

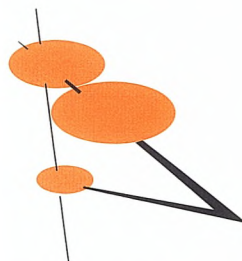
FEDERAL  
RESERVE  
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SAN FRANCISCO

# Monthly Review

In this issue

**On San Diego Bay  
Counting the Jobless**



September 1972

## **On San Diego Bay**

... A community long dominated by the military shows how cutbacks can be handled through the expansion of non-defense sectors.

## **Counting the Jobless**

... Labor Department interviewers check one of every 1,300 households to get an estimate of the employed and the unemployed.

**Editor: William Burke**

## On San Diego Bay

**R**econversion, one of the nation's major problems of the early 1970's, is a problem with which San Diego has long been familiar. That community for decades has been heavily dependent on Pentagon payrolls and aerospace contracts, and thus has participated in all the feasts and famines resulting from the defense budget-making process. (Income generated in these defense-related sectors accounts for roughly 30 percent of the area's total income, as against a 10-percent share in the nation generally.) Recent experience suggests, however, that the San Diego economy has become large enough and diverse enough so that it can take such shocks more or less in its stride.

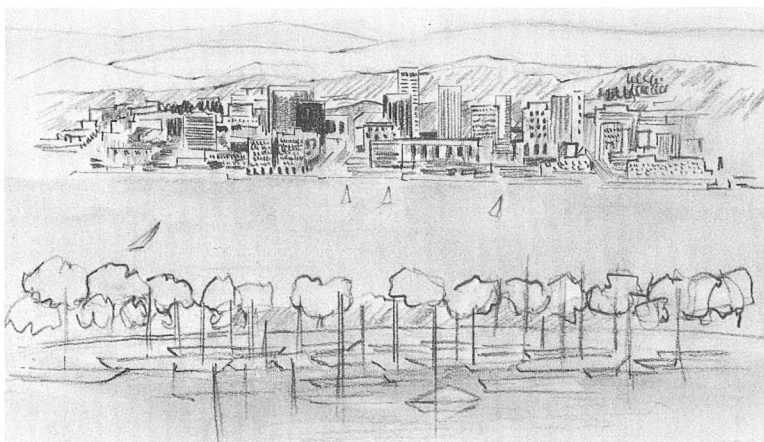
The metropolitan area (coextensive with San Diego county) contains about 1½ million people who receive about \$5½ billion in personal income annually. Paralleling the national experience, San Diego's unemployment rate has risen from below 4 percent to more than 6 percent over the past several years. At the same time, the area has been able to expand total payrolls during this period, despite the sharp cutbacks in several of

its basic industries. For that reason, its experience may bear watching by a nation which is now caught up in the process of reconversion.

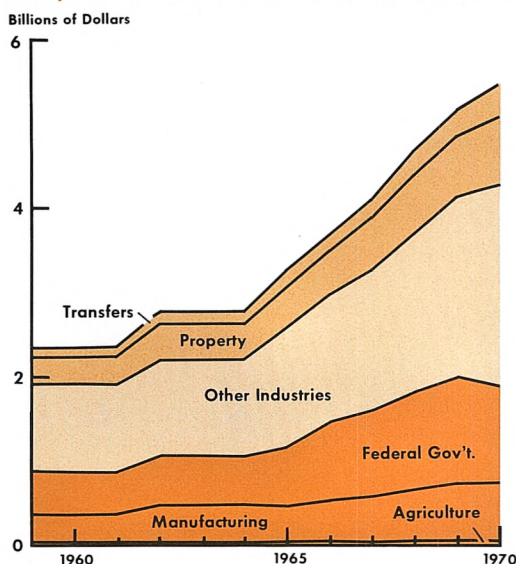
### Captains and consumptives

San Diego's close association with the military dates back to its very beginnings in 1769, when it was established by Don Gaspar de Portola as the oldest European settlement in (Alta) California. Portola's assignment was to establish effective control of California and thereby deny it to the Russians and other interlopers who threatened to establish themselves in the Northwest. His expeditions led to the establishment of four military presidios (San Diego, Santa Barbara, Monterey, and San Francisco) along with the famous chain of Franciscan missions.

Still, the community's real growth began only with the Southern California land boom of the late 19th century. With the selling point of a magnificent harbor (plus substantial subsidies), civic leaders attracted one major railroad (1885), but even with that, the town could not keep pace with Los Angeles to the north. Nonetheless, climate took



## San Diego's income expands despite slowdown in basic industries



the place of commerce as a major drawing card, as crowds of wealthy visitors began to flock to such attractions as the Coronado Beach hotel, the largest of the West Coast resort hotels. (The hotel's stationery advertised the area's restorative powers for those with "weak hearts, disabled lungs, and worn-out nerves".) Yet even as late as 1910, the town's population failed to exceed 40,000.

San Diego's growth pattern was set in the early 20th century with a naval coaling station (1907), an international exposition (1915-17), a second railroad (1919), a naval training station (1923), and the arrival of naval dependents and retired officers as well as fleet personnel. Just as in the 1880's, climate attracted the bulk of these new residents, and climate played a role too in the crucial arrival of the aircraft industry in the 1920's, because of the importance of that factor for open-air storage and test flying. It was from San Diego that Charles Lindbergh took off in 1927 on the first leg of his history-making flight.

During World War II and the Korean War, the expansion in military activity and in air-

craft production triggered a boom in income and employment, and the buildup of missile and space capabilities in the late 1950's then spurred another wave of growth. (At the 1958 peak, aerospace firms accounted for one-fifth of the area's total civilian employment.) The early 1960's marked a retrenchment in the economy because of the slowdown in missile production, but the Vietnam war later brought a new boom to the area.

As a reflection of these and other growth factors, the population of the San Diego metropolitan area roughly doubled in every decade of the half-century period, 1910-60, except for the depressed 1930's. (In some periods, migration has accounted for three-fourths or more of the total population increase.) The growth rate slowed considerably between 1960 and 1970, to 31 percent, but the absolute growth in that decade (325,000) far exceeded that of any other decade except the 1950's. San Diego's total population at the time of the 1970 census — 1.4 million — amounted to 6.8 percent of California's total population.

### Major sources: the military . . .

San Diego's economy generated over \$5.4 billion in personal income in 1970, according to Commerce Department estimates. Five major sectors acted as the main generators of income—Federal Government (military and civilian), manufacturing (especially aerospace), farming and fishing, tourism, and research and development.

Earnings in the Federal Government sector reached \$1,142 million in 1970, or 21 percent of total income—down from 22 percent of the total in 1959 (1960 data not available) and from 27 percent in 1950. Military earnings in each of these years represented the largest share of Government earnings—and indeed, represented the largest single source of income for the entire San Diego economy. Uniformed military personnel received \$807 million in 1970, and a large part

of the \$336 million received by Federal civilian workers was earned on military projects.

San Diego is best known as the home base of the U.S. Navy's First Fleet, but the area also contains the headquarters of the Eleventh Naval District and a host of major installations, including supply depots, air stations, training centers, and an anti-submarine warfare school. Camp Pendleton, the major Marine basic-training center, is located on 125,000 acres of land in the northwestern part of the county. Despite the sharp reductions in the last several years, military and civilian personnel at area installations increased over the past decade as a whole. Total military personnel and civilian employees remained stable over the 1960-65 period at around 128,000 persons, rose to 175,000 at the 1969 peak, and then dropped to 135,000 in 1971, with almost all of the decline centered in the military component.

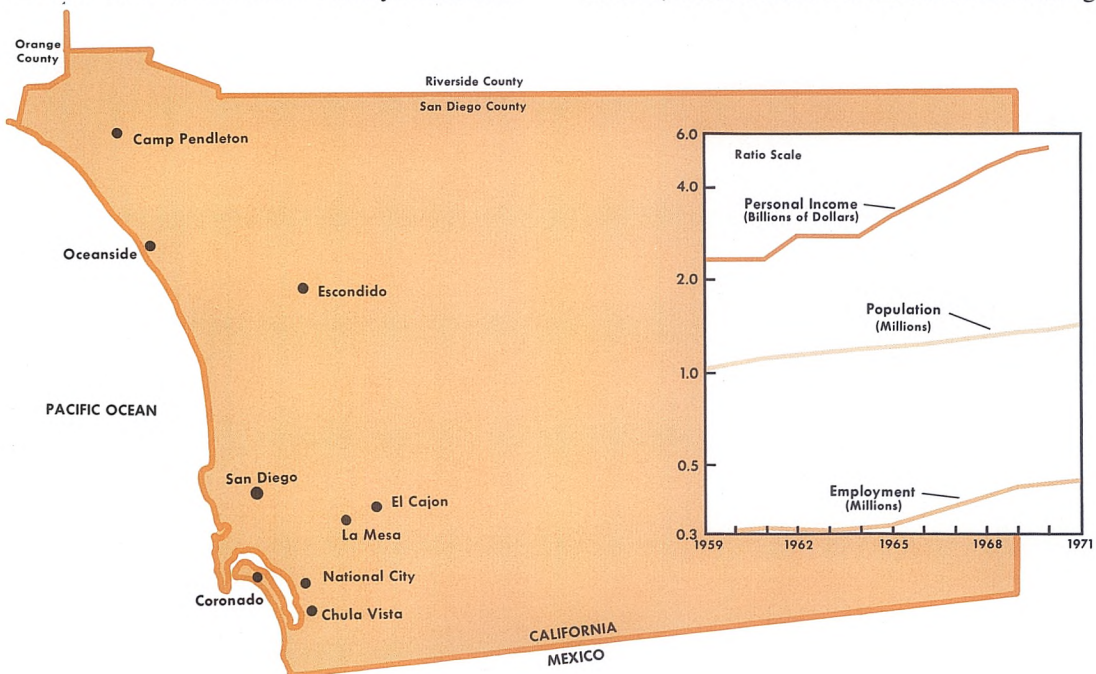
The strength of the local economy also depends on a related factor, the spending of military dependents and retired military personnel. Almost half of the locally-based mil-

itary are married, with an average of 2.7 dependents, so that the total number included in Navy and Marine families amounted to roughly 260,000 in 1971. If the families of civilian workers and retired personnel are included, the number of persons associated in some way with military activities probably exceeded 400,000 in 1971, or almost one-third of San Diego's total population.

The Federal Government, in addition to paying out roughly \$1,200 million in military and civilian pay last year, also disbursed about \$115 million in retirement checks, plus some \$260 million for shipbuilding and repair work, \$65 million for military construction, and \$13 million for school aid for Federally-connected students. All this came on top of the substantial Federal contracts to the aerospace-manufacturing industry, the second major base of the San Diego economy.

... and aerospace

The aerospace boom, which was largely responsible for the record growth of the 1950's, was a much weaker influence during



## FEDERAL RESERVE BANK OF SAN FRANCISCO

most of the past decade. The industry accounted for 19 percent of the area's total civilian employment at the height of the missile-building boom in 1958. However, its share then dropped to 10 percent in 1965, on the heels of a two-fifths reduction in aerospace jobs in the early 1960's, which came about because of a drop in commercial-aircraft orders and the phasing out of several missile programs. The industry more than matched the overall growth of the economy during the Vietnam war buildup, but the budget cutbacks in defense and space programs reduced its employment share from 11 to 7 percent between 1969 and 1971.

In the face of these severe cutbacks in key Federal programs, San Diego's manufacturing industry managed to expand during the past decade by dint of diversification efforts in both defense-related and other lines. Total earnings of factory workers almost doubled between 1959 and 1970, to \$692 million, and earnings increased by two-thirds even in defense-related categories — aircraft, electrical machinery and shipbuilding.

For manufacturing generally, diversification involved the construction of several new plants by makers of computers and data-processing equipment, along with the expansion of shipbuilding work; for the aircraft industry, it involved the manufacture of such non-defense products as nuclear reactors, rapid-transit equipment, materials-handling systems, measuring and surveying equipment, and voting machines. Overall, the past decade witnessed a sharp expansion for practically all except the traditional food-processing industry, with non-electrical machinery in particular exhibiting very rapid growth.

### . . . and other sources

Farming and fishing, the original foundations of the regional economy, remain important although less so than in earlier decades. Farm income reached \$41 million in 1970, about 60 percent above the 1959 fig-

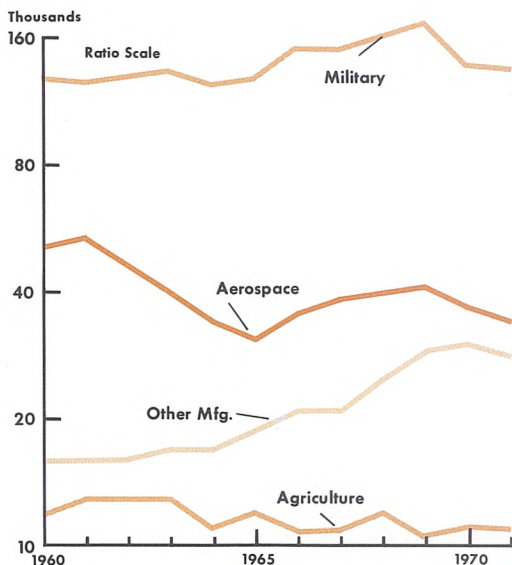
ure. Receipts from farm marketings, at \$153 million last year, placed San Diego among the top 20 farm counties in the nation. Almost a half-million acres are utilized for farming, although the vast majority of farms are small and highly diversified. Urbanization has cut severely into farm acreage over time, forcing the industry to shift toward high-value specialty products which offer a high return per acre.

Livestock and dairy products have declined in importance over the past decade, but still accounted for over one-third of total farm receipts last year. Vegetable crops (such as tomatoes, celery and cucumbers) have also declined in importance, and now account for about one-fourth of the total. But the crops which produce the highest value per acre have sharply increased their share. Fruits and nuts (such as avocados, oranges and strawberries) and cut flowers and other nursery crops each make up one-fourth to one-fifth of total receipts.

The fishing catch, which had practically disappeared a decade earlier, recovered by 1970 to reach \$53 million. Most of this represented a strong improvement in the tuna catch, made possible by the use of larger boats which have the capacity to go anywhere on the high seas. The improved fish catch in turn has helped the fortunes of the canning industry and shipbuilding and repair yards.

Tourism, a major growth factor a century ago, continues in that role today. Indeed, the opening of a convention center and many new hotels has helped tourist receipts to double within the decade, with business and pleasure visitors spending roughly \$400 million last year for food, lodging, entertainment, and other services. Convention business is up sharply, so that even the loss of the Republican convention was less of a shock to San Diego businessmen than might have been expected. Visitors have been attracted not

**Employment cutbacks  
in defense-related sectors . . .**

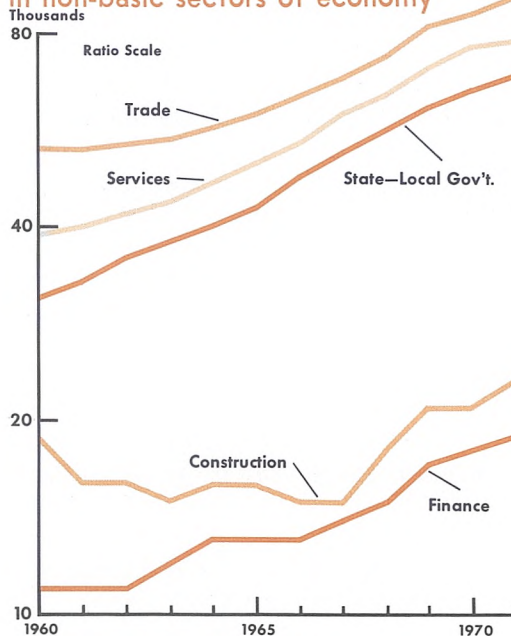


only by the area's business and industrial facilities but also by the wide variety of recreational and leisure-time activities that the region has to offer. These include the world's largest zoo (over 5,000 animals), camping and water-sport facilities, and a number of spectator-sport activities — and whatever is not available in San Diego may be found just across the border in Tijuana.

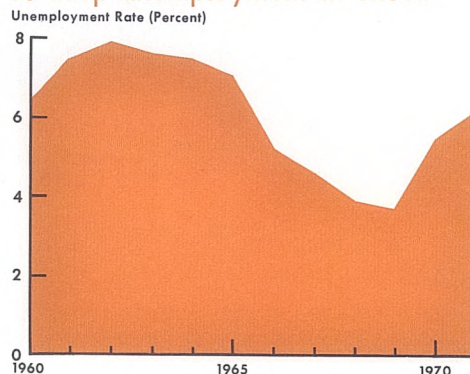
**R&D and the future**

San Diego's rapid growth during the past half-century has been based not only upon the basic sectors described above but also upon another major resource — a large pool of highly-skilled research personnel who are attracted here by the incomparable climate, work opportunities in sophisticated new industries, and educational opportunities in the institutions which feed these new industries. Educational and research facilities have originated a circular development process, whereby research contracts generate production contracts which in turn lead to the strengthening of research staffs which gen-

**. . . largely offset by gains  
in non-basic sectors of economy**



**. . . but not sufficiently  
to keep unemployment in check**



erate new research contracts, and so on. More than that, these institutions seem destined to play a key role in attracting future growth industries to this area.

The nine institutions of higher learning in the San Diego area experienced a doubling of enrollment just within the past half-decade, as the number of full- and part-time students rose to more than 100,000 last year. The most prestigious are the University of Cali-

fornia at San Diego, despite its still relatively small enrollment of 6,500, and the California State University (San Diego) with its massive enrollment of 26,500.

The University of California campus was established around the nucleus of the Scripps Institution of Oceanography in the late 1950's, and is now embarked on a major expansion program looking toward an eventual enrollment of 27,500. The construction program for the 1972-77 period includes \$90 million for marine-biology, clinical-science and humanities buildings. Much of the university's support comes from outside sources; 38 percent of its operating expenditures of \$100 million last year consisted of Federal contracts and grants for oceanography, medicine and the like. The university's large operating budget relative to the size of its enrollment highlights its orientation as a scientific-and medical-research center.

Research-and-development efforts are concentrated not only in the universities but also in independent institutes (such as the Palomar Observatory and the Salk Institute), government agencies and aerospace firms.

Altogether, more than 140 organizations in the area are now engaged in R&D work of one type or another. Most of the work is done in three major areas: electronics (including computers and data processing), oceanography and biomedicine. Probably no other area in the nation can match San Diego's concentration of oceanographic talent, centered mostly at the Scripps Institute and the Naval Undersea Research and Development Center. Similarly, San Diego has a major reputation in biomedical research, conducted primarily at the Salk Institute, the Scripps Clinic and the UCSD School of Medicine.

### Supporting industries' role

Despite the crucial importance of these basic industries—Federal Government, aerospace, farming, tourism, and R&D—the bulk of the area's income and employment is generated by a multiplicity of smaller industries geared mostly to local markets. During periods of rapid growth, these industries generally have been hard-pressed to keep up with the demands created by the crowds of

## Climate (1872)

San Diego seems to me to possess the mildest and sunniest winter climate on the coast. It has the advantage of a large and excellent hotel, and very good shops, and the disadvantage of an almost entire absence of shade and trees. It has pleasant society, and within thirty miles very fine and varied scenery. If I were spending a winter in California for my health, I think I should go first to San Diego, and stay there the months of December and January. . . . It affords some simple amusements, in fishing, shell-hunting, and boat-sailing; and here, as all over Southern California, horses are cheap; and to those who are fond of driving or riding, very fair roads are open. There is less rain here than in any other part of the State; and as the so-called winter in the State is a rainy season, San Diego has the advantage over other places of less mud in December and January. In fact, I doubt if it is ever muddy there.

*Charles Nordhoff*  
California for Health, Pleasure, and Residence



in-migrants attracted into the area. During periods of overall sluggishness, however, these industries have caught up and filled in the economic structure made possible by the earlier rapid growth. Construction, finance, local government, trade and services have all contributed in their own way to the increasing size and stability of the regional economy—witness the record of the past several years.

The unemployment rate in the San Diego area jumped from a very low 3.7 percent in 1969 to a quite high level of 6.2 percent in 1971 and an average of 6.4 percent during the first half of 1972. However, the current rate is still a full percentage point below the jobless rate on the eve of the Vietnam war.

During the 1969-71 period, the rate of employment growth (2.6 percent) was only about one-third as large as the gain between 1965 and 1969. Nonetheless, the fact that employment grew at all between 1969 and 1971 represents a considerable achievement, considering the fact that defense-related manufacturing jobs dropped almost 15 percent (8,000) and the number of military personnel dropped almost 25 percent (37,000) over that period.

The severe employment losses in these major industries were more than offset by substantial employment gains in other industries, ranging from 6 percent for construction to 14 percent for state-local government and 18 percent for finance. Moreover, personal

income increased in these years at about a 7-percent annual rate, reflecting the resilience of the local economy. Surprisingly, in some respects San Diego has recently outperformed California and the nation. For example, residential construction awards jumped 83 percent in 1971 alone—almost double the increase in California generally.

Having all but surmounted its latest crisis, San Diego can begin planning for its next surge of growth. Federal Government payrolls should expand in coming years, reflecting the stabilization of force levels and the recent sharp increases in Federal pay rates. Defense-related manufacturing should gradually stabilize, as at least some of the projects on Washington drawing boards come to fruition—strategic-weapons systems, the space shuttle, the undersea long-range missile system, and shipbuilding programs involving both naval and merchant vessels. R&D projects leading to the new industries of the future will remain a constant plus factor in the long-range outlook, and the same can be said for the region's original basic industry, tourism. Meanwhile, the size and diversity of the San Diego economy, as represented by the recent expansion of locally-oriented industries and the entrance of numerous new nondefense-related manufacturing firms, should help to ensure a broader and more balanced growth than earlier decades were able to record.

*Yvonne Levy*

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Publication Staff: Karen Rusk, Editorial Assistant; Janis Wilson, Artwork.

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## Counting the Jobless

**Q.** What do the following people have in common?

(1) A civilian over 16 who either (a) worked for someone for pay, or (b) worked in his own business, or (c) served as an unpaid worker in a family enterprise, during the week containing the 12th day of the month — and (2) a person who did not work during that week because of temporary absence due to (a) illness, (b) bad weather, (c) labor-management disputes, or (d) vacation or personal business.

A. For statistical purposes, both individuals are considered as employed.

**Q.** How does the following individual differ from those described above?

A civilian who had no job during the week containing the 12th day of the month, but was available for work, and additionally (a) had actively sought employment during the past four weeks, or (b) was waiting to be recalled to a job from which he had been laid off, or (c) was waiting to report to a new job for pay within the next 30 days.

A. For statistical purposes, this individual is considered as unemployed.

\* \* \*

The sum of all employed and unemployed civilians equals the civilian labor force. This figure of course is not synonymous with the total civilian population. For statistical purposes, some people are excluded from the civilian labor force who are neither employed nor unemployed by the above standards. Among the excluded categories are: (1) persons engaged in housework in their own

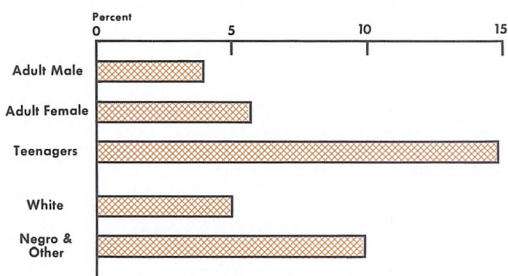
home, or (2) persons in school, or (3) persons with a new job not scheduled to begin until after 30 days, or (4) persons unable to work because of long-term physical or mental illness. Other excluded categories are: (1) retired persons, (2) individuals temporarily unable to work, (3) individuals too old or too young to work, (4) persons doing less than 15 hours weekly of unpaid family work, (5) seasonal workers surveyed in the off-season and not looking for work, (6) inmates of institutions, (7) persons not looking for work because of their belief that no jobs were available for which they could qualify, and (8) voluntarily idle persons.

### Counting the unemployed

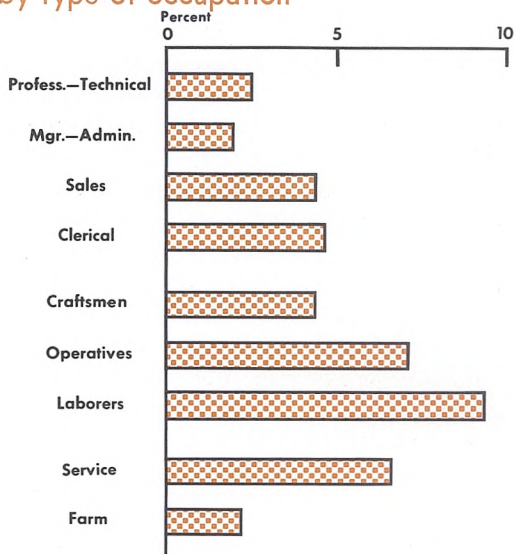
When a new report indicates that 81.7 million persons were employed and 4.8 million people were unemployed in a given month — as the Labor Department's July release reported — one might gain the impression that over 86 million individuals were personally enumerated and asked whether or not they were currently employed. A moment's reflection would indicate that the polling of this number of persons on a monthly basis would be both prohibitively expensive and physically impossible to accomplish. Obviously, a sample survey is the only realistic means of gaining the desired information.

A principal source of employment and unemployment information is the Current Population Survey (CPS), conducted by the Bureau of the Census. This household survey (which gathers data where each individual lives) generates the information for the measurement of the nation's unemployment rate. This survey utilizes a sample which repre-

**Household survey shows jobless rates by age, race and sex . . .**



**. . . along with jobless rates by type of occupation**



sents the entire national population, although it consists only of about 50,000 households chosen in 449 sample areas.

The design and construction of a survey sample is a highly technical operation, which is meant to ensure the equal probability of any household being chosen in the monthly survey. At the present time, each household in the sample represents about 1300 households in the nation. This sample size may seem small, but it is actually the largest monthly household survey in the world, 50 times larger than many of the national public opinion polls. How then to choose the group of households to be contacted?

**Choosing PSUs and EDs**

The United States is made up of 3,128 counties and independent cities, and for purposes of this sample they are divided into 1,913 primary sampling units (PSUs). Generally, a PSU consists of an entire county or a number of adjoining counties. Altogether, 212 counties are classified because of the size of their population as Standard Metropolitan Statistical Areas. (An SMSA is “a county or group of counties which contains at least one city of 50,000 inhabitants or more, or ‘twin cities’ with a combined population of 50,000. . . . Contiguous counties are included in an SMSA if, according to certain criteria, they are socially and economically integrated with the central city.”) An SMSA thus describes those counties, or groups of counties, which contain the major cities and their surrounding metropolitan areas.

A little over half of all SMSAs are included in the primary sample units (PSUs). Where counties outside the SMSAs are combined to form a PSU, the selection is based on internal heterogeneity of the population, with some emphasis on geographic compactness in the interests of economy. The ideal PSU outside the major population centers (SMSAs) should, at a minimum of travel cost, encompass urban and rural households of both high and low income levels, together with the widest possible diversity of industrial and occupational classifications.

Having been selected, the PSUs are then grouped into 357 strata. Each stratum is a group of PSUs whose populations are relatively similar in terms of race, age, sex, education, occupation, and other characteristics, in a way which differs from one stratum to another. If we were all as alike as peas in a pod, there would be no need to bother with the stratification procedure, since any sample would reflect the characteristics of all of us peas — the universe from which the sample is drawn.

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The basic sampling frame for the monthly household survey altogether includes 449 areas, allowing for double selection within some of the 357 strata. The sample automatically includes 107 of the largest SMSAs — those containing more than 250,000 persons each — plus 373 other areas chosen to ensure a broadly representative selection. These areas remain generally unchanged between decennial censuses.

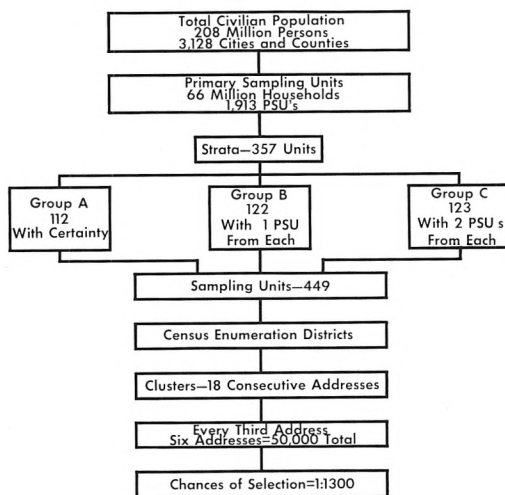
The 449 sampling units fix the areas to be included in the monthly household survey but do not specify the particular neighborhoods in which the selected households are located. The actual geographical area surveyed is the Census Enumeration District (ED), each of which averages somewhat less than 300 households. The EDs within a chosen PSU are sampled in such a manner that the probability of any ED being chosen is equal to its share of total population in the last census.

When the EDs have been selected, a group of six urban households is chosen from sample clusters of 18 consecutive addresses, with every third address being picked. In rural areas, the samples are chosen from designated areas considered to contain about six households. The households in each ED sampled are rotated on a gradual basis, so as to maintain some degree of continuity while reducing sample bias and the burden of response.

The overall sampling ratio today is approximately one out of every 1,300 households. This ratio decreases as the population grows, while the sample size is held constant. The sampling rate within PSUs may vary, but it is adjusted to give each household in the survey a 1,300-1 chance of being chosen.

## Household survey

The interview takes place during the calendar week which contains the 19th day of the month. At the time of the first inter-



view, the interviewer contacts “some responsible person in the household” and prepares a roster of the personal characteristics of each member of the household, including relationship to household head. After all, the principal purpose of the Current Population Survey is to measure some characteristics and composition of the population. In subsequent interviews the questionnaire is updated and changed to take account of new developments.

The reference period for the interview is the week prior to the interview — the week containing the 12th day of the month. The reference period is deliberately placed close to the interview so as to guard against the unreliability of memories concerning employment data over a longer time span.

The interviewer uses a series of standard questions concerning the economic activity during the reference week of every member of the household 16 years of age and over. These questions serve to establish the employment status of the sample population; whether employed, not employed, or not in the labor force. For a variety of reasons, the interviewed sample is about 4-6 percent smaller than the selected sample. Adjustment for nonresponse is made by weighting PSU

data according to the characteristics of the noninterviewed household. Although survey participation is entirely voluntary, refusals generally have run no higher than 1 percent of the total.

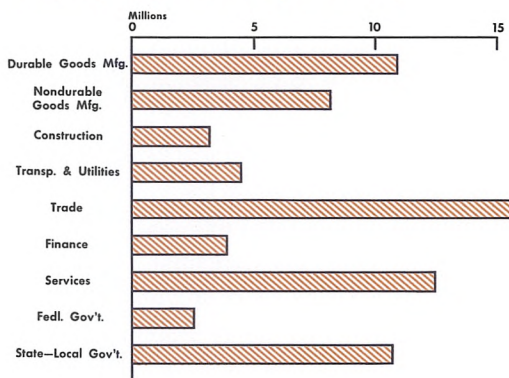
Persons at work are asked about the number of hours worked and the type of job held; part-time workers are also asked the reasons for working only part-time. Unemployed persons are asked about the steps taken to seek work in the past four weeks, the length of time spent in looking for work and the kind of job last held. Persons not in the labor force are asked about the last type of job held, as well as reasons for leaving it and not currently seeking employment.

### Establishment survey

In addition to the monthly household survey, there is another very important source of data concerning employment, hours, and earnings — the establishment employment survey. These data are taken from payroll records rather than directly from workers or their families — hence the frequent reference to “payroll” data. (In other words, the household survey relates to individuals whereas the establishment survey relates to jobs.) These data are collected and processed as a joint effort of the employment agencies of the 50 states and the District of Columbia along with the U.S. Bureau of Labor Statistics. They provide the principal source of state and metropolitan-area labor statistics, since the household survey for any single locality is too small to be statistically reliable.

An establishment is defined as “an economic unit which produces goods or services, such as a factory, mine, or store.” Ideally, it is located at a single geographical or physical location and is engaged in a specific activity. Where a firm has more than one plant engaged in the same activity, and these plants are in close proximity — say, in the same county — they may be reported as one unit.

### Establishment survey counts employed persons by industry



Payroll statistics cover the total number of persons employed full or part-time in non-agricultural establishments (including civilian government) during a given pay period. Again, as with the household survey, the reference period is the calendar week containing the 12th day of the month. Both full-time and part-time employees, and both permanent and temporary employees, are counted if they receive any pay at all during the reference period. Workers on paid sick leaves or on paid holiday or vacation are also counted. Persons on the payroll of more than one establishment are included in the tally of each firm. Proprietors, self-employed persons and unpaid family workers are excluded, together with domestic household workers.

### Sources and samples

Payroll-employment information is gathered from a sample of reporting establishments which report on a voluntary basis. The actual data — number of employees, payrolls, and hours of work — are taken from the firms' payroll records. In contrast to household-survey samples, which are checked against the decennial census for consistency, establishment samples are checked against the reports of a number of agencies which provide complete or nearly complete

counts of workers in certain industries or sizes of establishments. These include state employment-security agencies, the Social Security Administration, the Interstate Commerce Commission, the U.S. Civil Service Commission, and a number of private trade and professional agencies. Monthly payroll-employment data are adjusted to the benchmark data every March.

The payroll-employment sample is subject to a somewhat different set of constraints than is the household survey. In particular, there is a need to supply a considerable amount of detail on industry employment for the nation, states, and major metropolitan areas. Establishments are classified on the basis of industry and on the basis of size. Large establishments, which in most industries mean those with 250 or more employees, are automatically included in the sample. Where an industry is characterized by rather large establishments, the sampling of smaller facilities will be less frequent than for industries (such as retail trade or services) with many small establishments. Altogether, more than 157,000 reporting units (establishments) are included in the sample nationwide.

### Uses and limitations

The household survey data and the establishment data are not directly comparable; they should be considered complementary rather than interchangeable. For one thing, the household survey accounts for all members of the population 16 years of age and older, classifying them as employed, unemployed, or not in the labor force, while the payroll series is restricted to nonagricultural employed persons and reveals nothing about unemployment or the size of the labor force. Additionally, the household survey counts all members of the adult population without duplication, while the payroll survey counts multiple job holders on each payroll on which they appear. (There are about 4

million such people, or about 5 percent of all employed persons.)

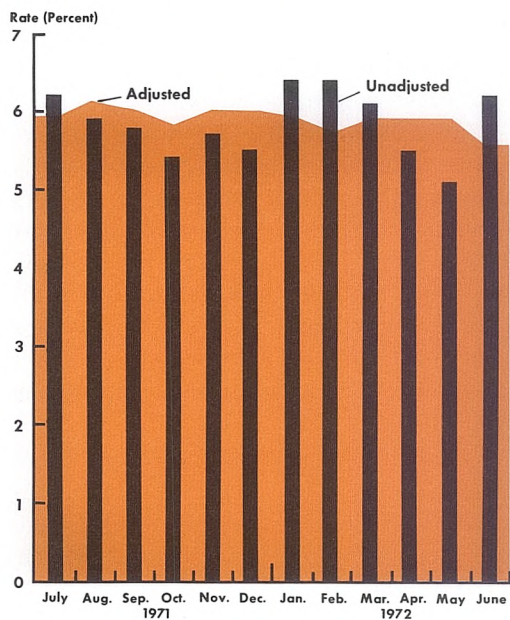
The household survey includes unpaid family workers, domestic household workers, proprietors and self-employed persons — all of whom are excluded from the payroll survey. (The latter, however, undoubtedly picks up some workers under 16 years of age, who are excluded from the household survey.) Workers on unpaid leave or on strike or unpaid vacations during the reference week are included in the household survey but not in the payroll series.

The household survey is strongest in detailing the personal characteristics of workers — age, sex, race, marital status, occupation — and weakest in describing the distribution of employment by industrial classification or geographical location. But the establishment survey is strongest where the household survey is weakest, since it provides industrial and geographical data along with earnings and hours information. Because each of these employment series is developed from its own sample survey, problems of sample variability and response error may introduce differences in both levels and trends that would limit employment comparisons between the two surveys.

### Samples and seasonals

The household survey contacts approximately 50,000 households, and this (as noted) corresponds to approximately 1 of every 1,300 households in the nation. This may seem to be a rather slim reed upon which to base decisions depending upon the unemployment rate — one of the most closely watched indicators in the economy and a basic consideration in the formation of public policy. Yet the quality of a statistical sample essentially is independent of the size of the universe or population which it represents. As with many other things, bigger is not necessarily better. Indeed, the household survey is designed to be accurate within ½

## Adjustment process smooths out seasonal fluctuations



percent of the “true” employment figures 95 percent of the time.

The establishment employment survey, unlike the household survey, is not susceptible to a mathematical specification of the probable error of the estimated size of non-farm employment. Its size (over 157,000 establishments) and its coverage (43 percent of total payroll employment) do not necessarily guarantee its accuracy, but the revision for total employment in the 1970 benchmark revision amounted to only 0.2 percent of the estimate.

The seasonally adjusted national unemployment rate for June 1972 was 5.5 percent of the civilian labor force. Since the labor force is the sum of the total number of persons employed plus the total number of persons without work who wish to find jobs, the unemployment rate is simply the ratio of the total number of such unemployed persons to the total number of persons who are either working or wish to work. But then

the employment and unemployment totals are adjusted to take account of normal seasonal fluctuations — due to weather, holidays, the school year, and so on — thus permitting comparisons of one month’s data with other months’ data.

June is a particularly difficult month for statisticians to cope with, since the school year ends then and students and graduates burst upon the labor market in very large numbers. The Christmas season also presents problems, because of the large number of temporary workers taken on during the holiday season and released after the turn of the year. Moreover, since current seasonal influences are never exactly the same from one year to another, one can never be sure that the seasonal adjustment is accurate. Where wide seasonal swings in employment are commonplace and, hence, large factors are used for seasonal adjustment, errors in the adjustment process can make substantial differences in the result.

### States and metro areas

The household survey has not been used to determine labor force data for states and major metropolitan areas, because of the costliness of developing a survey sample large enough to afford satisfactory estimates of such data. Individual state employment departments develop labor force data which are identical in concept to the information generated by the national household survey, but they use quite different procedures and techniques in doing so. The general method used commonly is referred to as the “building block” approach.

The first of these building blocks consists of the establishment data for nonagricultural employment. The second source, and the major basis of information concerning unemployment, consists of the records of the various unemployment compensation programs. However, supplemental information must be added to adjust for those groups of

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workers that are excluded from the basic data sources. The estimating technique used by the California Department of Human Resources, which is probably representative of the methodology used by most other states, is described below.

Total civilian employment is estimated by adding, on top of the establishment employment figures, estimates for such excluded categories as farm workers, unpaid family workers, domestic household workers and self-employed persons (including proprietors). These estimates are developed from a number of sources, such as the decennial population census, agricultural reports, unemployment-insurance data, and information obtained from various tax permits and professional licenses. Government employment information comes from Federal agencies, state personnel departments, and surveys of local governments and school boards.

Similarly, adjustments must be made to the reported information for covered unemployment — those persons protected by unemployment insurance programs. In fact, even the number of persons collecting unemployment compensation at any one time may fall short of the actual number of persons on covered status. Persons may have exhausted their benefits and still remain unemployed, or they may have filed claims and been found disqualified, or been qualified but have not filed. In addition, there are other unemployed workers who are not covered by unemployment compensation programs, principally the self-employed, unpaid family workers,

farm workers, and some state-and-local government workers. Generally speaking, however, the incidence of unemployment among uncovered workers bears some correspondence to the rate of unemployment among covered workers.

Estimates must also be made for new entrants to the labor force — would-be workers with a minimum or complete lack of work experience. Allied to these new entrants are the re-entrants who have had earlier work experience but have then dropped out of the labor force, such as a housewife who worked prior to marriage and whose children are now old enough to allow her to seek employment once again.

The ingress of new entrants to the labor force generally is bunched at the end of the school year. The re-entrants to the labor force demonstrate less of a seasonal pattern; instead, they tend to respond to changes in life cycle or living style, as well as to the degree of tightness or ease in labor markets, which fluctuates (albeit irregularly) with the general level of economic activity. If the demand for labor is strong and wage rates are rising and attractive, former workers might well be coaxed back into the job market. Conversely, if the labor market softens, and the primary income earner in the family loses his (or her) job, other members of the family unit with work experience may re-enter the labor force in an attempt to maintain the family income.

*Herbert Runyon*