has overall responsibility for the operation of the hotel. Within guidelines established by the owners of the hotel or executives of the hotel chain, the general manager sets room rates, allocates funds to departments, approves expenditures, and establishes standards for service to guests, decor, housekeeping, food quality, and banquet operations. (For more information, see the statement on general managers and top executives elsewhere in the *Handbook*.) Assistant managers must insure that the day-to-day operations of their departments meet the general manager's standards.

Resident managers live in hotels and are on call 24 hours a day to resolve any problems or emergencies, although they normally work an 8-hour day. As the most senior assistant manager, they oversee the day-to-day operations of the hotel. In many hotels, the general manager also serves as the resident manager.

Executive housekeepers are responsible for insuring that guest rooms, meeting and banquet rooms, and public areas are clean, orderly, and well maintained. They train, schedule, and supervise the work of housekeepers, inspect rooms, and order cleaning supplies.

Front office managers coordinate reservations and room assignments and train and direct the hotel's front desk staff that deals with the public. They insure that guests are handled courteously and efficiently, complaints and problems are resolved, and requests for special services are carried out.

Food and beverage managers direct the food services of hotels. They oversee the operation of hotels' restaurants, cocktail lounges, and banquet facilities. They supervise and schedule food and beverage preparation and service workers, plan menus, estimate costs, and deal with food suppliers. (For more information, see the statement on restaurant and food service managers elsewhere in the *Handbook*.)

Convention services managers coordinate the activities of large hotels' various departments for meetings, conventions, and other special events. They meet with representatives of groups or organizations to plan the number of rooms to reserve, the desired configuration of hotel meeting space, and any banquet services needed. During the meeting or event, they resolve unexpected problems and monitor activities to check that hotel operations conform to the expectations of the group.

Other assistant managers may be specialists responsible for activities such as personnel, accounting and office administration, marketing and sales, security, maintenance, and recreational facilities. (For more information, see the related statements on personnel, training, and labor relations specialists and managers; financial managers; and marketing, advertising, and public relations managers elsewhere in the *Handbook*.) Managers who work for chains may be assigned to organize and staff a newly built hotel, refurbish an older hotel, or reorganize a hotel or motel that is not operating successfully.

Working Conditions

Since hotels are open around the clock, night and weekend work is common. Many hotel managers work considerably more than 40 hours per week. Managers who live in the hotel usually have regular work schedules, but they may be called for work at any time. Some employees of resort hotels are managers during the busy season and have other duties the rest of the year.

Hotel managers sometimes experience the pressures of coordinating a wide range of functions. Conventions and large groups of tourists may present unusual problems. Dealing with irate patrons can also be stressful. The job can be particularly hectic for front office managers around checkin and checkout time.

Employment

Hotel managers and assistant managers held about 102,000 wage and salary jobs in 1990. An additional number—primarily owners of small hotels and motels—were self-employed. Others were employed by companies that manage hotels and motels under contract.

Training, Other Qualifications, and Advancement

Postsecondary training in hotel or restaurant management is preferred for most hotel management positions, although a college liberal arts degree may be sufficient when coupled with related hotel experience. In the past, most managers were promoted from the ranks of front desk clerks, housekeepers, waiters and chefs, and hotel sales workers. While some persons still advance to hotel management positions without the benefit of education or training beyond high school, increasingly, postsecondary education is preferred. Nevertheless, experience working in a hotel—even part time while in school—is an asset to all persons seeking to enter hotel management careers. Restaurant management training or experience is also a good background for entering hotel management because the success of a hotel's food service and beverage operations is often of great importance to the profitability of the entire establishment.

A bachelor's degree in hotel and restaurant administration provides particularly strong preparation for a career in hotel management. In 1991, over 160 colleges and universities offered bachelor's and graduate programs in this field. Over 800 community and junior colleges, technical institutes, vocational and trade schools, and other academic institutions also have programs leading to an associate degree or other formal recognition in hotel or restaurant management. Graduates of hotel or restaurant management programs usually start as trainee assistant managers, or at least advance to such positions more quickly.

Hotel management programs usually include instruction in hotel administration, accounting, economics, marketing, housekeeping, food service management and catering, hotel maintenance engineering, and data processing—reflecting the widespread use of computers in hotel operations such as reservations, accounting, and housekeeping management. Programs encourage part-time or summer work in hotels and restaurants because the experience gained and the contacts



Front office managers train and direct the hotel's front desk staff.

made with employers may benefit students when they seek full-time employment after graduation.

Hotel managers must be able to get along with all kinds of people, even in stressful situations. They need initiative, self-discipline, and the ability to organize and direct the work of others. They must be able to solve problems and concentrate on details.

Sometimes large hotels sponsor specialized on-the-job management training programs which enable trainees to rotate among various departments and gain a thorough knowledge of the hotel's operation. Other hotels may help finance the necessary training in hotel management for outstanding employees.

Most hotels promote employees who have proven their ability. Newly built hotels, particularly those without well-established on-the-job training programs, often prefer experienced personnel for managerial positions. Large hotel and motel chains may offer better opportunities for advancement than small, independently owned establishments, but relocation every several years often is necessary for advancement. They have more extensive career ladder programs and offer managers the opportunity to transfer to another hotel or motel in the chain or to the central office if an opening occurs. Career advancement can be accelerated by completion of certification programs offered by the associations listed below. These programs generally require a combination of course work, examinations, and experience.

Job Outlook

Employment of salaried hotel managers is expected to grow much faster than the average for all occupations through the year 2005 as more hotels and motels are built. Business travel will continue to grow, and increased domestic and foreign tourism will also create demand for additional hotels and motels. Most openings are expected to occur as experienced managers transfer to other occupations, retire, or stop working for other reasons.

Opportunities to enter hotel management are expected to be very good for persons who have college degrees in hotel or restaurant management.

Earnings

Salaries of hotel managers varied greatly according to their responsibilities and the size of the hotel in which they worked. In early 1991, annual salaries of assistant hotel managers averaged nearly \$31,000, based on a survey conducted for the American Hotel and Motel Association. Assistants employed in large hotels with over 350 rooms averaged over \$36,000 in 1991, while those in small hotels with no more than 150 rooms averaged less than \$25,000. Salaries of assistant managers also varied because of differences in duties and responsibilities. For example, food and beverage managers averaged \$38,900, according to the same survey, whereas front office managers averaged \$25,000. The manager's level of experience is also an important factor.

In 1991, salaries of general managers averaged nearly \$56,000, ranging from an average of about \$42,300 in hotels and motels with no more than 150 rooms to an average of about \$81,800 in large hotels with over 350 rooms. Managers may earn bonuses ranging up to 15 percent of their basic salary in some hotels. In addition, they and their families may be furnished with lodging, meals, parking, laundry, and other services.

Most managers and assistants receive 3 to 11 paid holidays a year, paid vacation, sick leave, life insurance, medical benefits, and pension plans. Some hotels offer profit-sharing plans, educational assistance, and other benefits to their employees.

Related Occupations

Hotel managers and assistants are not the only workers concerned with organizing and directing a business in which pleasing people is very important. Others with similar responsibilities include restaurant managers, apartment building managers, department store managers, and office managers.

Sources of Additional Information

For information on careers and scholarships in hotel management, contact:

• The American Hotel and Motel Association (AH&MA), Information Center, 1201 New York Ave. NW., Washington, DC 20005-3931.

For information on educational programs, including correspondence courses, in hotel and restaurant management, write to:

• The Educational Institute of AH&MA, P.O. Box 1240, East Lansing, MI 48826.

Information on careers in housekeeping management may be obtained from:

• National Executive Housekeepers Association, Inc., 1001 Eastwind Dr., Suite 301, Westerville, OH 43081.

For information on hospitality careers, as well as how to purchase a directory of colleges and other schools offering programs and courses in hotel and restaurant administration, write to:

• Council on Hotel, Restaurant, and Institutional Education, 1200 17th St. NW., Washington, DC 20036-3097.

General career information and a directory of accredited private trade and technical schools offering programs in hotel-motel management may be obtained from:

• National Association of Trade and Technical Schools, P.O. Box 10429, Department BL, Rockville, MD 20850.

Industrial Production Managers

(D.O.T. 180.167-054; 181.117-010; 182.167-022; 183.117-010, -014, .161-014, .167-010, -014, -018, -022, -026, -034, and -038; and 189.117-042, .167-042, and -046)

Nature of the Work

Industrial production managers coordinate activities related to production of goods and direct the work of first-line supervisors. Due to the variety of goods produced, few factories are exactly alike, so managers' duties may vary from plant to plant. However, industrial production managers generally have the same major functions regardless of industry. These include responsibility for production scheduling, staffing, equipment, quality control, inventory control, and for the coordination of activities with other departments.

Production managers usually report to the plant manager or the vice president for manufacturing. (Information about these workers can be found in the statement on general managers and top executives elsewhere in the *Handbook*). In many plants, one production manager is responsible for all production. In large plants with several operations—aircraft assembly, for example—there are managers in charge of each operation, such as machining, assembly, or finishing.

Based on current and projected customer demand, management determines what and how much will be produced. Working within budgetary limitations, industrial production managers plan the production schedule. This entails analyzing the plant's personnel and capital resources and selecting the best way to meet the production quota. They determine which machines will be used, whether overtime or extra shifts are necessary, the sequence of production, and related matters. They also monitor the production run to make sure that it stays on schedule, and, if problems arise, take action to solve them.

Production managers need to work closely with those in upper management and their counterparts in other departments. For example, production managers are increasingly involved in the long-term planning for their firms. In addition, because the work of many departments is dependent upon others, they work closely with managers of other departments such as sales, purchasing, and traffic to plan and implement companies' goals, policies, and procedures.

Computers play an integral role in the coordination of the production process by providing up-to-date data on such things as inventory, work-in-progress, and product standards. Industrial production managers then analyze these data and, working with those from upper management and other departments, determine if adjustments need to be made.

Industrial production managers also monitor product standards. When quality drops below the established standard, product managers must determine why standards aren't being maintained and how

to improve the product. If the problem is poor workmanship, the manager may implement better training programs, reorganize the manufacturing process, or institute employee suggestion or involvement programs. If the cause is substandard materials, the manager works with the purchasing department to improve the quality of the product's components.

Maintaining the inventory of materials necessary for production ties up the firm's financial resources. Yet insufficient quantities of materials cause delays in production. Working with the purchasing department, the production manager insures that plant inventories are maintained at their optimal level. A breakdown in communications between departments can cause slowdowns and a failure to meet production schedules.

Working Conditions

Most industrial production managers divide their time between the shop floor and their office. While on the floor, they must follow established health and safety practices and wear the required protective clothing and equipment. The time in the office—often located on or near the production floor—is usually spent meeting with subordinates or other department managers, analyzing production data, and writing and reviewing reports.

Most industrial production managers work more than 40 hours a week, especially when production deadlines must be met. In facilities that operate around the clock, managers may have to work shifts or may be called at any hour to deal with emergencies that could result in production line downtime. Occasionally, this may mean going to the plant to resolve the problem, regardless of the hour, and staying until the situation is under control. Dealing with production workers as well as superiors when working under the pressure of production deadlines or emergency situations can be stressful.

Employment

Industrial production managers held about 210,000 jobs in 1990. Although employed throughout manufacturing, about one-half are employed in five industries: Industrial machinery and equipment, transportation equipment, fabricated metal products, food products, and chemicals. Table 1 shows employment concentration of industrial production managers by major industry.

Table 1. Distribution of industrial production managers by industry, 1990

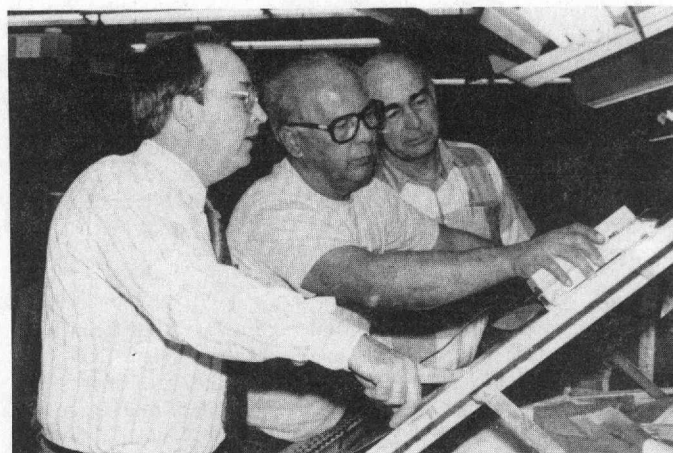
Industry	Percent
Total.....	100
Industrial machinery and equipment.....	13
Electronic and other electrical equipment.....	10
Transportation equipment.....	9
Food and kindred products.....	9
Fabricated metal products.....	8
Printing and publishing.....	7
Chemical and allied products.....	7
Instruments and related products.....	6
Rubber and miscellaneous plastics products.....	5
Other industries.....	26

SOURCE: Bureau of Labor Statistics

Although production managers work in all parts of the country, jobs are most plentiful in areas where manufacturing is concentrated.

Training, Other Qualifications, and Advancement

Because of the diversity of manufacturing operations and job requirements, there is no standard preparation for this occupation. Many industrial production managers have a college degree in business administration or industrial engineering. Some have a master's degree in business administration (MBA). Others are former production line supervisors who have been promoted. Increasingly, however, employers are looking for candidates with a college degree. Although many



Managers coordinate the many aspects of industrial production.

employers prefer candidates to have a degree in business or engineering, some companies hire liberal arts graduates.

As production operations become more sophisticated, an increasing number of employers are looking for candidates with MBA's. This, combined with an undergraduate degree in engineering, is considered particularly good preparation.

Those who enter the field directly from college or graduate school often are unfamiliar with the firm's production process. As a result, they may spend their first few months on the job in the company's training program. These programs familiarize trainees with the production line, company policies and procedures, and the requirements of the job. In larger companies, they may also include assignments to other departments, such as purchasing and accounting.

Blue-collar worker supervisors who advance to production manager positions already have an intimate knowledge of the production process and the firm's organization. To be selected for promotion, these workers must have demonstrated leadership ability and often take company-sponsored courses in management skills and communications techniques.

Once in their job, industrial production managers must stay abreast of new production technologies and management practices. To do this, they belong to professional organizations and attend trade shows where new equipment is displayed or industry conferences and conventions where changes in production methods and technological advances are discussed.

Although certification in production management and inventory control is not required for most positions, it demonstrates an individual's knowledge of the production process and related areas. Various certifications are available through the American Production and Inventory Control Society. To be certified in production and inventory management, candidates must pass a series of examinations that test their knowledge of inventory management, just-in-time systems, production control, capacity management, and materials planning.

Industrial production managers must be able to speak and write effectively and deal tactfully with both subordinates and superiors in pressure situations.

Industrial production managers with a proven record of superior performance may advance to plant manager or vice president for manufacturing. Others transfer to jobs at larger firms with more responsibilities. Opportunities also exist as consultants. (For more information, see the statement on management analysts and consultants elsewhere in the *Handbook*.)

Job Outlook

Employment of industrial production managers is expected to increase as fast as the average for all occupations through the year 2005. Employment growth will be fueled by increasing demand for consumer and industrial products. In addition, many openings will occur as these managers advance, transfer to other occupations, or leave the labor force.

To combat increasing domestic and foreign competition, firms are expected to continue to automate their facilities. Automation often reduces the number of production workers needed, although it is expected to have little impact on production managers. Even in a highly automated factory, production managers are needed to oversee the flow of materials, machinery, and quality control. However, because of the increasing sophistication of production technology, opportunities are expected to be best for those with college degrees in industrial engineering or business administration and MBA's with undergraduate engineering degrees.

Earnings

Salaries of industrial production managers vary significantly by industry and plant size. According to Wyatt Data Services/ECS, 1990 median annual salaries ranged from \$52,000 in the smallest establishments to \$82,000 in the largest. The median salary in average size establishments was \$68,000 in 1990. In addition, industrial production managers usually receive bonuses based on job performance.

Benefits for industrial production managers tend to be similar to those offered most workers: Vacation and sick leave, health and life insurance, and retirement plans.

Related Occupations

Industrial production managers oversee production staff and equipment, insure that production goals and quality standards are being met, and implement company policies. Individuals with similar functions include materials, operations, purchasing, and traffic managers.

Other occupations requiring similar training and skills are sales engineer, manufacturers' sales representative, and industrial engineer.

Sources of Additional Information

Information on industrial production management can be obtained from:

- American Production and Inventory Control Society, 500 West Annandale Rd., Falls Church, VA 22046-4274.
- Institute of Industrial Engineers, 25 Technology Park, Atlanta, GA 30092-2988.

Management Analysts and Consultants

(D.O.T. 100.117-014; 161.117-014, .167-010, .267 except -014 and -030; 169.167-074; and 375.267-026)

Nature of the Work

A rapidly growing small company needs a better system of control over inventories and expenses. An established manufacturing company decides to relocate to another State and needs assistance planning the move. After acquiring a new division, a large company realizes that its corporate structure must be reorganized. A division chief of a government agency wants to know why the division's contracts are always going over budget. These are just a few of the many organizational problems that management analysts, as they are called in government agencies, and management consultants, as business firms refer to them, help solve. Although their job titles may differ, their job duties are essentially the same.

The work of management analysts and consultants varies from employer to employer and from project to project. For example, some projects require several consultants to work together, each specializing in one area; at other times, they will work independently. In general, analysts and consultants collect, review, and analyze information; make recommendations; and often assist in the implementation of their proposal.

Both public and private organizations use consultants for a variety of reasons. Some don't have the internal resources needed to handle a project; others need a consultant's expertise to determine what resources will be required—or problems encountered—if they pursue a particular course of action; while others want to get outside advice on how to resolve organizational problems that have already been identified or to avoid troublesome problems that could arise.

Firms providing consulting services range in size from solo practitioners to large international organizations employing thousands of consultants. These services usually are provided on a contract basis—a company solicits proposals from consulting firms specializing in the area in which it needs assistance. These proposals include the estimated cost and scope of the project, staffing requirements, and the deadline. The company then selects the proposal which best meets its needs.

Upon getting an assignment or contract, consultants define the nature and extent of the problem. During this phase of the job, they may analyze data such as annual revenues, employment, or expenditures; interview employees; or observe the operations of the organizational unit.

Next, they use their knowledge of management systems and their expertise in a particular area to develop solutions. In the course of preparing their recommendations, they must take into account the general nature of the business, the relationship the firm has with others in that industry, and the firm's internal organization, as well as information gained through data collection and analysis.

Once they have decided on a course of action, consultants usually report their findings and recommendations to the client, often in writing. In addition, they often make oral presentations regarding their findings. For some projects, this is all that is required; for others, consultants may assist in the implementation of their suggestions.

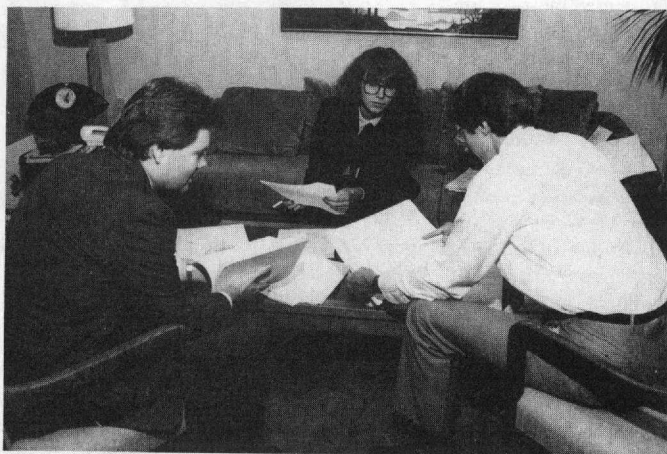
Management analysts in government agencies use the same skills as their private-sector colleagues to advise managers in government on many types of issues—most of which are similar to the problems faced by private firms. For example, if an agency is planning to purchase several personal computers, it first must determine which type to buy, given its budget and data processing needs. Management analysts would assess the various types of machines available and determine which best meets their department's needs.

Working Conditions

Management analysts and consultants usually divide their time between their offices and their client's operation. Although much of their time is spent indoors in clean, well-lighted offices, they may have to visit a client's production facility where conditions may not be so favorable. They must follow established safety procedures when making field visits to sites where they may encounter potentially hazardous conditions.

Typically, analysts and consultants work at least 40 hours a week. Overtime is common, especially when deadlines must be met. In addition, because they must spend a significant portion of their time with clients, they may travel frequently.

Self-employed consultants can set their workload and hours and work at home. On the other hand, their livelihood depends on their ability to maintain and expand their client base, which can be difficult at times.



Management consultants review and analyze financial and technical information before recommending solutions to organizational problems.

Employment

Management analysts and consultants held about 151,000 jobs in 1990. Almost half of these workers were self-employed. Most of the rest worked in management consulting firms and for Federal, State, and local governments. The majority of those working for the Federal Government were found in the Department of Defense.

Management analysts and consultants are found throughout the country, but employment is concentrated in metropolitan areas.

Training, Other Qualifications, and Advancement

There are no universal educational requirements for entry level jobs in this field. However, employers in private industry prefer to hire those with a master's degree in business administration or a discipline related to the firms' area of specialization. Those individuals hired straight out of school with only a bachelor's degree are likely to work as research associates or junior consultants, rather than full-fledged management consultants. It is possible for research associates to advance up the career ladder if they demonstrate a strong aptitude for consulting, but, more often, they need to get an advanced degree to do so.

Many entrants to this occupation have, in addition to the appropriate formal education, several years of experience in management or in another occupation.

Most government agencies hire those with a bachelor's degree and no work experience as entry level management analysts, and often provide formal classroom training in management analysis.

Many fields of study provide a suitable formal educational background for this occupation because of the diversity of problem areas addressed by management analysts and consultants. These include most areas of business and management, as well as computer and information sciences and engineering.

Management analysts and consultants who are hired directly from school sometimes participate in formal company training programs. These programs may include instruction on policies and procedures, computer systems and software, and management practices and principles. Because of their previous industry experience, most who enter at middle levels do not participate in formal company training programs. However, regardless of background, analysts and consultants routinely attend conferences to keep abreast of current developments in their field. Additionally, some large firms offer in-house formal training programs for all levels of staff.

Management analysts and consultants often work under little or no supervision, so they should be independent and self-motivated. Analytical skills, strong oral communication and written skills, good judgment, the ability to manage time well, and creativity in developing solutions to problems are other desirable qualities for prospective management analysts and consultants.

In large consulting firms, beginners usually start as a member of a consulting team. The team is responsible for the entire project and each consultant is assigned to a particular area. As consultants gain experience, they may be assigned to work on one specific project full-time, taking on more responsibility and managing their own hours. At the senior level, consultants may supervise entry level workers and become increasingly involved in seeking out new business. Those with exceptional skills may eventually become a partner or principal in the firm. Others with entrepreneurial ambition may open their own firm.

The Institute of Management Consultants (a division of the Council of Consulting Organizations) offers the Certified Management Consultant (CMC) designation to those who pass an examination and meet minimum levels of education and experience. Certification is not mandatory for management consultants to practice, but it may give a jobseeker a competitive advantage.

Job Outlook

Employment of management analysts and consultants is expected to grow much faster than the average for all occupations through the year 2005 as industry and government increasingly rely on outside expertise to improve the performance of their organizations. Growth is expected in large consulting firms, but also in small consulting firms whose consultants will fill specialized niches. Most job open-

ings, however, will result from the need to replace personnel who transfer to other fields or leave the labor force.

Increased foreign competition has caused American industry to take a closer look at its operations. In a more competitive international market, firms cannot afford inefficiency and wasted resources or else they risk losing their share of the market. Management consultants are being increasingly relied upon to help reduce costs, streamline operations, and develop marketing strategies. As businesses downsize and eliminate needed functions, consultants will be used to perform those functions on a contractual basis. On the other hand, businesses undergoing expansion will also need the skills of management consultants to help with organizational, administrative, and other issues. Continuing changes in the business environment also are expected to lead to demand for management consultants: Firms will use consultants' expertise to incorporate new technologies, to cope with more numerous and complex government regulations, and to adapt to a changing labor force. As businesses rely more on technology, there are increasing roles for consultants with a technical background, such as engineering or biotechnology, particularly when combined with an MBA.

Federal, State, and local agencies also are expected to expand their use of management analysts. In the era of budget deficits, analysts' skills at identifying problems and implementing cost reduction measures are expected to become increasingly important.

In the private sector, job opportunities are expected to be best for those with a graduate degree and some industry expertise, while opportunities for those with only a bachelor's degree will be best in the Federal Government. Consultants with special knowledge or skills in the environmental field, in human resources administration, and in the health care field are expected to have better job prospects than others.

Because many small consulting firms fail each year for lack of managerial expertise and clients, those interested in opening their own firm should have good organizational and marketing skills, plus several years of consulting experience.

Despite projected rapid employment growth and higher than average turnover, competition for jobs as management consultants is expected to be keen in the private sector. Because management consultants can come from such diverse educational backgrounds, the pool of applicants from which employers hire is quite large. Additionally, the independent and challenging nature of the work combined with high earnings potential make this occupation attractive to many.

Earnings

Salaries for management analysts and consultants vary widely by experience, education, and employer. In 1990, those who were wage and salary workers had median annual earnings of about \$39,900. The middle 50 percent earned between \$28,000 and \$53,100.

In 1989, according to the Association of Management Consulting Firms (ACME), earnings—including bonuses and/or profit sharing—for research associates in ACME member firms averaged \$31,800; for entry level consultants, \$40,900; for management consultants, \$58,900; for senior consultants, \$79,300; for junior partners, \$110,600; and for senior partners, \$183,800.

In the Federal Government, the average salary for management analysts in 1991 was \$41,353.

Typical benefits for salaried analysts and consultants include health and life insurance, a retirement plan, vacation and sick leave, profit sharing, and bonuses for outstanding work. In addition, all travel expenses usually are reimbursed by their employer. Self-employed consultants usually have to maintain an office and do not receive employer-provided benefits.

Related Occupations

Management analysts and consultants collect, review, and analyze data; make recommendations; and assist in the implementation of their ideas. Others who use similar skills are managers, computer systems analysts, operations research analysts, economists, and financial analysts.

Sources of Additional Information

Information about career opportunities in management consulting is available from:

☛ The Council of Consulting Organizations, Inc., 251 Fifth Ave., New York, NY 10175.

For information about a career as a State or local government management analyst, contact your State or local employment service.

Persons interested in a management analyst position in the Federal Government can obtain information from:

☛ U.S. Office of Personnel Management, 1900 E St. NW., Washington, DC 20415.

Marketing, Advertising, and Public Relations Managers

(D.O.T. 141.137-010; 159.167-022; 163.117-014, -018, -022, -026, .167-010, -018, -022, .267-010; 164.117-010, -014, -018, .167-010; 185.117-014, .157-010, -014; 187.167-162; 189.117-018)

Nature of the Work

The fundamental objective of any firm is to market its products or services profitably. In very small firms, all marketing responsibilities may be assumed by the owner or chief executive officer. In large firms, which may offer numerous products and services nationally or even worldwide, experienced marketing, advertising, and public relations managers coordinate these and related activities.

In large firms, the executive vice president for marketing directs the overall marketing policy—including market research, marketing strategy, sales, advertising, promotion, pricing, product development, and public relations activities. (This occupation is included in the *Handbook* statement on general managers and top executives.) These activities are supervised by middle and supervisory managers who oversee staffs of professionals and technicians.

Marketing managers develop the firm's detailed marketing strategy. With the help of subordinates, including product development managers and market research managers, they determine the demand for products and services offered by the firm and its competitors and identify potential consumers—for example, business firms, wholesalers, retailers, government, or the general public. Mass markets are further categorized according to various factors such as region, age, income, and lifestyle. Marketing managers develop pricing strategy with an eye towards maximizing the firm's share of the market and ultimately its profits. In collaboration with sales, product development, and other managers, they monitor trends that indicate the need for new products and services and oversee product development. Marketing managers work with advertising and promotion managers to best promote the firm's products and services and to attract potential users.

Sales managers direct the firm's sales program. They assign sales territories and goals and establish training programs for their sales representatives. Managers advise their sales representatives on ways to improve their sales performance. In large, multiproduct firms, they oversee regional and local sales managers and their staffs. Sales managers maintain contact with dealers and distributors. They analyze sales statistics gathered by their staffs to determine sales potential and inventory requirements and monitor the preferences of customers. Such information is vital to develop products and maximize profits.

Except in the largest firms, advertising and promotion staffs are generally small and serve as a liaison between the firm and the advertising or promotion agency to which many advertising or promotional functions are contracted out. Advertising managers oversee the account services, creative services, and media services departments. The account services department is managed by account executives, who assess the need for advertising and, in advertising agencies, maintain the accounts of clients. The creative services department—which develops the subject matter and presentation of advertising—is supervised by a creative director, who oversees the copy chief and art director and their staffs. The media services department is supervised by the media director, who oversees planning groups which select the communication media—for example, radio, television, newspapers, magazines, or outdoor signs—to disseminate the advertising.

Promotion managers—who supervise staffs of promotion specialists—direct promotion programs, which combine advertising with purchase incentives to increase sales of products or services. In an effort to establish closer contact with purchasers—dealers, distributors, or consumers—promotion programs may involve direct mail, telemarketing, television or radio advertising, catalogs, exhibits, inserts in newspapers, in-store displays and product endorsements, and special events. Purchase incentives may include discounts, samples, gifts, rebates, coupons, sweepstakes, and contests.

Public relations managers supervise public relations specialists (see the *Handbook* statement on public relations specialists). Public relations managers direct publicity programs to a targeted public, using any necessary communication media, designed to maintain the support of the specific group upon whom their organization's success depends, such as consumers, stockholders, or the general public. For example, public relations managers may clarify or justify the firm's point of view on health or environmental issues to community or special interest groups. They may evaluate advertising and promotion programs for compatibility with public relations efforts. Public relations managers in effect serve as the eyes and ears of top management—observing social, economic, and political trends that might ultimately have an impact upon the firm, and making recommendations to enhance the firm's public image in view of those trends. Public relations managers may confer with labor relations managers to produce internal company communications—such as news about employee-management relations—and with financial managers to produce company reports. They may assist company executives in drafting speeches, arranging interviews, and other forms of public contact; oversee company archives; and respond to information requests. In addition, public relations managers may handle special events such as sponsorship of races, parties introducing new products, or other activities by which the firm seeks public attention through the press without advertising directly.

Working Conditions

Marketing, advertising, and public relations managers are provided with offices close to top managers. Long hours, including evenings and weekends, are not uncommon. Working under pressure is unavoidable as schedules change, problems arise, and deadlines and goals must be met. Marketing, advertising, and public relations managers meet frequently with other managers; some meet with the public and government officials.

Substantial travel may be involved. For example, attendance at meetings sponsored by associations or industries is often mandatory. Sales managers travel to national, regional, and local offices and to various dealers and distributors. Advertising and promotion managers may travel to meet with clients or representatives of communications media. Public relations managers may travel to meet with special interest groups or government officials. Job transfers between headquarters and regional offices are common—particularly among sales managers—and may disrupt family life.

Employment

Marketing, advertising, and public relations managers held about 427,000 jobs in 1990. These managers are found in virtually every industry. Industries employing them in significant numbers include motor vehicle dealers; printing and publishing firms; advertising agencies; department stores; computer and data processing services firms; and management and public relations firms.

Training, Advancement, and Other Qualifications

A wide range of educational backgrounds are suitable for entry into marketing, advertising, and public relations managerial jobs, but many employers prefer a broad liberal arts background. A bachelor's degree in sociology, psychology, literature, or philosophy, among other subjects, is acceptable. However, requirements vary depending upon the particular job.

For marketing, sales, and promotion management positions, some employers prefer a bachelor's or master's degree in business administration with an emphasis on marketing. Courses in business law, economics, accounting, finance, mathematics, and statistics are also



Employment of marketing, advertising, and public relations managers is expected to grow much faster than average.

highly recommended. In highly technical industries, such as computer and electronics manufacturing, a bachelor's degree in engineering or science combined with a master's degree in business administration may be preferred. For advertising management positions, some employers prefer a bachelor's degree in advertising or journalism. The curriculum should include courses in marketing, consumer behavior, market research, sales, communications methods and technology, and visual arts—for example, art history and photography. For public relations management positions, some employers prefer a bachelor's or master's degree in public relations or journalism. The curriculum should include courses in advertising, business administration, public affairs, political science, and creative and technical writing. For all specialties, courses in management and completion of an internship while in school are highly recommended. Familiarity with computerized word processing and data base applications also is important for many marketing, advertising, and public relations management positions.

Most marketing, advertising, and public relations management positions are filled by promoting experienced staff or related professional or technical personnel—for example, sales representatives, purchasing agents, buyers, product or brand specialists, advertising specialists, promotion specialists, and public relations specialists. In small firms, where the number of positions is limited, advancement to a management position may come slowly. In large firms, promotion may occur more quickly.

Although experience, ability, and leadership are emphasized for promotion, advancement may be accelerated by participation in management training programs conducted by many large firms. Many firms also provide their employees with continuing education opportunities, either in-house or at local colleges and universities, and

encourage employee participation in seminars and conferences, often provided by professional societies. In addition, numerous marketing and related associations, often in collaboration with colleges and universities, sponsor national or local management training programs. Courses in these schools include brand and product management, international marketing, sales management evaluation, telemarketing and direct sales, promotion, marketing communication, market research, organizational communication, and data processing systems procedures and management. Many firms pay all or part of the cost for those who successfully complete courses.

Persons interested in becoming marketing, advertising, and public relations managers should be mature, creative, highly motivated, resistant to stress, and flexible, yet decisive. The ability to communicate persuasively, both orally and in writing, with other managers, staff, and the public is vital. Marketing, advertising, and public relations managers also need tact, good judgment, and exceptional ability to establish and maintain effective personal relationships with supervisory and professional staff members and client firms.

Because of the importance and high visibility of their jobs, marketing, advertising, and public relations managers are often prime candidates for advancement. Well-trained, experienced, successful managers may be promoted to higher positions in their own or other firms. Some become top executives. Managers with extensive experience and sufficient capital may open their own businesses.

Job Outlook

Employment of marketing, advertising, and public relations managers is expected to increase much faster than the average for all occupations through the year 2005. Increasingly intense domestic and foreign competition in products and services offered consumers should require greater marketing, promotional, and public relations efforts. In addition to much faster than average growth, many job openings will occur each year to replace managers who move into top management positions, transfer to other jobs, or leave the labor force. However, many of these highly coveted jobs will be sought by other managers or highly experienced professional and technical personnel, resulting in substantial job competition. College graduates with extensive experience, a high level of creativity, and strong communication skills should have the best job opportunities.

Projected employment growth varies by industry. For example, employment of marketing, advertising, and public relations managers is expected to grow very rapidly in most services industries—such as computer and data processing firms, and management, public relations, and advertising firms—and in motor vehicle dealerships. More moderate growth is projected in manufacturing industries overall.

Earnings

The median annual salary of marketing, advertising, and public relations managers was \$41,400 in 1990. The lowest 10 percent earned \$20,300 or less, while the top 10 percent earned \$78,500 or more. Many earn bonuses equal to 10 percent or more of their salaries. Surveys show that salary levels vary substantially depending upon the level of managerial responsibility, length of service, education, and the employer's size, location, and industry. For example, manufacturing firms generally pay marketing, advertising, and public relations managers higher salaries than nonmanufacturing firms. For sales managers, the extent of their sales territory is another important factor.

According to a 1990 survey by Abbot, Langer and Associates, of Crete, Illinois, median annual incomes ranged from \$30,500 for a top sales promotion manager to \$63,700 for a regional sales manager. The median annual income for a top advertising manager was \$45,000; for a product/brand manager, \$53,400.

Like other managers, marketing, advertising, and public relations managers typically receive a range of fringe benefits that includes health and life insurance, vacation and sick leave, and a pension, among others.

Related Occupations

Marketing, advertising, and public relations managers direct the sale of products and services offered by their firms and the communica-

tion of information about their firms' activities. Other personnel involved with marketing, advertising, and public relations include art directors, commercial and graphic artists, copy chiefs, copywriters, editors, lobbyists, market research analysts, public relations specialists, promotion specialists, sales representatives, and technical writers. (Some of these occupations are discussed elsewhere in the *Handbook*.)

Sources of Additional Information

For information about careers in sales and marketing management, contact:

- American Marketing Association, 250 S. Wacker Dr., Chicago, IL 60606.
- Sales and Marketing Executives, International, 458 Statler Office Tower, Cleveland, OH 44115.

For information about careers in advertising management, contact:

- American Association of Advertising Agencies, 666 Third Ave., 13th Floor, New York, NY 10017.
- American Advertising Federation, Education Services Department, 1400 K St. NW., Suite 1000, Washington, DC 20005.

Information about careers in promotion management is available from:

- Council of Sales Promotion Agencies, 750 Summer St., Stamford, CT 06901.
- Promotion Marketing Association of America, Inc., 322 Eighth Ave., Suite 1201, New York, NY 10001.

Information about careers in public relations management is available from:

- Public Relations Society of America, 33 Irving Place, New York, NY 10003-2376.

Personnel, Training, and Labor Relations Specialists and Managers

(D.O.T. 079.127; 099.167-010; 166.067, .117, .167 except -046, .257, .267-014 through -046; 169.107, .167-062, .207; 188.117-010, -086, .217)

Nature of the Work

Attracting the most qualified employees available and matching them to the jobs they are best suited for is important for the success of any organization. However, many enterprises are too large to permit close contact between top management and employees. Instead, personnel, training, and labor relations specialists and managers, commonly known as human resource specialists and managers, provide this link. These specialists and managers recruit, interview, and hire employees based on policies and requirements that they have established in conjunction with top management. In an effort to improve morale and productivity, they also help management make effective use of employees' skills, and help employees find satisfaction in their jobs and working conditions. Although some jobs in this field require only limited contact with people outside the office, most involve frequent contact. Dealing with people is an essential part of the job.

In a small organization, one person may handle many, if not all, aspects of personnel, training, and labor relations work. In contrast, in a large corporation, the top human resource executive usually develops and coordinates personnel programs and policies. (Executives are included in the *Handbook* statement on general managers and top executives.) These policies are implemented by a director of human resources and, in some cases, a director of industrial relations.

The director of human resources may oversee several departments, each headed by an experienced manager, who most likely specializes in one personnel activity such as employment, compensation, benefits, training and development, or employee welfare.

Employment and placement managers oversee the hiring and separation of employees and supervise various workers including equal employment opportunity specialists and recruitment specialists.

Recruiters maintain contacts within the community and may travel extensively—often to college campuses—to search for promising job applicants. Recruiters screen, interview, and, in some cases, test applicants, and recommend those who are qualified to fill vacancies.

They may also check references before an offer is made. These workers need to be thoroughly familiar with the organization and its personnel policies to discuss wages, working conditions, and promotional opportunities with prospective employees. They also need to keep informed about equal employment opportunity (EEO) and affirmative action guidelines and laws.

EEO representatives or affirmative action coordinators handle this area in large organizations. They investigate and resolve EEO grievances, examine corporate practices for possible violations, and compile and submit EEO statistical reports.

Employer relations representatives—who usually work in government agencies—maintain working relationships with local employers and promote the use of public employment programs and services. Similarly, employment interviewers—sometimes called account representatives or personnel consultants—help match jobseekers with employers. (For more information, see the statement on employment interviewers elsewhere in the *Handbook*.)

Job analysts, sometimes called position classifiers, perform very exacting work. They collect and examine detailed information about job duties to prepare job descriptions. These descriptions explain the duties, training, and skills each job requires. Whenever a large organization introduces a new job or reviews existing ones, it calls upon the expert knowledge of the job analyst.

Occupational analysts conduct research, generally in large firms. They are concerned with occupational classification systems and study the effects of industry and occupational trends upon worker relationships. They may serve as technical liaison between the firm and industry, government, and labor unions.

Establishing and maintaining a firm's pay system is the principal job of the compensation manager. Assisted by staff specialists, compensation managers devise ways to ensure fair and equitable pay rates. They may conduct surveys to see how their rates compare with others and to see that the firm's pay scale complies with changing laws and regulations. In addition, compensation managers often oversee their firm's performance evaluation system, and may design reward systems such as pay for performance plans.

Employee benefits managers handle the company's employee benefits program, notably its health insurance and pension plans. Expertise in designing and administering benefits programs continues to gain in importance as pension and benefit plans increase in number and complexity. Familiarity with health benefits is a top priority at present, as more and more firms search for ways to respond to the pressures posed by the rising cost of health insurance for employees and retirees. Benefits managers must keep abreast of changing Federal and State regulations affecting employee benefits. In many firms, the same person oversees employee compensation and benefits.

In addition to health insurance and pension coverage, some firms offer their employees dental insurance, accidental death and dismemberment insurance, disability insurance, stock options, profit sharing, and thrift/savings plans. Benefits analysts and benefits administrators handle these programs.

Training is supervised by training and development managers. Increasingly, management recognizes that training offers a way of developing skills, enhancing productivity and quality of work, and building loyalty to the firm. Training is widely accepted as a method of improving employee morale, but this is only one of the reasons for its growing importance. Other factors include the complexity of the work environment, the rapid pace of organizational and technological change, and the growing number of jobs in fields where new knowledge is constantly generated. In addition, advances in learning theory have provided insights into how adults learn, and how training can be organized to be most effective for adults.

Training specialists are responsible for planning, organizing, and directing a wide range of training activities. Trainers conduct orientation sessions and arrange on-the-job training for new employees. They help rank-and-file workers maintain and improve their job skills and possibly prepare for jobs requiring greater skill. They help supervisors improve their interpersonal skills in order to deal effectively with employees. To help employees prepare for future responsibilities, they may set up individualized training plans to strengthen existing skills or to teach new skills. Training specialists in some

companies set up programs designed to develop executive potential among employees in lower echelon positions.

Planning and program development is an important part of the training specialist's job. In order to identify and assess training needs within the firm, trainers may confer with managers and supervisors or conduct surveys. They also periodically evaluate training effectiveness.

Depending on the size, goals, and nature of the organization, there may be considerable differences in trainers' responsibilities and in the methods they use. Training methods include on-the-job training; schools in which shop conditions are duplicated for trainees prior to putting them on the shop floor; apprenticeship training; classroom training; programmed instruction, which may involve interactive videos, videodiscs, and other computer-aided instructional technologies; simulators; conferences; and workshops.

Employee welfare managers—also called employee assistance plan managers—are responsible for a wide array of programs covering occupational safety and health standards and practices; health promotion and physical fitness, medical examinations, and minor health treatment, such as first aid; plant security; publications; food service and recreation activities; van-pooling; employee suggestion systems; childcare; and counseling services—an area of rapidly growing importance. Counseling—often provided through employee assistance programs—may help employees deal with emotional disorders, alcoholism, or marital, family, consumer, legal, and financial problems. Career counseling and second career counseling for employees approaching retirement age may also be provided. In large firms, some of these programs—such as security and safety—are in separate departments headed by other managers.

The director of industrial relations formulates labor policy, oversees industrial labor relations, negotiates collective bargaining agreements, and coordinates grievance procedures to handle complaints resulting from disputes under the contract for firms with unionized employees. The duties of the director of industrial relations include advising and collaborating with the director of human resources and other managers and members of their staff, since all aspects of personnel policy—such as wages, benefits, pensions, and work practices—may be involved in drawing up a new or revised contract.

Industrial labor relations programs are implemented by labor relations managers and their staff. When a collective bargaining agreement is up for negotiation, labor relations specialists prepare information for management to use during negotiation, which requires familiarity with economic and wage data as well as extensive knowledge of labor law and collective bargaining trends. The labor relations staff interprets and administers the contract with respect to grievances, wages and salaries, employee welfare, health care, pensions, union and management practices, and other contractual stipulations.

Dispute resolution—that is, attaining tacit or contractual agreements—has become increasingly important as disputants attempt to avoid costly litigation, strikes, or other disruptions. Dispute resolution has also become more complex, involving employees, management, unions, other firms, and government agencies. Specialists involved in dispute resolution must be highly knowledgeable and experienced, and often report to the director of industrial relations. Conciliators, or mediators, advise and counsel labor and management to prevent and, when necessary, resolve disputes over labor agreements or other labor relations issues. Arbitrators, sometimes known as umpires or referees, decide disputes and bind both labor and management to specific terms and conditions of labor contracts. Labor relations specialists who work for unions perform many of the same functions on behalf of the union and its members.

Other emerging specialists include international human resource managers, who handle human resource issues related to a company's foreign operations, and human resource information system specialists, who develop and apply computer programs to process personnel information, match jobseekers with job openings, and other personnel matters.

Working Conditions

Personnel work is office work. Generally, the work setting is clean, pleasant, and comfortable. Many personnel, training, and labor rela-



College graduates with various majors fill personnel, training, and labor relations jobs.

tions specialists and managers work a standard 35- to 40-hour week. However, many work longer hours—for example, labor relations specialists and managers—when contract agreements are being prepared and negotiated.

Although most personnel, training, and labor relations specialists and managers work in the office, some travel extensively. For example, recruiters regularly attend professional meetings and visit college campuses to interview prospective employees.

Employment

Personnel, training, and labor relations specialists and managers held about 456,000 jobs in 1990. They were employed in virtually every industry. Specialists accounted for 278,000 positions; managers, 178,000. About 12,000—mostly specialists—were self-employed, working as consultants to public and private employers.

The private sector accounted for 85 percent of salaried jobs. Services industries—including business, health, social, management, and educational services—accounted for nearly 4 out of 10 jobs; labor organizations—a services industry and the largest employer among specific industries—accounted for more than 1 out of 10. Manufacturing industries accounted for more than 2 out of 10 jobs, while finance, insurance, and real estate firms accounted for 1 out of 10.

Federal, State, and local governments employed about 15 percent of salaried personnel, training, and labor relations specialists and managers. They handled recruitment, interviewing, job classification, training, salary administration, benefits, employee relations, mediation, and related matters for the Nation's public employees.

Training, Other Qualifications, and Advancement

Because of the diversity of duties and level of responsibility, the educational backgrounds of personnel, training, and labor relations specialists and managers vary considerably. In filling entry level jobs, firms generally seek college graduates. Some employers prefer applicants who have majored in human resources, personnel administration, or industrial and labor relations, while others look for college graduates with a technical or business background. Still others feel that a well-rounded liberal arts education is best.

Many colleges and universities have programs leading to a degree in personnel, human resources, or labor relations. Some offer degree programs in personnel administration or human resource management, training and development, or compensation and benefits. Depending on the school, courses leading to a career in human

resource management may be found in departments of business administration, education, instructional technology, organizational development, human services, communication, or public administration, or within a separate human resources institution or department.

Because an interdisciplinary background is appropriate for work in this area, a combination of courses in the social sciences, business, and behavioral sciences is useful. Some jobs may require a background in engineering, science, finance, or law. Most prospective personnel specialists should take courses in compensation, recruitment, training and development, and performance appraisal, as well as courses in principles of management and organizational structure. Other relevant courses include business administration, public administration, psychology, sociology, political science, economics, and statistics. Courses in labor law, collective bargaining, labor economics, labor history, and industrial psychology also provide a valuable background for the prospective labor relations specialist. Knowledge of computers and information systems is important for some jobs.

Graduate study in industrial or labor relations is increasingly important for those seeking work in labor relations. A law degree seldom is required for entry level jobs, but many people responsible for contract negotiations are lawyers, and a combination of industrial relations courses and law is highly desirable. A background in law is also desirable for employee benefits managers and others who must interpret the growing number of laws and regulations. A degree in dispute resolution provides an excellent background for mediators, arbitrators, and related personnel. A master's degree in personnel, training, or labor relations, or in business administration with a concentration in human resource management, is desirable for those seeking general and top management positions.

For many specialized jobs in this field, previous experience is an asset; for managerial positions, it is essential. Many employers prefer even entry level workers who have gained some experience through an internship or work-study program while in school. Personnel administration and human resource development require the ability to work with individuals as well as having a commitment to organizational goals. They also demand skills that may be developed outside the field—computer usage, selling, teaching, supervising, and volunteering, among others. This field offers clerical workers opportunities for advancement to professional positions. However, more responsible positions may be filled by experienced individuals from other fields, including business, government, education, social services administration, and the military.

Personnel, training, and labor relations specialists and managers should speak and write effectively and be able to work with or supervise people of all levels of education and experience as part of a team. They must be patient to cope with conflicting points of view and emotionally stable to deal with the unexpected and the unusual. The ability to function under pressure is essential. Integrity, fairness, and a persuasive, congenial personality are important qualities.

Entry level workers often enter formal or on-the-job training programs, where they learn how to classify jobs, interview applicants, or administer employee benefits. Next, they are assigned to specific areas in the personnel department to gain experience. Later, they may advance to a managerial position, overseeing a major element of the personnel program—compensation or training, for example.

Exceptional personnel, training, and labor relations workers may be promoted to director of personnel or industrial relations, which can eventually lead to a top managerial or executive position. Others may join a consulting firm or open their own business. A Ph.D. is an asset for teaching, writing, or consulting work.

Though not widespread, some organizations offer certification examinations to members who meet certain requirements. Certification is a sign of competence and can enhance one's advancement opportunities. (Several of these organizations are listed under sources of additional information.)

Job Outlook

The number of personnel, training, and labor relations specialists and managers is expected to grow faster than the average for all occupations through the year 2005. In addition, many job openings will result

from the need to replace workers who leave this relatively large occupation. However, the job market is likely to remain competitive in view of the abundant supply of college graduates and experienced workers with suitable qualifications.

Most growth will occur in the private sector as employers, concerned about productivity and quality of work, devote greater resources to job-specific training programs in response to the increasing complexity of many jobs, the aging of the work force, and technological advances that can leave employees with obsolete skills. Demand for personnel, training, and labor relations specialists and managers should also increase as legislation and court rulings setting standards in occupational safety and health, equal employment opportunity, benefits, and other related areas has substantially increased the amount of recordkeeping, analysis, and report writing in these areas. In addition, data gathering and analytical activities will increase as employers continue to review and evaluate their personnel policies and programs, but few additional jobs are likely to be created because of offsetting productivity gains associated with the automation of personnel and payroll information.

Employment demand could be particularly strong in management and consulting firms as well as personnel supply firms as businesses increasingly contract out personnel functions or hire personnel specialists on a contractual basis to meet the increasing cost and complexity of training and development programs. Demand should also increase in firms that develop and administer the increasingly complex employee benefits and compensation packages for other organizations.

Demand for personnel, training, and labor relations specialists and managers is also governed by the staffing needs of the firms where they work. A rapidly expanding business is likely to hire additional personnel workers—either as permanent employees or consultants—while a business that has experienced a merger or a reduction in its workforce will require fewer personnel workers. In any particular firm, the size and the job duties of the human resources staff are determined by a variety of factors, including the firm's organizational philosophy and goals, the labor intensity and skill profile of the industry, the pace of technological change, government regulations, collective bargaining agreements, standards of professional practice, and labor market conditions.

Earnings

The median annual salary of personnel, training, and labor relations specialists was about \$30,000 in 1990. For managers, the median annual salary was almost \$36,000. However, salaries varied widely. The lowest 10 percent of specialists earned under \$19,000, while the highest 10 percent of managers earned over \$65,000.

According to a 1990 survey of compensation in the human resources field, conducted by Abbott, Langer, and Associates of Crete, Illinois, the median annual salaries for selected personnel and labor relations occupations were: Industrial/labor relations directors, \$63,500; training directors, \$50,300; safety specialists, \$39,200; compensation supervisors, \$35,400; EEO/affirmative action specialists, \$32,300; and personnel records specialists, \$27,000.

A 1991 survey of salaries in selected white-collar occupations in private industry also indicated that salaries in the personnel field varied widely depending on the complexity of the job and level of responsibility. The median annual salary for personnel specialists ranged from \$23,900 to \$71,500; personnel supervisors/managers, \$48,300 to \$93,200; and directors of personnel, \$44,800 to \$99,900.

In the Federal Government in 1991, persons with a bachelor's degree or 3 years' general experience in the personnel field generally started at \$17,000 a year. Those with a superior academic record or an additional year of specialized experience started at \$21,000 a year. Holders of a master's degree started at \$25,700, and those with a doctorate in a personnel field started at \$31,100. There are no formal entry level requirements for managerial positions. Applicants must possess a suitable combination of educational attainment, experience, and record of accomplishment.

Labor relations specialists in the Federal Government averaged \$45,900 a year in 1991; personnel managers, \$43,500; equal employment opportunity specialists, \$43,100; position classification specialists, \$41,000; and personnel staffing specialists, \$38,500.

Similar to other workers, personnel, training, and labor relations specialists and managers receive fringe benefits that typically include vacation and sick leave, health and life insurance, and pension plans, among others.

Related Occupations

All personnel, training, and labor relations occupations are closely related. Other workers with skills and expertise in interpersonal relations include employment, rehabilitation, and college career planning and placement counselors; lawyers; psychologists; sociologists; public relations specialists; and teachers. These occupations are described elsewhere in the *Handbook*.

Sources of Additional Information

For general information on careers and certification in the human resource field, send a self-addressed, stamped, legal-sized envelope to:

• Society for Human Resource Management, 606 N. Washington St., Alexandria, VA 22314.

For information about careers in employee training and development, contact:

• American Society for Training and Development, 1640 King St., Box 1443, Alexandria, VA 22313.

For information about careers and certification in employee compensation, contact:

• American Compensation Association, 14040 Northside Blvd., Scottsdale, AZ 85260.

Information about careers and certification in employee benefits is available from:

• International Foundation of Employee Benefit Plans, 18700 W. Bluemound Rd., Brookfield, WI 53005.

For information about careers in arbitration and other aspects of dispute resolution, contact:

• American Arbitration Association, 140 West 51st St., New York, NY 10020.

For information about academic programs in industrial relations, write to:

• Industrial Relations Research Association, University of Wisconsin, 7226 Social Science Bldg., 1180 Observatory Dr., Madison, WI 53706.

Information about personnel careers in the health care industry is available from:

• American Hospital Association, American Society for Healthcare Human Resources Administration, 840 North Lake Shore Dr., Chicago, IL 60611.

For information about personnel and labor relations careers in government, contact:

• International Association of Personnel in Employment Security, 1801 Louisville Rd., Frankfort, KY 40601.

For additional information on government careers in personnel, send a self-addressed, stamped envelope to:

• International Personnel Management Association, 1617 Duke St., Alexandria, VA 22314.

Property and Real Estate Managers

(D.O.T. 186.117-042, -046, -058, and -062, -167-018, -030, -038, -042, -046, -062, and -066; 187.167-190; 189.157; 191.117-030 and -042 through -050).

Nature of the Work

Many people own real estate in the form of a home, but, to businesses and investors, real estate is more than simply the roof over their heads and the ground under their feet. For them, real estate is a valuable asset—land and structures, such as office buildings, shopping centers, and apartment complexes—that can produce income and appreciate in value over time if well managed. Real estate can be a source of income when it is leased to others, and a substantial business expense when it is leased from others. Property managers administer income-producing commercial and residential properties and manage the communal property and services of condominium and community associations. Real estate managers plan and direct the purchase, development, and disposal of real estate for businesses.

The majority of property and real estate managers work in the field of property management. When owners of apartments, office buildings, retail and industrial properties, or condominiums lack the time or expertise to assume the day-to-day management of their real estate investments, they often hire a property manager, or contract for one's services with a real estate management company. Most property managers handle several properties simultaneously. Property managers act as the owners' agent and adviser for the property. They market vacant space to prospective tenants, through the use of a leasing agent, advertising, or by other means, and establish rental rates in accordance with prevailing local conditions. They negotiate and prepare lease or rental agreements with tenants and collect their rent payments and other fees. Property managers also handle the bookkeeping for the property. They see to it that rents are received and make sure that mortgages, taxes, insurance premiums, payroll, and upkeep and maintenance bills are paid on time. They also supervise the preparation of financial statements and periodically report to the owners on the status of the property, occupancy rates, dates of lease expirations, and other matters.

Property managers negotiate contracts for janitorial, security, groundskeeping, trash removal, and other services. When contracts are awarded competitively, managers must solicit bids from several contractors and recommend to the owners which bid to accept. They monitor the performance of the contractors, and investigate and resolve complaints from tenants. Managers also purchase all supplies and equipment needed for the property, and make arrangements with specialists for any repairs that cannot be handled by the regular property maintenance staff.

Property managers hire the maintenance, stationary engineering, and on-site management personnel. At smaller properties, the property manager might employ only a building engineer who maintains the building's heating, ventilation, and air-conditioning systems and performs other routine maintenance and repair. Larger properties require a sizable maintenance staff supervised by a full-time on-site or resident manager, who works under the direction of the property manager.

Although some on-site managers oversee large office buildings or shopping centers, most manage apartments. They train, supervise, and assign duties to the maintenance staff and routinely inspect the grounds, facilities, and equipment, determine what repairs and maintenance are needed, and assign workers to do them. Occasionally, outside contractors are required, and the on-site manager may obtain bids for the work and submit them to the property manager. On-site managers schedule routine servicing of the heating, ventilation, and air-conditioning systems and insure that the work of the maintenance staff and contract workers is up to standards or contract specifications. They keep records of expenditures incurred for operating the property and submit regular expense reports to the property manager or owners. They may recruit maintenance staff, interview the job applicants, and recommend to the property manager qualified candidates for employment.

Tenant relations is an important part of the work of on-site managers, particularly apartment managers. Apartment managers handle tenants' requests for service or repairs and try to resolve complaints. They show vacant apartments to prospective tenants and explain the occupancy terms. They are responsible for enforcing rules and lease restrictions, such as pet restrictions or use of parking areas.

Property and on-site managers employed by condominium and homeowner associations must be particularly adept at dealing with people. Instead of tenants, they must deal on a daily basis with homeowners—members of the community association that employs the manager. Hired by the volunteer board of directors of the association, the community association manager administers its daily affairs and oversees the maintenance of property and facilities that the homeowners own and use jointly through the association. Many community associations are small and do not require professional management, but managers of the larger condominiums have many of the same responsibilities as the managers of large apartment complexes. Some homeowner associations encompass thousands of homes, and, in addition to administering the associations' financial records, their managers may be responsible for the operation of com-

munity pools, golf courses, community centers, and the maintenance of landscaping, parking areas, and streets.

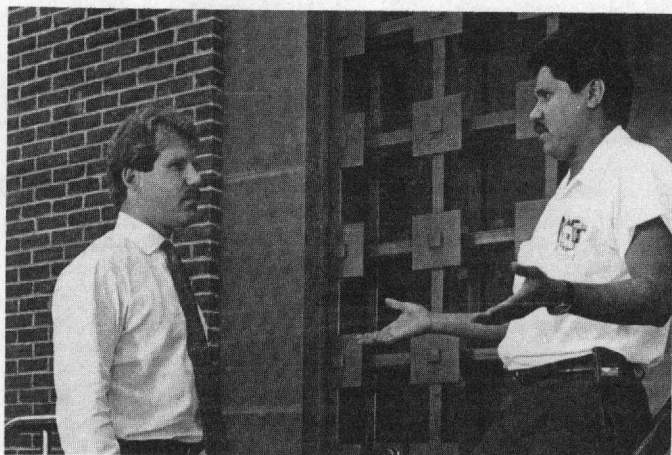
Some real estate managers are employed by businesses to locate, acquire, and develop real estate needed for their operations and to dispose of property no longer suited to their uses. These managers locate sites suited for these businesses and arrange to purchase or lease the property. They select a site based on their assessment of such things as property values, zoning, population growth, and traffic volume and patterns. They negotiate contracts for the purchase or lease of the property, securing the most beneficial terms for their company. Real estate managers periodically review their company's real estate holdings, identifying properties that are no longer commercially attractive. They negotiate the sale or termination of the lease of properties selected for disposal.

Real estate managers who work for land development companies acquire land and plan the construction of shopping centers, houses and apartments, office buildings, or industrial parks. They negotiate with representatives of local government, other businesses, community and public interest groups, and public utilities to eliminate obstacles to the development of the land and to gain support for the planned project. It sometimes takes years to win approval for a project, and in the process managers may have to modify the plans for the project many times. Once they are free to proceed with a project, managers negotiate short-term loans to finance the construction of the project, and later negotiate long-term permanent mortgage loans. They then contract with architectural firms to draw up detailed plans, and with construction companies to build the project.

Working Conditions

Property and real estate managers work in clean, well-lighted offices, but they usually spend a major portion of their time away from their desks. Property managers frequently visit the properties they oversee, sometimes on a daily basis when contractors are doing major repair or renovation work. On-site apartment managers may spend a large portion of their workday away from their office visiting the building engineer in the boiler room, checking up on the janitorial and maintenance staff, or investigating a problem reported by a tenant. Many real estate managers spend the majority of their time away from home, traveling to company real estate holdings or searching for properties that might be acquired.

Property and real estate managers often must attend meetings in the evening with property owners, community association boards of directors, or civic groups. Not surprisingly, many property and real estate managers put in long work weeks. Many apartment managers are required to live in the apartments where they work so that they are available to handle any emergency that occurs while they are off duty. They usually receive compensatory time off, however, for working at night or on weekends. Many apartment managers receive time off during the week so that they are available on weekends to show apartments to prospective tenants.



Property managers supervise janitorial, security, groundskeeping, and other maintenance staff.

Employment

Property and real estate managers held about 225,000 jobs in 1990. Most worked for real estate operators and lessors or for property management firms. Others worked for real estate development companies, banks, government agencies that manage public buildings, and corporations with extensive holdings of commercial properties. Many were self-employed developers, apartment owner-managers, or owners of property management or full-service real estate brokerage firms that manage as well as sell real estate for clients.

Training, Other Qualifications, and Advancement

Most employers prefer to hire college graduates for property and real estate management positions. Degrees in business administration, finance, real estate, public administration, or related fields are preferred, but persons with degrees in the liberal arts are often accepted. Good speaking and writing skills and an ability to deal tactfully with people are essential. Most persons enter property and real estate management as on-site apartment or community association managers, or as assistants to property managers. Previous employment as a real estate agent is an asset to apartment managers because it provides experience useful in showing apartments and dealing with people, as well as an understanding that an attractive, well-maintained property can command higher rental rates and result in lower turnover among tenants. In the past, many persons with backgrounds in stationary engineering and building maintenance have advanced to apartment manager positions on the strength of their knowledge of building mechanical systems, but this is becoming uncommon as employers are placing greater emphasis on administrative and communication abilities for manager jobs.

On-site managers usually begin at a smaller apartment complex, condominium, or community association, or as an assistant manager at a large property, association, or management company. As they acquire experience working under the direction of a property manager, they may advance by transferring to positions with greater responsibility at larger properties. Persons who excel as on-site managers often transfer to assistant property manager positions where they can acquire experience handling a broader range of property management responsibilities.

Although most persons who enter jobs as assistant property managers do so on the strength of on-site management experience, employers are increasingly hiring inexperienced college graduates with bachelor's or master's degrees in business administration, finance, or real estate for these jobs. Assistants work closely with a property manager and acquire experience performing a variety of management tasks, such as preparing financial statements, analyzing insurance coverage and risk options, marketing the property to prospective tenants, and collecting overdue rent payments. In time, many assistants advance to property manager positions.

The responsibilities and compensation of property managers increase as they manage larger properties. Most property managers are responsible for several properties at a time, and as their careers advance they are gradually entrusted with properties that are larger or whose management is more complex. Many specialize in the management of one type of property, such as apartments, office buildings, condominiums and homeowner associations, or retail properties. Managers who excel at marketing properties to tenants may specialize in managing new properties, while those who are particularly knowledgeable about buildings and their mechanical systems might specialize in the management of older properties that require renovation or more frequent repairs. Some experienced property and real estate managers open their own property management or real estate firms.

Persons most commonly enter real estate manager jobs by transferring from positions as property managers or real estate brokers. Real estate managers must be good negotiators, adept at persuading and handling people, and good at analyzing data to assess the fair market value of property or its development potential. Resourcefulness and creativity in arranging financing are essential for managers who specialize in land development. Real estate managers may be required to hold a real estate broker's license.

Many property and real estate managers attend short-term formal training programs conducted by various professional and trade associations active in the real estate field. Employers send many managers to

these programs to improve their management skills and expand their knowledge of specialized subjects, such as the operation and maintenance of building mechanical systems, insurance and risk management, business and real estate law, and accounting and financial concepts. Many managers also participate in these programs to prepare themselves for positions of greater responsibility in property and real estate management. In many cases, completion of these programs, together with meeting job experience standards and achieving a satisfactory score on a written examination, leads to certification, or the formal award of a professional designation, by the sponsoring association.

Managers of public housing subsidized by the Federal Government are required to be certified, but many other property and real estate managers voluntarily earn a formal professional designation because it represents formal recognition of their achievements and status in the occupation. A number of organizations have such programs. The Institute of Real Estate Management awards the designations Accredited Residential Manager and Certified Property Manager, while the National Association of Home Builders awards the designation Registered Apartment Manager. The National Apartment Association confers the designations Certified Apartment Manager and Certified Apartment Property Supervisor. The Community Associations Institute bestows the designation Professional Community Association Manager and Association Manager Specialist, while the Building Owners and Managers Institute International awards the designations Real Property Administrator and Facilities Management Administrator. The International Association of Corporate Real Estate Executives confers the designations Associate of Corporate Real Estate and Master of Corporate Real Estate.

Job Outlook

Employment of property and real estate managers is projected to increase faster than the average for all occupations through the year 2005. Many job openings are also expected to occur as experienced managers transfer to other occupations or leave the labor force. Opportunities are expected to be best for persons with college degrees in business administration and related fields.

Growth in the demand for office buildings and retail establishments will spur employment of property and real estate managers. Nearly 9 of every 10 new jobs that will be created over the 1990-2005 period are expected to be in wholesale and retail trade; finance, insurance, and real estate; and service industries. Because establishments in these industries are the primary tenants of commercial properties, expansion of these industries is expected to require growth in the Nation's supply of office and retail space. In addition, the expected faster than average employment growth in some retail trade industries should require growing numbers of real estate managers to acquire and develop properties for expanding restaurant, food, apparel, and specialized merchandise chains.

Growth in the Nation's stock of apartments and houses also should require more property and real estate managers. Although the rate of new household formation is expected to slow somewhat over the 1990-2005 period, the high cost of purchasing a home is expected to force a growing proportion of these workers to delay leaving rental housing. In addition, developments of new houses are increasingly being organized with community or homeowner associations that provide community services and oversee jointly owned common areas, requiring professional management.

A growing proportion of commercial and multiunit residential property owners are expected to entrust the management of their properties to a professional manager. Recent changes to income tax laws have greatly limited the tax benefits that property owners and investors can derive from unprofitable apartments and commercial properties. To help properties become more profitable, more owners are expected to place their investments in the hands of property and real estate managers.

Earnings

Median earnings of all property and real estate managers were \$21,800 a year in 1990. The middle 50 percent earned between \$14,600 and \$33,600. Ten percent earned less than \$10,300 and 10 percent earned more than \$47,300 annually.

Earnings of property and real estate managers vary widely by level of responsibility. A survey conducted by Huntress Real Estate Executive Search Inc. found that the middle third of the on-site apartment managers surveyed had annual salaries averaging \$31,300 in 1990. Property managers had considerably higher earnings, with the middle third of property managers responsible for multiple apartment properties averaging \$63,000. Of property managers responsible for shopping centers, the middle third earned \$69,300; of those who managed office buildings, the middle third earned \$72,200.

Earnings of corporate real estate managers were generally comparable to those of property managers, according to the same survey. Among those employed by fast-food and restaurant chains, the middle third of the lease negotiators and site selection representatives averaged \$59,900 annually, while the middle third of real estate directors earned \$70,400. Among real estate managers employed by retail apparel chains, the middle third of the lease negotiators and site selection representatives averaged \$62,300 and the middle third of real estate directors had an average annual salary of \$66,600.

Community association managers received compensation comparable to on-site and property managers employed by other types of properties. Many resident apartment managers receive the use of an apartment as part of their compensation package. Property and real estate managers often are given the use of a company automobile, and managers employed in land development often receive a small percentage of ownership in projects that they develop.

Related Occupations

Property and real estate managers plan, organize, staff, and manage the real estate operations of businesses. Workers who perform similar functions in other fields include restaurant and food service managers, hotel and resort managers and assistants, health services managers, education administrators, and city managers.

Sources of Additional Information

General information about careers in property and real estate management and programs leading to the award of a professional designation in the field is available from:

- Apartment Owners and Managers Association of America, 65 Cherry Plaza, Watertown, CT 06795-0238.
- Building Owners and Managers Institute International, 1521 Ritchie Hwy., Arnold, MD 21012.
- Community Associations Institute, 1630 Duke St., Alexandria, VA 22314.
- Institute of Real Estate Management, 430 N. Michigan Ave., Chicago IL 60611.
- International Association of Corporate Real Estate Executives, 440 Columbia Dr., Suite 100, West Palm Beach, FL 33409.
- National Apartment Association, 1111 14th St. NW., Suite 900, Washington, DC 20005.
- National Association of Home Builders, 15th and M Sts. NW., Washington, DC 20005.

Public Relations Specialists

(D.O.T. 165.017-010, .067-010, and .167-010)

Nature of the Work

An organization's public reputation, profitability, and even its continued existence can depend on the degree to which its goals and policies are supported by its targeted publics. Public relations specialists serve as advocates for businesses, governments, universities, hospitals, schools, and other organizations, and strive to build and maintain positive relationships with the public.

Public relations specialists handle such functions as media, community, consumer, and governmental relations; political campaigns; interest-group representation; conflict mediation; or employee and investor relations. Public relations is not only "telling the organization's story," however. Understanding the attitudes and concerns of customers, employees, and various other "publics"—and communicating this information to management to help formulate sound policy—is also an important part of the job. To improve communications,

public relations specialists establish and maintain cooperative relationships with representatives of community, consumer, employee, and public interest groups and those in print and broadcast journalism.

Public relations specialists put together information that keeps the general public, interest groups, and stockholders aware of an organization's policies, activities, and accomplishments. That, in turn, keeps management aware of public attitudes and concerns of the many groups and organizations with which it must deal. They may prepare press releases and contact people in the media who might print or broadcast their material. Many radio or television special reports, newspaper stories, and magazine articles start at the desks of public relations specialists. Sometimes the subject is an organization and its policies towards its employees or its role in the community. Often the subject is a public issue, such as health, nutrition, energy, or the environment.

Public relations specialists also arrange and conduct programs for contact between organization representatives and the public. For example, they set up speaking engagements and often prepare the speeches for company officials. These specialists represent employers at community projects; make film, slide, or other visual presentations at meetings and school assemblies; and plan conventions. In addition, they may be responsible for preparing annual reports and writing proposals for various projects.

In government, public relations specialists—sometimes called press secretaries, information officers, public affairs specialists, or communications specialists—keep the public informed about the activities of government agencies and officials. For example, public affairs specialists in the Department of Energy might keep the public informed about the proposed lease of offshore land for oil exploration. A press secretary for a member of Congress may try to keep constituents aware of their elected representative's accomplishments.

In large organizations, the director of public relations, who is often a vice president, may develop overall plans and policies with other executives. In addition, public relations departments employ public relations specialists such as account executives and assistants to write, do research, prepare materials, maintain contacts, and respond to inquiries.

People who handle publicity for an individual or who direct public relations for a small organization may deal with all aspects of the job. They contact people, plan and do research, and prepare material for distribution. They may also handle advertising or sales promotion work to support marketing.

Working Conditions

Although public relations staffs generally work a standard 35- to 40-hour week, schedules often have to be rearranged to meet deadlines, deliver speeches, attend meetings and community activities, and travel out of town. Occasionally they may have to be at the job or on call around the clock, especially if there is an emergency or crisis.



Public relations specialists attempt to create a favorable public image for their clients.

Employment

Public relations specialists held about 109,000 jobs in 1990. About two-thirds worked in services industries—management and public relations firms, educational institutions, religious organizations, hospitals, and advertising agencies, for example. Others worked for a wide range of employers, including manufacturing firms, financial institutions, department stores, and government agencies. Some were self-employed.

Public relations specialists are concentrated in large cities where press services and other communications facilities are readily available, and where many businesses and trade associations have their headquarters. Many public relations consulting firms, for example, are in New York, Los Angeles, Chicago, and Washington, D.C. There is a trend, however, for public relations jobs to be dispersed throughout the Nation.

Training, Other Qualifications, and Advancement

Although there are no defined standards for entry into a public relations career, a college education combined with public relations experience, usually gained through an internship, is considered excellent preparation for public relations work. The ability to write and speak well is essential. Many beginners have a college major in public relations, journalism, or communications. Some firms seek college graduates who have worked in electronic or print journalism. Other employers seek applicants with demonstrated communications skills and training or experience in a field related to the firm's business—science, engineering, sales, or finance, for example.

In 1991, some 250 colleges and 100 graduate schools offered degree programs or special curriculums in public relations, usually in a journalism or communications department. In addition, many other colleges offered at least one course in this field. A commonly used public relations sequence includes 5 courses: Public relations principles and techniques; public relations management and administration, including organizational development; writing, emphasizing news releases, proposals, annual reports, scripts, speeches, and related items; visual communications, including desktop publishing and computer graphics; and research, emphasizing social science research and survey design and implementation. Courses in advertising, journalism, business administration, political science, psychology, sociology, and creative writing also are helpful, as is familiarity with word processing and other computer applications. Specialties are offered in business, government, or nonprofit organization public relations.

Writing for a school publication or television or radio station provides valuable experience and material for one's portfolio. Many colleges help students gain part-time or summer internships in public relations that provide valuable experience and training. The Armed Forces also can be an excellent place to gain training and experience. Membership in local chapters of the Public Relations Student Society of America or International Association of Business Communicators provides an opportunity for students to exchange views with public relations specialists and to make professional contacts that may help them find a job in the field. A portfolio of published articles, television or radio programs, slide presentations, and other work is an asset in finding a job.

Creativity, initiative, good judgment, and the ability to express one's thoughts clearly and simply are essential. Decision making, problem solving, and research skills are also important.

People who choose public relations as a career need an outgoing personality, self-confidence, an understanding of human psychology, and an enthusiasm for motivating people. They should be competitive and yet flexible and able to function as part of a team.

Some organizations—particularly those with large public relations staffs—have formal training programs for new employees. In others, new employees work under the guidance of experienced staff members. Beginners often maintain files of material about company activities, scan newspapers and magazines for appropriate articles to clip, and assemble information for speeches and pamphlets. After gaining experience, they may write news releases, speeches and articles for publication, or design and carry out public relations programs. In some firms, public relations specialists get all-around experience whereas in other firms they specialize.

The Public Relations Society of America accredits public relations specialists who have at least 5 years of experience in the field and have passed a comprehensive 6-hour examination (5 hours written, 1 hour oral). Employers consider professional recognition through such accreditation a sign of competence in this field.

Promotion to supervisory jobs may come as public relations specialists show they can handle more demanding managerial assignments. In public relations firms, a beginner may be hired as a research assistant or account assistant and be promoted to account executive, account supervisor, vice president, and eventually senior vice president. A similar career path is followed in corporate public relations. Some experienced public relations specialists start their own consulting firms. (For more information on public relations managers, see the *Handbook* statement on marketing, advertising, and public relations managers.)

Job Outlook

Keen competition for public relations jobs is likely to continue to persist among recent college graduates with communications degrees. People without the appropriate educational background or work experience will face the toughest obstacles in finding a public relations job.

Employment of public relations specialists is expected to increase about as fast as the average for all occupations through the year 2005. New jobs will result from growth in demand for these specialists from corporations, associations, consulting firms, health facilities, professional groups, and other organizations of all sizes that recognize the need for good external and internal relations. The vast majority of job opportunities, however, will result from the need to replace public relations specialists who leave the occupation to take another job, retire, or for other reasons.

Earnings

Median annual earnings for salaried public relations specialists who usually worked full time were about \$30,000 in 1990. The middle 50 percent earned between \$21,000 and \$41,000 annually; the lowest 10 percent earned less than \$15,000; and the top 10 percent earned more than \$52,000.

According to a 1990 salary survey by the *Public Relations Journal*, the median annual salary of public relations account executives was \$29,500. Median annual salaries also varied widely by type of employer. Manufacturers, utilities, and public relations counseling firms were among the highest paying employers; museums and miscellaneous nonprofit organizations, religious and charitable organizations, and hotels and resorts were among the lowest paying employers. Nearly 40 percent of the survey's respondents earned cash bonuses. Many received perquisites such as paid vacations, company cars, parking privileges, and stock purchase plans.

In the Federal Government, persons with a bachelor's degree generally started at \$21,000 a year in 1991; those with a master's degree generally started at \$25,700 a year. Public affairs specialists in the Federal Government averaged \$41,500 a year in 1991.

Related Occupations

Public relations specialists create favorable attitudes among various organizations, special interest groups, and the public through effective communication. Other workers with similar jobs include fundraisers, lobbyists, promotion managers, advertising managers, and police officers involved in community relations.

Sources of Additional Information

A comprehensive directory of schools offering degree programs or a sequence of study in public relations, and a brochure on careers in public relations, are available for \$10 and \$2, respectively, from:

• Public Relations Society of America, Inc., 33 Irving Place, New York, NY 10003-2376.

Current information on the public relations field, salaries, and other items is available from:

• *PR Reporter*, P.O. Box 600, Exeter, NH 03833.

Additional information on job opportunities and the public relations field in general may be obtained for \$1 from:

• Service Department, *Public Relations News*, 127 East 80th St., New York, NY 10021.

Career information on public relations in hospitals/health care is available from:

• The American Society for Health Care Marketing and Public Relations, American Hospital Association, 840 North Lake Shore Dr., Chicago, IL 60611.

Purchasing Agents and Managers

(D.O.T. 162.117-018; .157-030, -034, and -038, .167-022 and -030, 163.117-010; 169.167-054; and 184.117-078.)

Nature of the Work

Purchasing agents and managers, sometimes called procurement officers or industrial buyers, purchase the goods, materials, supplies, and services that are required by their organization. These items can range from raw materials, machinery, office supplies, and airline tickets, to television air time. They insure that products are of suitable quality and sufficient quantity, secured at the right price, and available when needed. This is important because the flow of work—or even the entire production process—could be slowed or halted if the right materials, supplies, or equipment are not on hand when needed.

Purchasing agents and managers must have a thorough understanding of the items that are to be purchased. This often requires extensive technical knowledge. In addition, they often work with other departments in their organization to determine what and when supplies are needed. They must also be able to articulate their company's needs to suppliers and to evaluate and choose between suppliers.

Purchasing agents and managers use a variety of means to choose suppliers. They compare listings in catalogs, directories, and trade journals. They meet with salespersons to discuss items to be purchased, examine samples, and attend demonstrations of products and equipment.

Some purchasing agents and managers, who usually are called contract specialists, specialize in negotiating and supervising supplier contracts. They determine vendor qualifications and invite suppliers to bid on large orders. They then negotiate prices and contract terms or select the lowest bidder from among those who meet purchasing and delivery date requirements.

The nature of the work may differ according to the size and objective of the organization as well as its purchasing policy. In large organizations, a distinction is often drawn between the work of a purchasing agent and that of a purchasing manager. Purchasing agents typically focus on routine purchasing tasks, often specializing in a commodity or group of related commodities—for example, steel, lumber, cotton, or petroleum products. This often requires an agent to track such things as market conditions, wholesale price indices, or futures markets. Purchasing managers usually perform more complex purchasing tasks and may supervise a group of purchasing agents handling a number of related goods and services.

Changing business practices have altered the role of purchasing managers and agents and have placed greater importance on their function. Companies recognize the importance of purchasing specialists and increasingly involve them at most stages of product development and improvement. For example, potential problems with the supply of materials can be avoided by consulting purchasing agents in the early stages of product design.

Previously, the job of purchasing agent involved many routine tasks. Today, computers handle many of the more routine tasks—enabling purchasing agents and managers to concentrate mainly on products and suppliers. They are used to obtain up-to-date product and price listings, to keep track of inventory levels, to process routine orders, and to help determine when to make purchases. Computers are also used to maintain bidders' lists, to record the history of supplier performance, and to issue purchase orders.

Successful purchasing agents and managers must develop good business relationships with suppliers. The trend in the private sector toward limited-source contracting reduces the number of vendors with whom an agent or manager deals but results in longer-term rela-

tionships. This makes the selection of the suppliers all the more important and increasingly the agent's or manager's main job is to select the supplier who offers the best combination of quality, service, and price. Purchasing agents also work closely with employees in their own organization. For example, they may discuss design of custom-made products with company engineers, defects in purchased goods with quality control technicians, or shipment problems with workers in the shipping department.

The Federal Government distinguishes between purchasing agents and the more highly skilled contract specialists. Purchasing agents use simplified purchasing methods to procure items while Federal contract specialists use sealed bidding and negotiated agreements for more expensive or complex items.

Although the goal of those who work in the public sector is the same as in the private sector, government purchasing agents and managers must follow strict laws, statutes, and regulations in their work. These laws and regulations are continually being changed, requiring agents and contract specialists to keep informed about the latest regulations and their applications.

Working Conditions

Purchasing agents and managers generally work a standard 35- to 40-hour week in offices, although overtime work is common. Some agents and managers spend part of their time traveling to suppliers, seminars, or trade shows.

Employment

Purchasing agents and managers held about 300,000 jobs in 1990. Almost one-half of all jobs were located in manufacturing industries. Government agencies, primarily in the Federal sector, provided almost 20 percent of the jobs. Because of its complex and extensive purchasing requirements, the Department of Defense employs the greatest number of purchasing agents and managers in the Federal Government. Other important Federal employers are the Departments of Agriculture, Interior, and Transportation, the General Services Administration, and the Veterans Administration.

Training, Other Qualifications, and Advancement

Although there are no universal educational requirements for entry level jobs, most organizations prefer, and increasingly, require a college degree. A degree is almost essential to advance to higher positions. A master's degree in business may be required for higher level jobs. It is also important to have strong analytical and communication skills.

Educational requirements vary by industry. The Federal Government seeks applicants with a college degree or 3 years of work experience. Companies that manufacture machinery or chemicals may prefer applicants with a technical background, such as engineering or science. Other companies hire business administration majors and other college graduates as trainees. Regardless of the field, familiarity

with computers is desirable. Some colleges and vocational-technical institutes offer courses or degrees in purchasing.

Although many companies require a bachelor's degree, some hire graduates of associate degree and vocational education programs in purchasing for entry level jobs. They also may promote clerks or technicians in the purchasing department.

Whatever their educational background, beginning purchasing agents are often enrolled in company training programs and spend considerable time learning about company operations and purchasing procedures. They work with experienced agents to learn about commodities, prices, suppliers, and negotiating techniques. They may be assigned to production planning to learn about the purchasing system, inventory records, and storage facilities.

Purchasing agents and managers must be able to analyze the technical data in suppliers' proposals, make buying decisions, and spend large amounts of money responsibly. The job requires the ability to work independently as well as a part of a team. In addition, purchasing agents and managers must be able to get along well with people to balance the needs of departments within the organization with budgetary constraints. They may consult with lawyers, engineers, and scientists when involved in complex procurements.

An experienced purchasing agent may become an assistant purchasing manager in charge of a group of purchasing agents before advancing to purchasing manager or director of materials management. At the top levels, duties may overlap into other management functions such as production, planning, and marketing.

This occupation is becoming increasingly professionalized and specialized. Continuing education is essential for advancement. Many purchasing agents and managers participate in seminars offered by professional societies and take college courses in purchasing. Although no national standard exists, certification is becoming increasingly important.

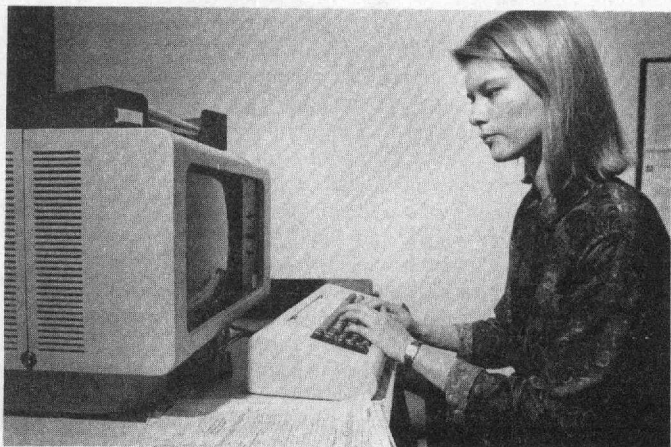
In private industry, the recognized mark of experience and professional competence is the designation Certified Purchasing Manager. It is conferred by the National Association of Purchasing Management, Inc. (NAPM), upon candidates who pass four examinations and meet specified educational and experience requirements. In State and local government, the indications of professional competence are the designations Professional Public Buyer (PPB) and Certified Public Purchasing Officer (CPPO), conferred by the National Institute of Governmental Purchasing, Inc. The PPB is earned by passing a two-part written examination and meeting certain experience requirements. To earn the CPPO, a candidate must have additional purchasing experience, pass a three-part written exam, and undergo an oral interview assessment.

As more purchasing is conducted on a long-term basis, both private and public purchasing agents are specializing in contractual aspects of purchasing. The National Contract Management Association confers the designations Certified Associate Contract Manager (CACM) or Certified Professional Contract Manager (CPCM). Candidates for these certifications must have related work experience, complete academic coursework, and pass written exams. These designations primarily apply to contract managers in the Federal Government and its suppliers.

Job Outlook

Employment of purchasing agents and managers is expected to increase about as fast as average for all occupations through the year 2005. Computerization has changed the nature of the work but has not eliminated jobs. Computers allow agents and managers to concentrate on buying decisions instead of routine paperwork. In addition, companies are placing larger responsibilities on purchasing departments, which increases the need for qualified personnel. As in the past, however, most job openings will arise from the need to replace workers who leave their jobs. Some purchasing agents and managers transfer to or from other occupations, often sales or other material management positions.

Persons who have a master's degree in business administration or a bachelor's degree should have the best opportunities. However, graduates of 2-year programs in purchasing should continue to find good opportunities, especially in small firms.



Responsibilities of purchasing agents have significantly increased in many industries.

Earnings

Median annual earnings for purchasing agents were about \$26,900 in 1990. The middle 50 percent earned between \$21,200 and \$35,900. The bottom 10 percent earned less than \$16,100 and the top 10 percent earned more than \$45,300. The middle 50 percent of purchasing managers earned between \$26,800 and \$51,900 in 1990.

Purchasing agents in the Federal Government averaged \$21,928 in 1990 and contract specialists averaged \$39,160.

Related Occupations

Other workers who negotiate and contract to purchase equipment, supplies, or other merchandise include wholesale and retail buyers, procurement services managers, and traffic managers. Because buying and selling are closely related, manufacturers' sales workers and other sales related occupations are also closely related to purchasing agents and managers.

Sources of Additional Information

Further information about careers in purchasing and certification is available from:

- National Association of Purchasing Management, Inc., P.O. Box 22160, Tempe, AZ 85285.
- National Institute of Governmental Purchasing, Inc., 115 Hillwood Ave., Falls Church, VA 22046.
- National Contract Management Association, 1912 Woodford Rd., Vienna, VA 22182.
- Federal Acquisition Institute (VF), General Services Administration, 18th and F Sts. NW., Washington, DC 20405.

Restaurant and Food Service Managers

(D.O.T. 185.137; 187.161-010 and .167-026, -106, -126, -206, and -210; 319.137-014 and -018)

Nature of the Work

Food is consumed outside the home in a variety of settings. Eating places range from restaurants that serve fast food or that emphasize elegant dining, to institutional dining in school and employee cafeterias, hospitals, and nursing facilities. The cuisine offered, its price, and the setting in which it is consumed vary greatly, but the managers of these diverse dining facilities have many responsibilities in common. Efficient and profitable operation of restaurants and institutional food service facilities requires that managers and assistant managers select and appropriately price interesting menu items, efficiently use food and other supplies, achieve consistent quality in food preparation and service, recruit and train adequate numbers of workers and supervise their work, and attend to the various administrative aspects of the business.

In most restaurants and institutional food service facilities, the manager is assisted by one or more assistant managers, depending on the size and business hours of the establishment. In large establishments, as well as in many others that offer fine dining, the management team consists of a general manager, one or more assistant managers, and an executive chef. The executive chef is responsible for the operation of the kitchen, while the assistant managers oversee service in the dining room and other areas of the operation. In some smaller restaurants, the executive chef may also be the general manager, and sometimes an owner. In fast-food restaurants and other food service facilities that operate long hours, 7 days a week, the manager is aided by several assistant managers, each of whom supervises a shift of workers. (For additional information, see the *Handbook* statements on general managers and top executives and chefs, cooks, and other kitchen workers.)

Many restaurants change their menu only rarely, but other eating establishments change it frequently. Institutional food service facilities and some restaurants offer a new menu every day. Managers or executive chefs select menu items, taking into account the likely number of customers, the past popularity of various dishes, and considerations such as food left over from prior meals that should not be

wasted, the need for variety on the menu, and the availability of foods due to seasonal and other factors. They analyze the recipes of the dishes to determine food, labor, and overhead costs and assign prices to the menu items. Menus must be developed far enough in advance that needed supplies may be received in time.

Ordering supplies and dealing with suppliers are important aspects of the work of restaurant and food service managers. On a daily basis, managers estimate food consumption, place orders with suppliers, and schedule the delivery of fresh food and beverages. They receive and check the content of deliveries, evaluating the quality of meats, poultry, fish, fruits, vegetables, and baked goods. Managers meet or talk with sales representatives of restaurant suppliers to place orders to replenish stocks of tableware, linens, paper, cleaning supplies, cooking utensils, and furniture and fixtures. They also arrange for equipment maintenance and repairs, and for a variety of services such as waste removal and pest control.

Managers interview, hire, and, when necessary, discharge workers. They familiarize newly hired workers with the establishment's policies and practices and oversee their training. Managers schedule the work hours of employees, insuring that there are adequate numbers of workers present during busy periods, but not too many during slow periods.

Restaurant and food service managers supervise the kitchen and the dining room. They oversee food preparation and cooking, checking the quality of the food and the sizes of portions to insure that dishes are prepared and garnished correctly and in a timely manner. They also investigate and resolve customers' complaints about food quality or service. During busy periods, managers may roll up their sleeves and help with the cooking, clearing of tables, or other tasks. They direct the cleaning of the kitchen and dining areas and the washing of tableware, kitchen utensils, and equipment to maintain company and government sanitation standards. They monitor workers and observe patrons on a continual basis to insure compliance with health and safety standards and local liquor regulations.

Managers have a variety of administrative responsibilities. In larger establishments, much of this work is delegated to a bookkeeper, but in others, managers must keep accurate records of the hours and wages of employees, prepare the payroll, and do paperwork to comply with licensing laws and reporting requirements of tax, wage and hour, unemployment compensation, and Social Security laws. They also must maintain records of the costs of supplies and equipment purchased and insure that accounts with suppliers are paid on a regular basis. In addition, managers record the number, type, and cost of items sold to weed out dishes that are unpopular or less profitable. Many managers are able to ease the burden of recordkeeping and paperwork through the use of computers.

Managers are among the first to arrive and the last to leave at night. At the conclusion of each day, or sometimes each shift, managers must tally the cash received and charge receipts and balance them against the record of sales. They are responsible for depositing the day's income at the bank, or securing it in a safe place. Managers are also responsible for locking up and checking that ovens, grills, and lights are off and alarm systems switched on.

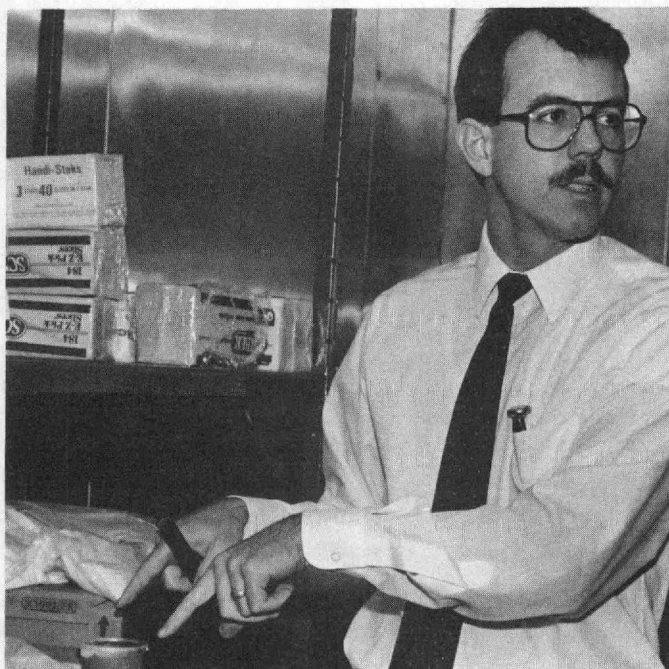
Working Conditions

Since evenings and weekends are popular dining periods, night and weekend work is common. However, many managers of institutional food service facilities work more conventional hours because factory and office cafeterias are often open only on weekdays for breakfast and lunch. Many restaurant and food service managers work 50 hours or more per week.

Managers often experience the pressure of simultaneously coordinating a wide range of activities. When problems occur, it is the responsibility of the manager to resolve them with minimal disruption to customers. The job can be hectic during peak dining hours, and dealing with irate customers or uncooperative employees can be particularly stressful.

Employment

Restaurant and food service managers held about 557,000 jobs in 1990. Most worked in restaurants or for contract institutional food



Restaurant and food service managers check the quality and quantity of refrigerated foods.

service companies, but small numbers also were employed by educational institutions, hospitals, nursing and personal care facilities, and civic, social, and fraternal organizations. Nearly half were self-employed. Jobs are located throughout the country, but are most plentiful in large cities and tourist areas.

Training, Other Qualifications, and Advancement

Many restaurant and food service manager positions are filled by promoting experienced food and beverage preparation and service workers. Waiters, waitresses, chefs, and fast-food workers who have demonstrated their potential for handling increased responsibility sometimes advance to assistant manager or management trainee jobs when openings occur. Executive chefs need extensive experience working as a chef, and general managers need experience working as assistant manager. However, most food service management companies and national or regional restaurant chains also recruit management trainees from among the graduates of 2-year and 4-year college programs. Food service and restaurant chains prefer to hire persons with degrees in restaurant and institutional food service management, but they often hire graduates with degrees in other fields who have demonstrated interest and aptitude.

A bachelor's degree in restaurant and food service management provides a particularly strong preparation for a career in this occupation. In 1990, more than 160 colleges and universities offered 4-year programs in restaurant and hotel management or institutional food service management. For persons who do not want to pursue a 4-year degree, a good alternative is provided by the more than 800 community and junior colleges, technical institutes, and other institutions that offer programs in these fields leading to an associate degree or other formal award below the bachelor's degree. Both 2-year and 4-year programs provide instruction in subjects such as accounting, business law and management, food planning and preparation, and nutrition. Some programs combine classroom and laboratory study with internships that provide on-the-job experience. In addition, many educational institutions offer culinary programs that provide food preparation training which can lead to a career as a cook or chef and provide a foundation for advancement to an executive chef position.

Most employers emphasize personal qualities. Restaurant and food service management can be demanding, so good health and stamina are important. Self-discipline, initiative, and leadership ability are essential. Managers must be able to solve problems and concentrate

on details. They need good communication skills to deal with customers and suppliers, as well as to motivate and direct their subordinates. A neat and clean appearance is also required since managers are often in close personal contact with the public.

Most restaurant chains and food service management companies have rigorous training programs for persons hired for management jobs. Through a combination of classroom and on-the-job training, trainees receive instruction and gain work experience in all aspects of the operations of a restaurant or institutional food service facility—food preparation, nutrition, sanitation, security, company policies and procedures, personnel management, recordkeeping, and preparation of reports. Usually after 6 months or a year, trainees receive their first permanent assignment as an assistant manager.

A measure of professional achievement for restaurant and food service managers is to earn the designation of certified Foodservice Management Professional (FMP). Although not a requirement for employment or advancement in the occupation, voluntary certification provides recognition of professional competence, particularly for managers who acquired their skills largely on the job. The Educational Foundation of the National Restaurant Association awards the FMP designation to managers who achieve a qualifying score on a written examination, complete a series of courses that cover a range of food service management topics, and who meet standards of work experience in the field.

Willingness to relocate often is essential for advancement to positions with greater responsibility. Managers advance to larger establishments, or regional management positions with restaurant chains. Some managers eventually open their own eating and drinking establishments. Others transfer to hotel management positions, since their restaurant or institutional food service management experience is a good background for food and beverage manager jobs at hotels and resorts.

Job Outlook

Employment of restaurant and food service managers is expected to increase faster than the average for all occupations through the year 2005. In addition to growth in demand for these managers, the need to replace managers who transfer to other occupations or stop working for a variety of reasons will create many new jobs. Job opportunities are expected to be best for persons with bachelor's or associate degrees in restaurant and institutional food service management.

Employment will increase with growth in the number of eating and drinking establishments. Population growth, rising personal incomes, and increased leisure time will continue to produce growth in the number of meals consumed outside the home. Also, continued growth in the number of families in which both spouses work should make dining out a more frequent and affordable convenience.

Projected employment growth, however, varies by industry. For example, employment of restaurant and food service managers is expected to increase rapidly in hotels, while slower growth is anticipated in school and college cafeterias, due to increased contracting-out of cafeteria operations to institutional food service companies. Growth in the population of elderly people is expected to result in growth of food service manager jobs in nursing homes, residential care facilities, and other health care institutions.

Employment in eating and drinking establishments is not very sensitive to changes in economic conditions, so restaurant and food service managers are rarely laid off during hard times. However, competition among restaurants is always intense, and many restaurants do not survive.

Earnings

Earnings of restaurant and food service managers vary greatly according to the type and size of establishment. Based on a survey conducted for the National Restaurant Association, their median base salary was nearly \$26,000 a year in 1990, but managers of the largest restaurants and institutional food service facilities often had annual salaries in excess of \$42,000. Managers of fast-food restaurants had a median base salary of \$23,000 a year; managers of full-menu restaurants with table service, \$28,000; and managers of commercial and institutional cafeterias, \$27,000 a year in 1990. Besides a salary, most

managers received an annual bonus or incentive payment based on their performance. In 1990, most of these payments ranged between \$2,000 and \$8,000 a year.

Executive chefs had a median base salary of \$31,000 a year in 1990, but those employed in the largest restaurants and institutional food service facilities often had base salaries over \$45,000. Annual bonus or incentive payments of most executive chefs ranged between \$2,000 and \$4,000 a year.

The median base salary of assistant managers was \$21,600 a year in 1990, but ranged from \$18,200 in fast-food restaurants to over \$29,000 in some of the largest restaurants and food service facilities. Annual bonus or incentive payments of most assistant managers ranged between \$1,000 and \$4,000 a year.

Manager trainees had a median base salary of \$18,600 a year in 1990, but had salaries of nearly \$26,000 in some of the largest restaurants and food service facilities. Annual bonus or incentive payments of most trainees ranged between \$1,000 and \$3,000 a year.

Most salaried restaurant and food service managers received free meals, sick leave, health and life insurance, and 1 to 3 weeks of paid vacation a year, depending on length of service.

Related Occupations

Restaurant and food service managers direct the activities of business establishments that provide a service to customers. Other managers in businesses that sell goods or services to the general public include hotel managers and assistants, health services administrators, retail store managers, and bank managers.

Sources of Additional Information

Information about job opportunities may be obtained from local employers and local offices of the State employment service.

Career information about restaurant and food service managers, directories of 2- and 4-year college programs in restaurant and food service management, and certification as a Foodservice Management Professional are available from:

- The Educational Foundation of the National Restaurant Association, Suite 1400, 250 South Wacker Dr., Chicago, IL 60606.

General information on hospitality careers may be obtained from:

- Council on Hotel, Restaurant, and Institutional Education, 1200 17th St. NW., Washington, DC 20036-3097.

For general career information and a directory of accredited private trade and technical schools offering programs in restaurant and food service management, write to:

- National Association of Trade and Technical Schools, P.O. Box 2006, Department BL, Annapolis Junction, MD 20701-2006.

Underwriters

(D.O.T. 169.167-058)

Nature of the Work

Insurance companies assume billions of dollars in risks each year by transferring the risk of loss from their policyholders to themselves. Underwriters appraise and select the risks their company will insure. The underwriter must analyze information in insurance applications, reports from loss control consultants, medical reports, and actuarial studies (reports that describe the probability of insured loss) and then decide whether to issue a policy. An insurance company may lose business to competitors if the underwriter appraises risks too conservatively, or it may have to pay more claims if the underwriting actions are too liberal. (The term "life underwriter" is increasingly used in referring to insurance agents and brokers; see the statement on insurance agents and brokers elsewhere in the *Handbook* for a discussion of that occupation.)

When deciding that an applicant is an acceptable risk, an underwriter may outline the terms of the contract, including the amount of the premium. Underwriters frequently correspond with policyholders, agents, and managers about policy cancellations or other matters. On

rare occasions, they accompany sales workers on appointments with prospective customers.

Most underwriters specialize in one of three major categories of insurance: Life, property and casualty, or health. They further specialize in group or individual policies. Property and casualty underwriters specialize by type of risk insured, such as fire, homeowner, automobile, marine, property, or workers' compensation. In cases where casualty companies insure in a single "package" policy, covering various types of risks, the underwriter must be familiar with different lines of insurance. Some underwriters, called commercial account underwriters, handle business insurance exclusively. They often evaluate a firm's entire operation in appraising its insurance application.

An increasing proportion of insurance sales are being made through group contracts. A standard group policy insures all persons in a specified group through a single contract at uniform premium rates, generally for life or health insurance protection. The group underwriter analyzes the overall composition of the group to be sure that the total risk is not excessive. Another type of group policy provides members of a group—a labor union, for example—with individual policies reflecting their individual needs. These generally are casualty policies, such as those covering automobiles. The casualty underwriter analyzes the application of each group member and makes individual appraisals. Some group underwriters meet with union or employer representatives to discuss the types of policies available to their group.

Working Conditions

Underwriters have desk jobs that require no unusual physical activity. Their offices generally are comfortable and pleasant. Although some overtime may be required, the normal workweek is 35-40 hours. Underwriters occasionally may attend meetings away from home for several days. Construction and marine underwriters often travel to inspect work sites and assess risks.

Employment

Insurance underwriters held about 105,000 jobs in 1990. The following tabulation shows the percent distribution of wage and salary jobs by industry.

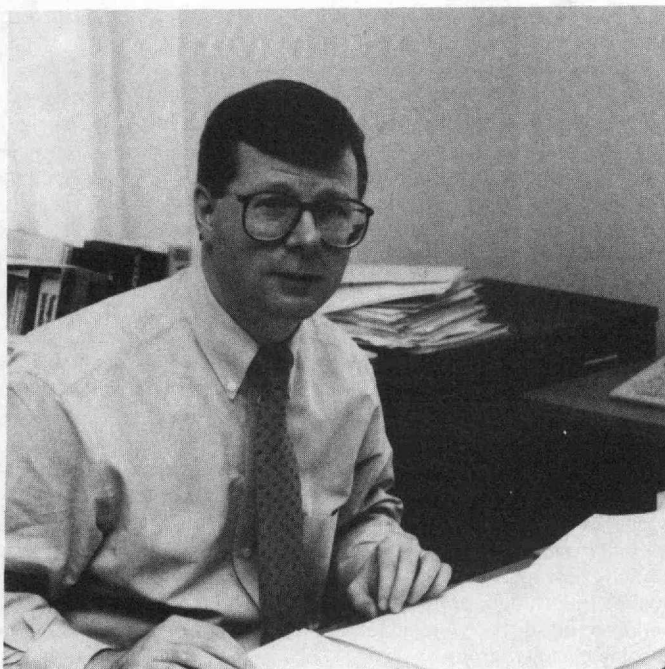
	Percent
Total.....	100
Insurance industries.....	94
Insurance agents, brokers, and service	41
Fire, marine, and casualty insurance	36
Life insurance.....	11
Medical service and health insurance.....	3
Pension funds and insurance, not elsewhere classified	3
Banks and credit agencies	5
Real estate and related industries	1

The majority of underwriters worked for insurance companies (or carriers). Most of the remaining underwriters worked throughout the country in independent agencies—firms which represent one or more insurance companies—and brokers—firms which may deal with any insurance company but represent none. Small numbers of underwriters worked for banks, credit agencies, and other financial institutions.

Underwriters in the life insurance industry are most likely to work in an insurance company's home office. In some large agencies, underwriters help life insurance agents determine if the risk will be accepted or rejected by the home office. However, most regional life insurance offices deal predominantly with sales, not underwriting. Property and casualty underwriters also work in home offices, but more work for agencies or regional branch offices, where they have the authority to underwrite risks and determine an appropriate rating without consulting the home office.

Training, Other Qualifications, and Advancement

For beginning underwriting jobs, many large insurance companies prefer college graduates who have a degree in business administration or finance, with courses or experience in accounting. However, a



Underwriters use computers to aid in assessing risks.

degree in almost any field plus courses in business law and accounting provide a good general background. Some companies hire persons without a college degree for underwriter trainee positions. In addition, some high school graduates who begin as underwriting clerks may be trained as underwriters after they demonstrate an aptitude for the work. In the property and casualty industry, ratings clerks sometimes advance to underwriter through their skill and experience in researching risk and rate setting.

Underwriter trainee or assistant underwriter is the typical entry-level position for this occupation. They may begin by helping to collect information on applicants, and by evaluating routine applications under the close supervision of an experienced risk appraiser. Property and casualty trainees study claim files to become familiar with factors associated with certain types of losses. Many larger insurers offer a training program, lasting from a few months to a year, that combines study with work. As trainees develop the necessary judgment, they are assigned policy applications that are more complex and have a greater face value. These often require the use of computers for more efficient processing. Consequently, computer literacy is necessary.

Continuing education is necessary for advancement. Insurance companies generally pay tuition for underwriting courses that their trainees successfully complete; some also offer salary incentives. Independent study programs for experienced property and casualty underwriters are also available. The Insurance Institute of America offers the designation "Associate in Underwriting (AU)," and the American Institute for Chartered Property Casualty Underwriters offers the designation "CPCU"—Chartered Property Casualty Underwriter. Earning the CPCU designation generally takes about 5 years, and requires the passage of 10 examinations covering such subjects as personal and commercial risk management, business law, accounting, finance, economics, and ethics.

Underwriting can be a satisfying career for persons who like working with detail and enjoy analyzing information. In addition, underwriters must possess good judgment in order to make sound decisions. They must also be imaginative and aggressive, especially when they have to obtain information from outside sources.

Experienced underwriters who complete courses of study may advance to chief underwriter or underwriting manager. Some underwriting managers are promoted to senior managerial jobs.

Job Outlook

Employment of underwriters is expected to rise about as fast as the average for all occupations through the year 2005. Most job open-

ings, however, are expected to result from the need to replace underwriters who transfer to other occupations or stop working altogether.

A number of factors underlie the continuing need for underwriters. Shifts in the age distribution of the population will result in an increase in the number of people who assume career and family responsibilities. People in this group have the greatest need for life and health insurance. A growing demand for insurance coverage for working women also is expected. In addition, expanding long-term healthcare and pension benefits for retirees—an increasing proportion of the population—will increase underwriting requirements. Growing security and liability consciousness should contribute to demand for more insurance protection for homes, automobiles, pleasure craft, and other valuables. New or expanding businesses will need protection for new plants and equipment, product liability, and insurance for workers' compensation and employee benefits.

On the other hand, the trend toward self-insurance is expected to lower the demand for some property and casualty underwriters. Businesses who self-insure set a rate for their own company and pay premiums into a reserve fund. Additionally, many property and casualty companies are foregoing personal lines insurance—especially automobile—and concentrating on commercial lines of business. Underwriters specializing in one particular area of insurance may find it difficult to transfer to another type of insurance if their jobs are threatened.

Computer technology in the form of expert systems, or artificial intelligence (AI), should further reduce the need for underwriters in life insurance and in property and casualty insurance. AI is capable of analyzing far more variables in a shorter amount of time than a human can, so underwriting decisions can be made more accurately and efficiently. Individuals who supplement their underwriting knowledge with extensive computer knowledge should have the best opportunities.

Since insurance is usually regarded as a necessity, regardless of economic conditions, underwriters are unlikely to be laid off because of a recession.

Earnings

The following tabulation shows the median salaries of casualty and property underwriters in 1989, according to a survey by the Alliance of American Insurers in collaboration with the American Insurance Association and the National Association of Independent Insurers.

Type of Underwriter

Personal lines	
Entry level	\$23,900
Journey level.....	28,400
Senior level.....	36,500
Supervisor.....	43,300
Manager.....	54,100
Commercial lines	
Entry level	25,400
Journey level.....	29,700
Senior level.....	37,200
Supervisor.....	43,200
Manager.....	54,300

Most insurance companies have liberal vacation policies and other employee benefits. Almost all insurance companies provide employer-financed group life and retirement plans.

Related Occupations

Underwriters make decisions on the basis of financial data. Other workers with the same type of responsibility include auditors, budget analysts, financial advisors, loan officers, credit managers, real estate appraisers, and risk managers.

Sources of Additional Information

General information about a career as an insurance underwriter is available from the home offices of many life insurance and property and liability insurance companies. Information about the insurance

business in general and the underwriting function in particular also may be obtained from:

☛ Society of Chartered Property and Casualty Underwriters, Kahler Hall, P.O. Box 3009, 720 Providence Rd., Malvern, PA 19355-0709.

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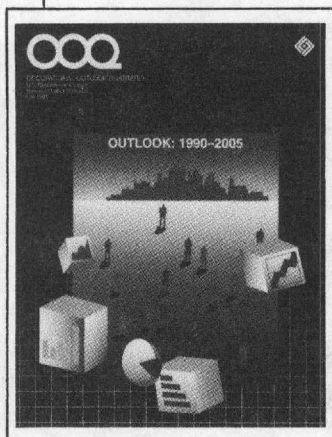


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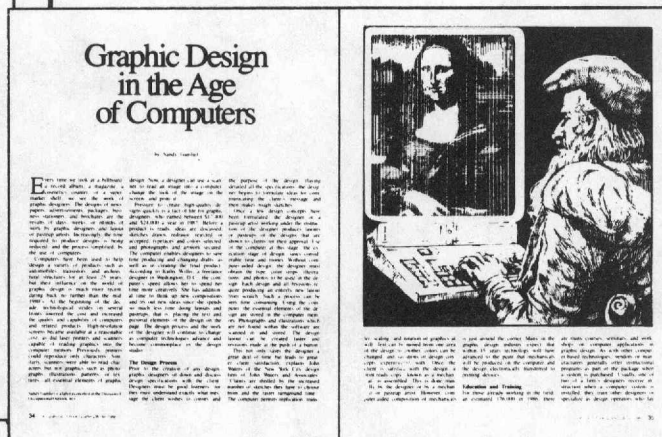
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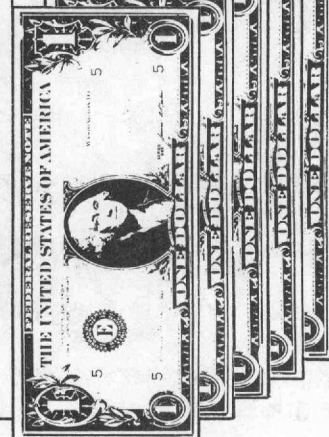
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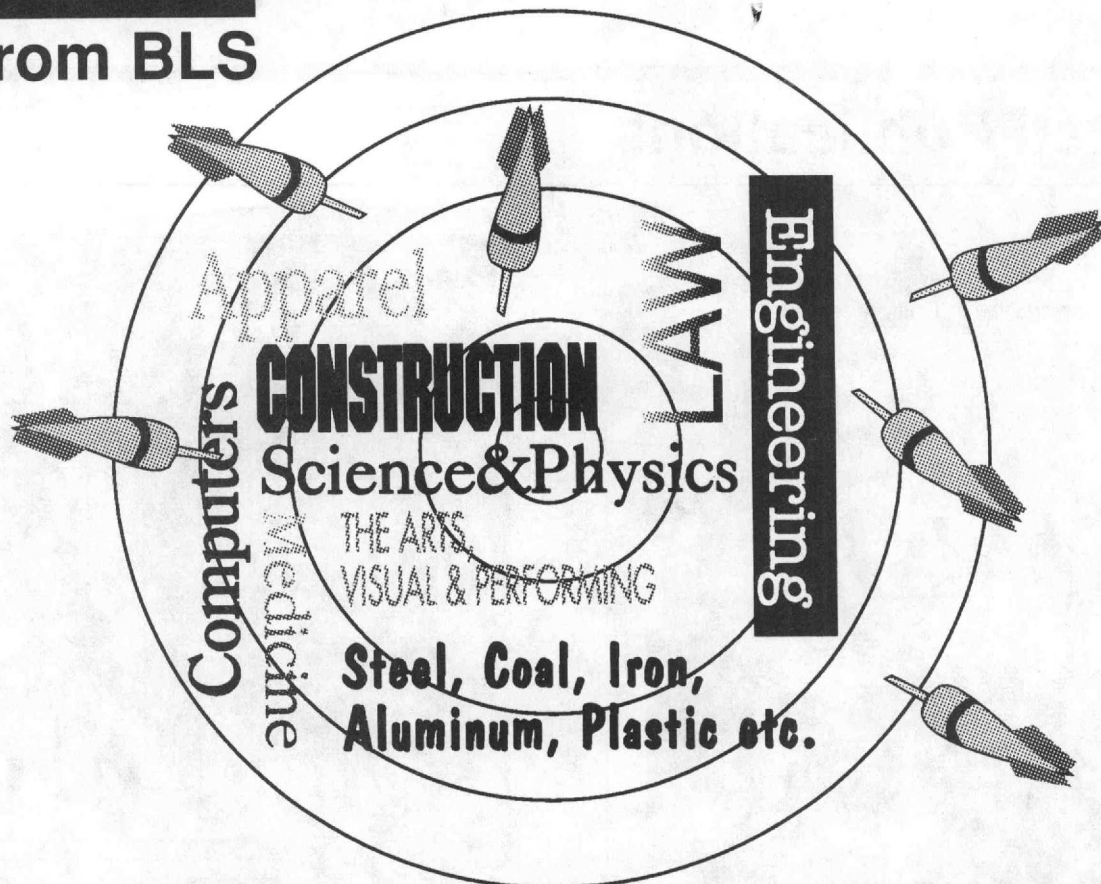
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Occupational Outlook Quarterly

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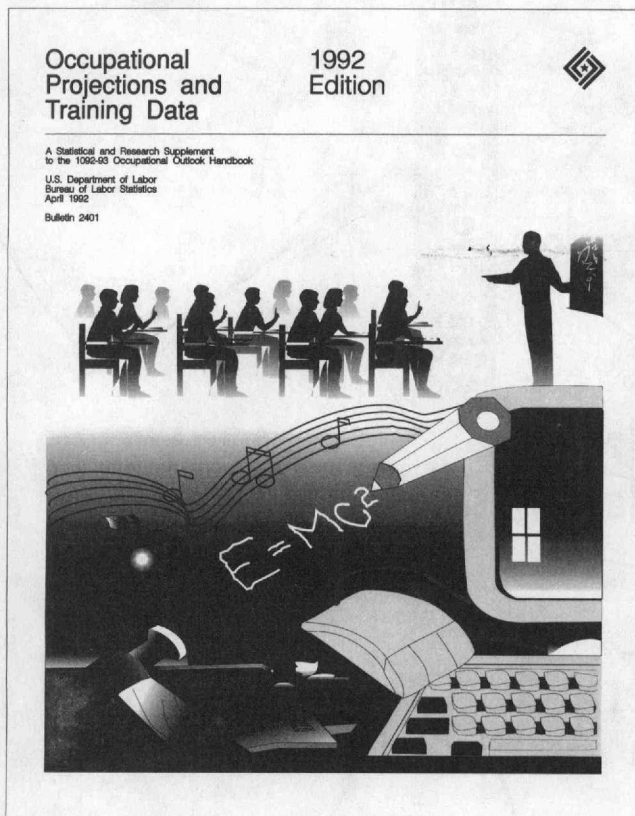
Career Guide to Industries

- Number of jobs
- Geographic areas having the most jobs
- Size of establishments
- Goods and services produced
- Kinds of workers employed—what types of work is done
- Common working conditions and hazards
- Jobs that can be entered from high school; from college
- Jobs that do not require specialized education or training
- Opportunities for acquiring skills
- Prospects for upward mobility
- Long-term employment outlook
- Reasons for changing staffing patterns
- Earnings of key occupations

Career Guide to Industries, BLS Bulletin 2403, was produced by the same staff that prepares the *Occupational Outlook Handbook*—the Federal Government's premier career guidance publication. This new book is a must for guidance counselors, individuals planning their careers, job seekers, and others who want the latest word on career information from an industry perspective.

Note: At press time, the price for this publication was not available. Contact any of the Bureau of Labor Statistics Regional Offices listed on the inside front cover, or the Division of Occupational Outlook, Bureau of Labor Statistics, Washington, DC 20212.

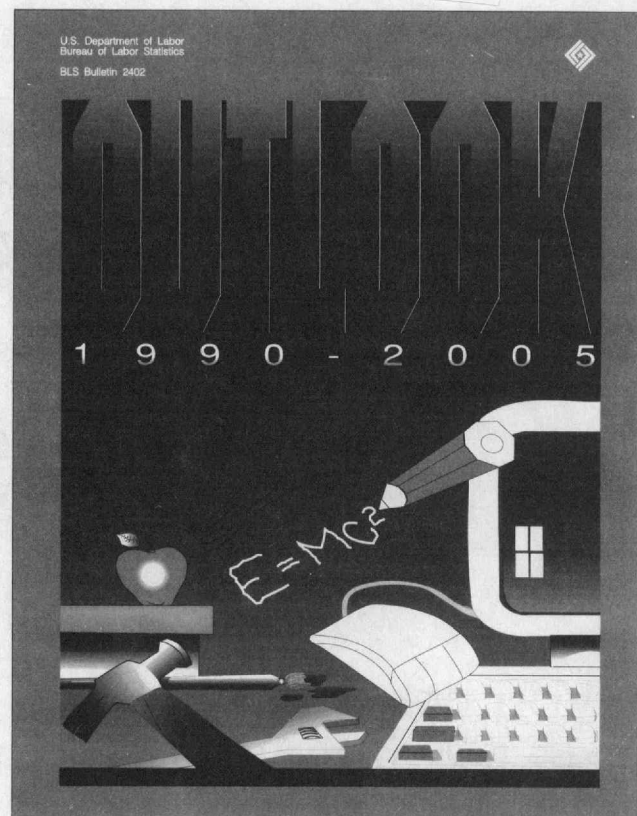
Related Publications



BLS Bulletin 2401

Occupational Projections and Training Data, 1992 Edition

This supplement to the *Occupational Outlook Handbook* provides the statistical and technical data supporting the information presented in the *Handbook*. Education and training planners, career counselors, and jobseekers can find valuable information that ranks occupations by employment growth, earnings, susceptibility to unemployment, separation rates, and part-time work.



BLS Bulletin 2402

Outlook 1990-2005

Every 2 years, the Bureau of Labor Statistics produces detailed projections of the U.S. economy and labor force. This bulletin presents the Bureau's latest analyses of economic and industrial growth, the labor force, and trends in occupational employment into the 21st century. An overview article focuses on important issues raised by these projections.

Note:

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