



Pay in data processing services by occupation and urban area

Top level systems analysts and systems programmers were usually the highest paid workers in the computer and data processing services industries, according to a Bureau of Labor Statistics survey conducted in October 1982. The survey, limited to 18 metropolitan areas, found these workers frequently averaging more than \$700 a week.¹

The survey included establishments primarily engaged in providing computer and data processing services. Computer services include systems analysis and design, program or system development, programming services, and systems engineering. Data processing services firms offer complete processing and preparation of reports from data supplied by the customer, or specialized services, such as key entry or provision of data processing equipment to others on an hourly or time-sharing basis. The survey also included establishments that manage or operate computer facilities for others on a continuing basis. Companies primarily providing accounting, auditing, and bookkeeping services, and those repairing or maintaining computer and data processing equipment were excluded.

Eight occupations, accounting for just under one-half of the 86,736 professional, technical, and clerical workers in the survey, were selected to represent the pay structure of office workers in the computer and data processing services industries. Six of the occupations were subdivided by work level based on duties and responsibilities—six levels of computer operators, five of programmer/programmer analysts, four of systems programmers, three each of systems analysts and electronics technicians, and two levels of key entry operators. Two occupations—data librarians and peripheral equipment operators—were limited to one level.

Systems programmers develop and modify programs making up the system software (such as operating systems) which provides basic services for computer installations. Average earnings for level IV systems programmers—the highest level surveyed for this occupation—ranged from \$591 per week in Newark to \$846 in San Francisco-Oakland.

Most commonly, the programmers averaged between \$700 and \$800 a week for the nine areas providing publishable data.

Level III systems analysts—the highest level surveyed for this occupation—examine complex computer systems with minimal supervision. Their average weekly earnings ranged from \$516.50 in Kansas City to \$783 in Dallas-Fort Worth. In the other nine areas for which averages for this job could be published, earnings were usually in the \$700 to \$750 range.

Programmer/programmer analysts, the largest occupational group studied with more than 14,000 employees, provide programming services to customers. Weekly pay averages for level I, consisting of trainees whose assignments are designed to develop their skills, were lowest in Chicago (\$273) and highest in San Francisco-Oakland (\$372.50) and Houston (\$373). Level V, typically supervisors, team leaders, or staff specialists performing both analysis and programming, had averages ranging from \$593 a week in Kansas City and \$595 in Detroit to \$735 in Houston. In general, these workers averaged about twice the earnings of level I.² Level III workers, the fully experienced and most numerous of the five levels, averaged between \$445 and \$486 in 12 of the 18 areas.

Average wages for level I key entry operators, the lowest paid occupation in 11 areas, ranged from \$182 a week in Boston to \$249.50 in Houston. Data librarians and level I computer operators also were at the low end of the pay scale, typically within the \$200 to \$250 range.

Where comparisons were possible, occupational pay levels were generally highest in Dallas-Fort Worth or Los Angeles-Long Beach. The lowest occupational pay levels were often found in Boston, Cleveland, Kansas City, Newark, and Philadelphia. Area pay relationships among occupations, however, varied substantially. For example, the Boston averages for both levels of key entry operators were about 75 percent of the corresponding averages in Houston; for the five levels of programmer/programmer analysts, Boston averages were between 94 and 100 percent of those in Houston; and for level III systems analysts, the Boston average was 125 percent of Houston's average.

All of the professional, technical, and clerical workers

were in establishments providing paid holidays (typically 9 to 11 days annually) and paid vacations. Vacation payments varied according to length of service; most common were 2 weeks after 1 year of service, 3 weeks after 5 years, and 4 weeks after 15 or 20 years. With relatively few exceptions, office workers were also provided at least part of the cost of life insurance and of hospitalization, surgical, and basic and major medical insurance. Income protection against short-term disabilities (sick leave or sickness and accident insurance, or both) covered three-fourths of the workers or more in each area. Long-term disability insurance was not as prevalent, usually applying to one-half to three-fourths. Retirement pension plans applied to between one-half and four-fifths of the office workers in all but Detroit, Phoenix, and San Jose. In these areas, fewer than half of the workers were covered. Typically, health, insurance, and pension plans were financed entirely by the employer.

The 1,732 computer services and data processing establishments within the scope of the survey employed a total of 114,653 workers in October 1982. Executives and managers were excluded from the 86,736 workers covered by the survey. Employment was highest in Washington (17,703), Dallas-Fort Worth (10,071), and Los Angeles-Long Beach (8,401). Boston, Chicago, and Philadelphia also recorded more than 5,000 office employees, while fewer than 1,500 were found in Cleveland and Phoenix. Relatively few of the workers were in establishments operating under labor-management agreements.

The survey provided earnings distributions for the occupations studied and percent distributions of office workers by type of service offered and by the primary source of revenue (type of customer) for the establishment, such as banks, private schools and hospitals, and government. A comprehensive report on the survey findings, *Industry Wage Survey: Computer and Data Processing Services, October 1982* (Bulletin 2184), is for sale at \$4.50 a copy from the Government Printing Office, or from any of the Bureau's regional offices. □

—FOOTNOTES—

¹Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Average weekly earnings relate to salaries paid for normal (standard) workweeks, and average weekly hours correspond to these earnings. The survey excluded establishments employing fewer than eight workers.

Areas studied are Standard Metropolitan Statistical Areas as defined by the U.S. Department of Commerce through October 1979. The 18 areas: Northeast—Boston, Newark, New York, Philadelphia; South—Atlanta, Dallas-Fort Worth, Houston, Washington; North Central—Chicago, Cleveland, Detroit, Kansas City, Minneapolis-St. Paul, and St. Louis; and West—Los Angeles-Long Beach, Phoenix, San Francisco-Oakland, and San Jose.

²The programmer/programmer analyst group, as defined for this survey, includes both business and scientific applications programmers. Only a few of the establishments employed both business and scientific programmers or systems analysts in October 1982, and none had pay differentials based on this distinction.

Future of collective bargaining probed in ILO report

Throughout the industrialized world, labor organizations are facing difficult choices between lower pay and fewer jobs, and many are asking if "concession bargaining" has come to stay. Are we entering a new era of industrial relations, or do negotiated short workweeks, jobsharing provisions, and other forms of concession bargaining represent only a temporary, pragmatic union response to the economic uncertainties of the past decade? In a recent report, analysts with the International Labour Organization attempted to answer these questions on the basis of a study of more than 400 key labor contracts in industrial nations.

The "stagflation" dilemma. The economic position of most major market economies has declined markedly over the last 10 to 15 years. Accelerating rates of inflation caused by supply shocks, inappropriately timed economic policies, and disorder in the foreign exchange markets have proved alarmingly impervious to an array of monetary and fiscal strategies. At the same time, unemployment rates in many nations have reached highs not witnessed since the 1930's.

Worsening stagflation has presented the large market economies with enormous challenges. Employers and unions face stark realities of adjustment and lower expectations, armed, for the most part, with industrial relations tools appropriate to earlier decades of relative growth and prosperity. The complexities of the new economic environment and the magnitude of the adjustments needed imply that considerable tensions will continue to arise, and appear to call for painful sacrifices by all parties concerned. Stagflation is a stiff test of the ability of developed economies to devise more sophisticated and mature industrial relations systems, to which those economies have begun to respond in a number of ways.

Tripartite approaches. Given the magnitude of the crisis, an increasing number of countries have tried or stepped up the use of tripartite approaches, which combine the efforts of government, business, and labor. Underlying such approaches is the realization that no one of the parties by itself may have the capacity to resolve the problem, including the eliciting of cooperation from the other two.

Tripartite approaches combine industrial relations and non-industrial relations elements to alleviate or diminish the crisis. As a rule, fiscal measures, social security benefits, and increased public investment are offered to workers and employers in order to secure wage moderation. The package of tradeoffs is intended to lower the level of unemployment and average price increases.

Some industrialized nations have a tradition of tripartite response to economic problems. These countries—among them Austria, Japan, and Switzerland—have tended to react to the recent troubles by accentuating the use of existing

formal and informal machinery. More important are developments in such countries as Ireland, Spain, and Italy, where tripartite agreements were concluded during the 1980–81 period. In these countries, neither idiosyncratic factors, the structure of collective bargaining, nor the orientation of the trade union movement seemed to favor the implementation of a tripartite approach. Yet, faced with a critical unemployment and inflationary situation, governments, employers, and unions saw fit to agree on a series of tradeoffs to help weather the crisis.

Neither the United States nor the United Kingdom has been able to articulate a tripartite response to stagflation. In the United States, a 1979 attempt by President Carter to conclude a National Accord among government and employers' and workers' organizations failed. In the United Kingdom, political circumstances have precluded a repetition of the Social Pact operation of 1973. It should also be noted that a longstanding tradition of tripartite cooperation and industrial peace has not prevented the economies of Denmark and Sweden from showing the strain imposed by stagflation.

Government policies. In some cases, national governments have acted unilaterally to create jobs and contain inflation, with varying degrees of success. Most problematical has been the task of balancing the two conflicting objectives. Austerity measures implemented by some governments provide a glaring example of the difficulties involved, for while curbs on spending by the central government may dampen inflation, they impair the government's ability to function as a short-term buffer against rising unemployment. Such measures also caused massive public-sector labor unrest in Belgium, Canada, the Netherlands, and the United Kingdom during 1983.

In a number of countries, the government has coupled austerity programs with direct intervention in the labor relations scene, aimed at adapting collective bargaining to the new economic reality. Incomes policies have been adopted in a few cases. General economic policies have also been geared to influence certain aspects of industrial relations. An important exception to this pattern is the United States, where the current administration has, for the most part, elected a policy of nonintervention.

During 1980–82, nations such as Denmark, Belgium, Canada, and France legislated anti-inflationary wage or wage and price controls for one or more sectors of their economies. At the same time, other government decisions, particularly in European countries, focused attention on the need to promote employment by cutting hours of work through reduced legal workweeks, extended paid annual leave, and incentives for early retirement. "Worksharing" is not a new idea, but recent measures adopted in this respect have formally and drastically changed well-entrenched standards, and implicitly subordinated collective bargaining to government dicta. The most visible and elaborate programs to

"spread the work" currently are found in Belgium and France. However, other nations (the Federal Republic of Germany, the Netherlands, Spain, the United Kingdom, Japan, and Australia) either already have similar, but less comprehensive, job generation plans or are considering implementing them.

Collective bargaining. A question of interest for the future is how stagflation is affecting the structure and process of collective bargaining. With regard to structure, it is frequently stated that in times of crisis, unions prefer to move the level of bargaining up to whole branches of the economy so as to find protection in class solidarity, while employers have a corresponding desire for decentralization. The outcome of the current clash between these conflicting interests will probably be determined by the consistency of previous bargaining structures and the balance of power between the parties.

Recent evidence on changes in bargaining structures shows a mixed picture. It appears that high levels of unemployment have served to further decentralize bargaining in countries where this was already the prevailing pattern (United States) or where structures had been edging toward decentralization over the past two decades (United Kingdom). In some European countries, private-sector bargaining currently takes place at all levels (Spain), while in others, it occurs at the industry level (Belgium and Ireland). Recent history also suggests that it is unwise to generalize about employers' vested interest in bargaining at the lowest possible level, as illustrated by Nordic employers' opposition to decentralization of negotiations.

In some countries, stagflation has affected the process of collective bargaining. Specifically, employers have been forced to accept certain forms of worker participation in the enterprise while unions have forgone some of their more militant activities as protest organizations. However, labor-management cooperation to keep companies alive is likely to be temporary, lasting only until economic recovery sets in.

Some of the most interesting effects of the current economic conditions are found in the contents of labor agreements. For example, both parties have felt the need to contractually specify certain changes in working conditions and in the rules governing their relations. And as the priorities of the parties have changed, emphasis has been shifted from economic benefits to workers' job or income security and their right to participate in decisions about the operations of the firm.

There is, however, an important difference between the United States and other nations in the way in which labor and management have tried to save jobs. In the United States, the parties have negotiated reductions in compensation, while those in other countries have shown a preference for contractual reductions in hours of work (worksharing). Experts have linked the extent of compen-

sation concessions in the United States to a variety of factors favoring employers, including the pattern of enterprise-level negotiations in that country, the relatively high initial level of wages, and the availability of an alternative nonunion labor force which does not exist in most of the other nations studied.

Agreements negotiated in recent years also reflect the need for greater flexibility in the organization of work. Some agreements include plans for the rationalization of troubled enterprises or industrial sectors. And some individual provisions have been altered to accommodate changes in workloads, work assignments, and production patterns.

Finally, there has been no substantial increase in worker representation on company boards in recent years. In several European countries, employers seeking reductions in labor costs have consented to furnish more of their financial information to unions and to consult with labor before important decisions are made. But there have been few changes in the arrangements for minority or quasi-parity worker representation on company boards that predate the current economic crisis. Likewise, there has been little change in the U.S. industrial climate regarding this form of worker participation, with managers preferring quality circles and other forms of worker participation in the organization of work.

Employer responses. Over the past few years, major initiatives for industrial relations change have come from employers, rather than from unions. One analyst notes that it is typical for management to become more assertive under special economic and political conditions, and then to revert to a more passive or reactive mode when the environment changes again.

During economic downturns, enterprises—particularly those employing highly paid personnel—have an incentive to cut labor costs through work force reductions. But when business picks up, such enterprises often find that the cost of hiring and training new workers offsets much of the financial advantage gained from the earlier layoffs. As part of the recent spate of management activism, employers have increasingly elected to transfer the production process from high-wage areas to those in which a relatively stable work force may be maintained on a much lower total payroll.

Where such “restructuring” takes place between countries, as is often the case in Europe, there is little that labor unions or individual governments can do to intervene. However, in the United States, which is not hampered by internal boundaries, transfer of work among regions has given rise to new legal problems. One issue before the courts is whether employers can terminate a labor contract in a high-wage area before it is due to expire, simply by relocating operations to a low-wage site.

To date, the approach of the courts has been that work transfers undertaken solely to avoid the provisions of a valid

agreement are illegal. But “mixed motive” situations are the much more difficult—and typical—case. The position taken by the courts in such cases could have a profound influence on future collective bargaining agreements, insofar as the agreements specify which transfers are management prerogatives and which must be negotiated with the union. Provisions along these lines already appear in a few U.S. agreements.

Another recent form of restructuring in the United States involves employers’ use of the provisions of Chapter 11 of the Bankruptcy Code to terminate their unionized work forces and then rehire some or all of the workers at lower rates of pay. In these controversial cases, workers essentially must choose between having a job without a union agreement or having a union agreement without a job.

The status of unions. Official statistics show that there has been a significant drop in membership in the major U.S. industrial unions. Although unemployment is obviously the major cause, one could also assume that various crisis-linked readjustments have contributed to the drop. And, while there is no evidence that concession bargaining alone has been a critical factor in the decline, such bargaining may have reduced the appeal of unions to their rank and file.

The drop in union membership has been less steep in other industrialized market economies. Trade unions in these countries have traditional formal links with recognized political parties which give them access to machinery other than the collective bargaining process to achieve their goals. This probably makes their membership levels less sensitive to the economic gains or losses resulting from periodic contract renegotiations.

WHILE INFLATION HAS SLOWED in most industrialized market economies over the last year, growth and employment generally have not yet reached satisfactory levels. It is thus too early to determine whether recent patterns of industrial relations can be expected to continue. However, with signs of economic recovery high in the United States, it is likely that the answer to this question will soon be reflected in collective bargaining.

The full ILO report, entitled *Collective bargaining: A response to the recession in industrialised market economy countries*, presents a detailed analysis of collective bargaining agreements by selected characteristics, and a series of articles on various bargaining issues by noted industrial relations experts. The foregoing summary is based on the introduction by Efrén Córdova and David Dror of the ILO’s Labour Law and Labour Relations Branch. Copies of the 1984 report may be obtained from ILO local offices, or directly from ILO Publications, International Labour Office, CH-1211 Geneva, Switzerland. Price: \$11.40. □