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U.S. CENSUS OF POPULATION: 1960

Final Report PC(2)-1B

SUBJECT REPORTS

Persons of Spanish Surname

*Social and Economic Data for White Persons of
Spanish Surname in Five Southwestern States*

*Prepared under the supervision of
HOWARD G. BRUNSMAN, Chief
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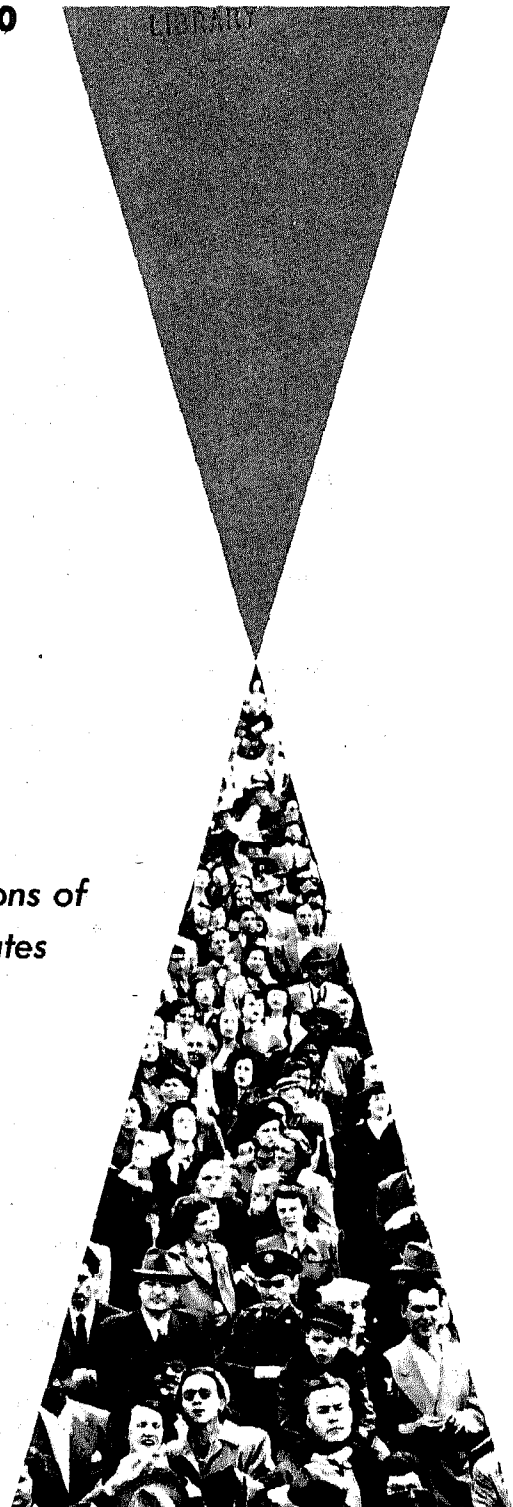
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PREFACE

This report presents statistics from the 1960 Census of Population on the social and economic characteristics of persons of Spanish surname in five southwestern States--Arizona, California, Colorado, New Mexico, and Texas. Legal provision for this census, which was conducted as of April 1, 1960, was made in the Act of Congress of August 31, 1954 (amended August 1957), which codified Title 13 United States Code.

The major portion of the information compiled from the 1960 Census of Population appears in Volume I, Characteristics of the Population, which contains data for the United States, States and counties and their urban and rural parts, cities, minor civil divisions, etc. The present report is part of Volume II, Subject Reports, and is designated as PC(2)-1B. A summary description of all the final reports of the 1960 Population Census appears on page IV.

ACKNOWLEDGMENTS

A large number of persons participated in the various activities of the 1960 Census of Population. Primary responsibilities were exercised by many of the persons listed on the preceding page. Within the Population, Demographic Operations, Field, Geography, and Statistical Methods Divisions, most of the staff members worked on the program. Important contributions were also made by the staffs of the Administrative Service Division, Everett H. Burke, Chief; Budget and Management Division, Charles H. Alexander, Chief; Data Processing Systems Division, Robert F. Drury, Chief; Jeffersonville Census Operations Office, Robert D. Krook, Chief; Personnel Division, James P. Taff, Chief; and Statistical Research Division, William N. Hurwitz, Chief.

Henry D. Sheldon, Chief, Tobia Bressler, and Denis F. Johnston, assisted by Benjamin S. Bradshaw, of the Demographic Statistics Branch, Population Division, had the major responsibility for planning this report and developing its content. John C. Beresford provided liaison with the operations staff, Elizabeth A. Larmon assisted in the preparation of the introductory text, and Mildred M. Russell and Leah S. Anderson performed the technical editorial work. The procedures for compiling the data were devised by Patience Lauriat, Catherine M. Neafsey, William D. Buell, George E. Turner, and Anthony B. Woodell of the Demographic Operations Division. The sampling materials were prepared by Robert Hanson, Stanley M. Edelstein, and Anthony G. Turner of the Statistical Methods Division.

The census program was designed in consultation with a number of advisory committees and many individuals in order to maximize the usefulness of the data. Among the groups organized for this purpose were the Technical Advisory Committee for the 1960 Population Census, the Council of Population and Housing Census Users, and the Federal Agency Population and Housing Census Council (sponsored by the U.S. Bureau of the Budget). The persons who served with these groups represented a wide range of interest in the census program; their affiliations included universities, private industry, research organizations, labor groups, Federal agencies, State and local governments, and professional associations.

August 1963.

FINAL REPORTS OF THE 1960 CENSUS OF POPULATION

The final reports of the 1960 Population Census are arranged in three volumes and a joint Population-Housing series of census tract reports. The 1960 Population Census publication program also includes preliminary, advance, and supplementary reports, certain evaluation, procedural, and administrative reports, and graphic summaries. After publication, copies of all reports are available for examination or purchase at any U.S. Department of Commerce Field Office.

Certain types of unpublished statistics are available for the cost of preparing a copy of the data. Also, under certain conditions, special tabulations of the 1960 Census data can be prepared on a reimbursable basis. In addition, there are available for purchase magnetic tapes and punchcards containing 1960 Census information on the characteristics of a one-in-a-thousand and a one-in-ten-thousand sample of the population of the United States. Confidentiality of the information, as required by law, has been maintained by the omission of certain identification items. Further information about any of these materials can be obtained by writing to the Chief, Population Division, Bureau of the Census, Washington, D.C., 20233.

Volume I. Characteristics of the Population. This volume consists of separate reports for the United States, each of the 50 States, the District of Columbia, Puerto Rico, Guam, Virgin Islands, American Samoa, and Canal Zone. For each of these 57 areas, the data were first issued in four separate paper-bound "chapters," designated as PC(1)-A, B, C, and D. (For Guam, Virgin Islands, American Samoa, and Canal Zone, the material normally contained in chapters B, C, and D are included in chapter B.) For library and general reference use, the paper-bound reports have been assembled and reissued in buckram-bound books identified as Parts A and 1 to 57 of Volume I.

Series PC(1)-1A to 57A: Chapter A. Number of Inhabitants. These reports contain final population counts for States and counties and their urban and rural parts, and for standard metropolitan statistical areas, urbanized areas, all incorporated places, unincorporated places of 1,000 inhabitants or more, and minor civil divisions.

Series PC(1)-1B to 57B: Chapter B. General Population Characteristics. These reports present statistics on sex, age, marital status, color or race, and relationship to head of household for States and counties and their urban and rural parts, and for standard metropolitan statistical areas, urbanized areas, places of 1,000 inhabitants or more, and minor civil divisions.

Series PC(1)-1C to 57C: Chapter C. General Social and Economic Characteristics. These reports cover the subjects of nativity and parentage, State of birth, country of origin of the foreign stock, mother tongue, place of residence in 1955, year moved into present house, school enrollment by level and type, years of school completed, families and their composition, fertility, veteran status, employment status, weeks worked in 1959, year last worked, occupation group, industry group, class of worker, place of work, means of transportation to work, and income of persons and families. Each subject is shown for some or all of the following areas: States and counties and their urban, rural-nonfarm, and rural-farm parts, standard metropolitan statistical areas, urbanized areas, and urban places.

Series PC(1)-1D to 57D: Chapter D. Detailed Characteristics. These reports present most of the subjects covered in chapter C, above, cross-classified by age, color, and other characteristics. There is also included additional information on families, as well as data on single years of age, detailed occupation, and detailed industry. Each subject is shown for some or all of the following areas: States and their urban, rural-nonfarm, and rural-farm parts; and large counties, cities, and standard metropolitan statistical areas.

Volume I, Part A: Number of Inhabitants. This is a compendium of the 57 chapter A reports, i.e., PC(1)-1A to 57A.

Volume I, Parts 1 to 57: Characteristics of the Population. The 57 parts relate respectively to the United States, each of the 50 States, District of Columbia, Puerto Rico, Guam, Virgin Islands, American Samoa, and Canal Zone. Each part contains the data previously published in the four chapters A, B, C, and D, and is in the form of a separate, buckram-bound book, Parts 54, 55, 56, and 57--for Guam, Virgin Islands, American Samoa, and Canal Zone, respectively--are bound in a single book.

Volume II (Series PC(2) reports). Subject Reports. Each report in this volume concentrates on a particular subject. Detailed information and cross-relationships are generally provided on a national and regional level; in a few reports data for States or standard metropolitan statistical areas are also shown. Among the characteristics covered are ethnic origin and race, fertility, families, migration, education, employment, unemployment, occupation, industry, and income. There is also a report on the geographic distribution and characteristics of inmates of institutions.

Volume III (Series PC(3) reports). Selected Area Reports. Three of the reports in this volume present selected characteristics of the population (1) for State economic areas, (2) for standard metropolitan statistical areas, and (3) according to the size of place where the individual resided. A fourth report provides data on the social and economic characteristics of Americans overseas.

Series PHC(1). Census Tract Reports. These reports present information on both population and housing subjects. There is one report for each of 180 tracted areas in the United States and Puerto Rico. The population subjects include age, race, marital status, country of origin of the foreign stock, relationship to head of household, school enrollment, years of school completed, place of residence in 1955, employment status, occupation group, industry group, place of work, means of transportation to work, and income of families, as well as certain characteristics of the nonwhite population in selected tracts. The housing subjects include tenure, color of head of household, vacancy status, condition and plumbing facilities, number of rooms, number of bathrooms, number of housing units in structure, year structure built, basement, heating equipment, number of persons in unit, persons per room, year household head moved into unit, automobiles available, value of property, and gross and contract rent, as well as certain characteristics of housing units with nonwhite household head for selected tracts. In addition, for selected tracts these reports contain data on certain population and housing subjects for persons of Puerto Rican birth or parentage and for white persons with Spanish surname. (This series is the same as the tract reports listed in the publication program for the 1960 Census of Housing.)

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Persons of Spanish Surname

GENERAL

This report, based on the 1960 Census of Population, presents data on the social and economic characteristics of the white population of Spanish surname in five Southwestern States--Arizona, California, Colorado, New Mexico, and Texas. All the data are tabulated from the 25-percent sample. These statistics and similar data obtained in the 1950 Census were tabulated for the purpose of obtaining information on the Spanish-American and Mexican-American population in the designated States. The statistics on persons of Spanish mother tongue in the 1940 Census and on "Mexicans" in the 1930 Census were compiled for the same general purpose. Information presented in this report includes statistics on age, birthplace and parentage, residence in 1955, years of school completed, school enrollment, marital status, relationship to head of household, family type and composition, employment status, occupation, industry, income, hours worked in the reference week, and weeks worked in 1959.

RELATED REPORTS

The major part of the population data tabulated from the 1960 Census on persons of Spanish surname is presented in this report. Information on the population of Spanish surname for census tracts is presented in 1960 Censuses of Population and Housing, Census Tracts, Series PHC(1), for tracted areas in the specified five Southwestern States. Data include the number of such persons by nativity for each tract. Social and economic characteristics of persons of Spanish surname are shown for tracts with 400 or more such persons in tracted areas having 5,000 or more persons

of Spanish surname. Persons of Spanish surname are also recognized as a separate ethnic group in several of the proposed PC(2) reports on such subjects as fertility, and educational attainment. Similar data for 1950 are published in 1950 Census of Population, Volume IV, Part 3, chapter C, Persons of Spanish Surname; Part 5, chapter B, Education; and Part 5, chapter C, Fertility.

AVAILABILITY OF UNPUBLISHED DATA

For the five Southwestern States of Arizona, California, Colorado, New Mexico, and Texas, photocopies of unpublished tabulations of social and economic characteristics of white persons of Spanish surname comparable to those published in Census Tracts, Series PHC(1), are available at cost for areas outside tracted areas for each ward in cities of 25,000 or more, urban place, minor civil division, and remainder of minor civil divisions containing urban places. For these same States, the data presented in this report in tables 1 to 8 are available on magnetic tape for the States, standard metropolitan statistical areas (SMSA's) of 250,000 or more by urban-rural residence, and for the nonmetropolitan balance of States by urban-rural residence. These data can be made available on a reimbursable basis. Inquiries concerning unpublished data should be addressed to the Bureau as soon as possible because tape files are not maintained indefinitely. Requests for unpublished data giving a specific description of the figures desired may be made in writing to the Chief, Population Division, Bureau of the Census, Washington, D.C., 20233.

DEFINITIONS AND EXPLANATIONS

Some of the definitions used in 1960 differ from those used in 1950. These changes were made after consultation with users of census data in order to improve the statistics, even though it was recognized that comparability would be affected. The definitions and explanations should be interpreted in the context of the 1960 Censuses, in which data were collected by a combination of self-enumeration, direct interview, and observation by the enumerator.

The definitions below are consistent with the instructions given to the enumerator. As in all surveys, there were some failures to execute the instructions exactly. Through the forms distributed to households, the respondents were given explanations of some of the questions more uniformly than would have been given

in direct interviews. Nevertheless, it was not feasible to give the full instructions to the respondents, and some erroneous replies have undoubtedly gone undetected.

More complete discussions of the definitions of population items are given in 1960 Census of Population, Volume I, Characteristics of the Population, Part 1, United States Summary, and in each of the State parts.

MEDIAN

The median is presented in connection with the data on age, years of school completed, and income. It is the value which divides the distribution into two

equal parts, one-half of the cases falling below this value and one-half the cases exceeding this value.

A plus (+) or minus (-) sign after the median indicates that the median is above or below that number. For example, a median of \$10,000+ for income indicates that the median fell in the interval "\$10,000 or more."

PERSONS OF SPANISH SURNAME

The population of Spanish surname in the Southwest is heterogeneous in both its history and ethnic origin. As early as the sixteenth century, the Spanish-American, Spanish-Colonial, or Hispano group, as it is variously called, settled in what is now the United States. The largest and earliest settlements were in New Mexico, but there were others in the next century in California and Texas. The Spanish-American group thus lived in territory that came under the American flag by the annexation of Texas, the Treaty of Guadalupe Hidalgo, and the Gadsden Purchase. The second major group, generally called Mexican Americans, consists of recent immigrants from Mexico and their descendants. Immigration from Mexico had been relatively light until about 1910; since that time immigration has been fairly steady and at times quite large. Direct immigrants from Spain, the West Indies, and Central and South America have generally been negligible in number. Ethnically, the population of Spanish-American and Mexican descent ranges from Indians to those of unmixed Spanish ancestry, with many persons being of Spanish-Indian ancestry.

Special recognition of the interest in the Spanish-American and Mexican-American population of the United States was first given by the Bureau of the Census through the collection and publication of data on "Mexicans" in the Census of 1930. The interest which gave impetus to the collection of these statistics was stimulated by the heavy immigration from Mexico during the decade of the twenties. In the 1930 Census, not only were persons of Mexican birth and parentage identified (as they had been in previous censuses), but an attempt was also made to identify as "Mexicans" persons of Spanish-Colonial descent and the small number of grandchildren of Mexican immigrants among native persons of native parentage and to provide statistics on the entire Spanish-American and Mexican-American population. The category "Mexican" in that census was one of the categories of the racial classification. Enumerators were instructed to classify as "Mexican" all persons of Mexican origin who were not definitely white, Negro, Indian, or Japanese.

In the Census of 1940, a question on mother tongue, or language other than English spoken in earliest childhood, was asked of a 5-percent sample of the entire population, and the responses to this question made possible tabulations for persons of Spanish mother tongue in the three nativity and parentage classes--foreign born, native of foreign or mixed parentage, and native of native parentage. Although the statistics on persons of Spanish mother tongue cannot be said to cover exactly the same segment of the population as was covered by the 1930 statistics on "Mexicans," they would seem to do so to a considerable extent.

In the 1950 and 1960 Censuses, data relating to persons of Spanish-American and Mexican-American origin were obtained by the identification of persons of Spanish surname on the census schedules as part of the general coding operation. This procedure was limited to the five Southwestern States--Texas, Colorado, New Mexico, Arizona, and California--which in 1940 accounted for more than 80 percent of all persons of Spanish mother tongue. This method of identification has proved to be a relatively efficient and economical means of obtaining the desired statistics. The merits and shortcomings of identification by surname are discussed below.

Identification of persons of Spanish surname.--The identification of Spanish surnames in 1960 was performed as a part of the manual coding operation. The regular coders were given a list of about 7,000 Spanish surnames originally compiled by the Immigration and Naturalization Service.¹ They were instructed to classify a name as Spanish only if it appeared on this list. Other names of apparent Spanish origin were referred to specialists who had been instructed on those characteristics of Spanish surnames which differentiate them from surnames in other Romance languages, such as Portuguese, French, and Italian. The procedure used in 1960 was essentially the same as that used in 1950 and employed the same basic list of names with a few additions and deletions to correct for obvious omissions or errors. The major difference in coding of Spanish surnames in 1950 and 1960 was that in 1950 coders were given more extensive training in recognizing characteristics of Spanish surnames, whereas in 1960 coders simply checked all names to the list of surnames. The list of names thus more nearly operationally defines the Spanish-surname population in 1960 than in 1950. The results appear to be comparable.

Although the validity and reliability of the Spanish-surname classification in 1950 and 1960 were probably not so great as they might have been had the classification been made by a committee of experts, the results appear to have been reasonably adequate. It must be recognized that surnames are only correlated with national origins; that certain surnames are common to a number of different languages and hence that a complete dichotomy of Spanish and non-Spanish names is not possible; that surnames identified with other European nationalities such as, for example, the Irish are found among Latin Americans; and that there has been some Anglicization of initially Spanish surnames. It is believed, however, that the general adequacy of the classification is not invalidated by these limitations. The Spanish surname classification does identify a population with distinctive social and economic characteristics highly correlated with certain national origins. The adequacy of the classification depends finally on the degree to which the purposes for which the classification was made were met.

¹ U.S. Immigration and Naturalization Service, Supplement to Manual of Immigration Spanish--Spanish Personal Names, selected by Inspector George Lockwood, New York, 1936.

Adequacy of classification.--The objective of the separate identification of "Mexicans" in the 1930 Census, of the compilation of persons of Spanish mother tongue in 1940, and of the identification of persons of Spanish surname in 1950 and 1960, was considerably more than the mere identification of persons of Mexican birth or parentage already available from the questions on birthplace of the respondent and of his parents. It involves an attempt to identify the third and later generations of such immigrants as well as the descendants of Spanish-Colonial inhabitants of the Southwest.

Each of the indexes used to identify this group of persons suffers from certain limitations. The seemingly straightforward approach of collecting and tabulating data on "Mexicans" encounters the difficulty that in areas in which descendants of the Spanish-Colonial population is concentrated neither respondents nor enumerators regard persons of this type as "Mexican," and thus in such areas there was a gross undercount of this group in the 1930 Census, which is reflected in the figures for native persons.

This situation is most clearly illustrated in the figures for New Mexico, the State in which the great majority of Spanish-Americans are descendants of persons living in the territory prior to its acquisition by the United States. In 1930, the number of persons

born in Mexico was about 16,000; by 1940, it had decreased to about 9,000. In 1930, about 43,000 native persons classified as "Mexican" were enumerated, but, in 1940, about 214,000 native persons of Spanish mother tongue. Since there was no great influx of Spanish-speaking peoples into the State during the decade, it is reasonable to assume that the figures refer to the same segment of the population, and since it is impossible that natural increase could account for a fivefold increase in number, it may be concluded that the question on mother tongue provided a more complete count of the segment of the population under consideration than did identification of "Mexicans" (table A).

Likewise, although the question on mother tongue used in the 1940 Census made possible the classification of native persons of native parentage by mother tongue, it permitted the reporting of English as the language spoken in the home in earliest childhood in homes of persons whose language in their country of origin was in all probability a language other than English. For example, for the United States as a whole, about 7 percent of the native population of Mexican parentage reported English as their mother tongue. Thus for the second and later generations, statistics on mother tongue tend to understate the full extent of foreign origin. This difficulty is illustrated in the figures for California which show an

Table A.--SPANISH-AMERICAN AND MEXICAN-AMERICAN POPULATION OF FIVE SOUTHWESTERN STATES AS VARIOUSLY IDENTIFIED IN CENSUSES OF 1930 TO 1960

(Statistics for 1960 based on 25-percent sample; for 1950, 20-percent sample; and for 1940, 5-percent sample)

State	All classes	Native			Foreign born
		Total	Native parentage	Foreign or mixed parentage	
Total, all States:					
Spanish surname, 1960.....	3,464,999	2,930,185	1,899,402	1,030,783	534,814
Spanish surname, 1950.....	2,281,710	1,889,210	1,113,680	775,530	392,500
Spanish mother tongue, 1940.....	1,570,740	1,247,300	628,000	619,300	323,440
Mexicans, 1930.....	1,282,883	752,211	253,441	498,770	530,672
Arizona:					
Spanish surname, 1960.....	194,356	160,106	95,825	64,281	34,250
Spanish surname, 1950.....	128,580	105,345	53,380	51,965	23,235
Spanish mother tongue, 1940.....	101,880	77,740	27,600	50,140	24,140
Mexicans, 1930.....	114,173	66,318	18,955	47,363	47,855
California:					
Spanish surname, 1960.....	1,426,538	1,141,207	656,674	484,533	285,331
Spanish surname, 1950.....	758,400	591,540	266,835	324,705	166,860
Spanish mother tongue, 1940.....	416,140	279,440	63,700	215,740	136,700
Mexicans, 1930.....	368,013	176,667	29,138	147,529	191,346
Colorado:					
Spanish surname, 1960.....	157,173	151,692	135,277	16,415	5,481
Spanish surname, 1950.....	118,715	113,750	98,750	15,000	4,965
Spanish mother tongue, 1940.....	92,540	85,900	71,800	14,100	6,640
Mexicans, 1930.....	57,676	44,860	32,956	11,904	12,816
New Mexico:					
Spanish surname, 1960.....	269,122	258,509	235,342	23,167	10,613
Spanish surname, 1950.....	248,560	238,040	216,805	21,235	10,520
Spanish mother tongue, 1940.....	221,740	213,920	192,820	21,100	7,820
Mexicans, 1930.....	59,340	43,357	25,586	17,771	15,983
Texas:					
Spanish surname, 1960.....	1,417,810	1,218,671	776,284	442,387	199,139
Spanish surname, 1950.....	1,027,455	840,535	477,910	362,625	186,920
Spanish mother tongue, 1940.....	738,440	590,300	272,080	318,220	148,140
Mexicans, 1930.....	683,681	421,009	146,806	274,203	262,672

82-percent increase from the Spanish mother-tongue total of 1940 to the Spanish-surname total of 1950. In New Mexico, where Spanish is established on an equal footing with English, this limitation is probably of no great significance. The successive figures for New Mexico for 1940 (based on Spanish mother tongue) and for 1950 and 1960 (based on Spanish surname) seem to reflect a growth that is consistent with the probable natural increase and net migration for the group.

Some interest attaches to the extent to which the population of Spanish surname is of Spanish-American

and Mexican-American descent, and conversely, the extent to which the population of Spanish-American and Mexican-American descent is of Spanish surname. Evidence on this point for 1960 and 1950 is available only for the foreign born, and it thus excludes persons of Spanish-Colonial descent. This evidence appears in table B, which presents figures for the foreign born of Mexican birth and of Spanish surname, for the foreign born of Spanish surname but not of Mexican birth, and for the foreign born of Mexican birth but not of Spanish surname, for 1960 and 1950.

Table B.--FOREIGN-BORN WHITE PERSONS OF SPANISH SURNAME AND MEXICAN BIRTH, OF SPANISH SURNAME ONLY, AND OF MEXICAN BIRTH ONLY, FOR FIVE SOUTHWESTERN STATES: 1960 AND 1950

State	Total	Spanish surname				Other surname, born in Mexico	
		Born in Mexico		Born elsewhere		Number	Percent of total
		Number	Percent of total	Number	Percent of total		
1960, total.....	566,300	468,684	82.8	66,130	11.7	31,486	5.6
Arizona.....	36,559	33,158	90.7	1,092	3.0	2,309	6.3
California.....	304,650	227,890	74.8	57,441	18.9	19,319	6.3
Colorado.....	5,809	4,524	77.9	957	16.5	328	5.6
New Mexico.....	11,192	10,110	90.3	503	4.5	579	5.2
Texas.....	208,090	193,002	92.7	6,137	2.9	8,951	4.3
1950, total.....	424,726	365,878	86.1	26,482	6.2	32,366	7.6
Arizona.....	25,782	22,143	85.9	865	3.4	2,774	10.8
California.....	183,049	145,265	79.4	20,740	11.3	17,044	9.3
Colorado.....	5,953	4,396	73.8	678	11.4	879	14.8
New Mexico.....	10,381	9,011	86.8	715	6.9	655	6.3
Texas.....	199,561	185,063	92.7	3,484	1.7	11,014	5.5

Of the total of these three groups in 1960, about 83 percent were persons of both Spanish surname and Mexican birth. This figure represents a slight decline from the comparable value of 86 percent in 1950 for the five States. The decline is attributable to the decrease in California in the proportion of persons of Spanish surname of Mexican birth in the total for that State. There has been a substantial increase in California in the number of persons from other Central and South American countries, most of whom have Spanish surnames. In the other four States, the proportion of persons of Mexican birth with Spanish surname was greater in 1960 than in 1950. Similarly, for all five States, the number of persons of Mexican birth with Spanish surname represented a greater percent of the total number of white persons of Mexican birth in 1960 than in 1950. It would seem from these facts that the coverage of the Spanish-surname coding in 1960 was better than that in 1950.

The number of foreign-born persons with Spanish surname but not of Mexican origin is of some interest, since it appears to be closely associated with the number of foreign-born persons in the State from countries other than Mexico whose surnames could easily be Spanish or could be confused with Spanish names. Appendix table A-1 presents statistics on birthplace and mother tongue of the foreign-born Spanish-surname population. These data indicate that many of the Spanish-surname persons born elsewhere than in Mexico were also of Spanish mother tongue and were, therefore, probably legitimately included in the Spanish-surname population as operationally defined even though

they do not belong in the group that is of main interest. If Spanish-surname persons of Spanish mother tongue born in countries other than Mexico are added to those born in Mexico, the total comprises 93.4 percent of all foreign-born persons of Spanish surname. These facts imply much more consistent coverage of the population and better quality of the data than can be inferred from table B. The numbers of persons born elsewhere than Mexico include foreign-born persons of Spanish surname whose country of birth was not reported, many of whom may have been born in Mexico.

Besides the inclusion of foreign-born persons of other than Mexican birth, some other groups may have been inadvertently included in the Spanish-surname classification. It is possible that a large proportion of the persons of Puerto Rican birth or parentage living in the five Southwestern States have been included in the native population of native parentage with Spanish surname.

In fact, an analysis in terms of country of origin and Spanish surname is not possible for the native population of native parentage. For this segment of the population, however, it seems reasonable to infer that the correspondence between Spanish surname and Mexican or Spanish-Colonial descent is somewhat less than among the foreign stock. These persons have had the opportunity to marry outside their initial origin groups for a longer period of time than the foreign stock; and, therefore, the gains and losses through intermarriage may be expected to be somewhat larger than among the foreign stock.

In terms of the available evidence, there appears to be no reason for assuming that the use of surname to identify the Spanish-American population is any less adequate than procedures previously used; and, in most respects, its use should have led to a genuine improvement in the quality of the statistics.

URBAN-RURAL RESIDENCE

In general, the urban population comprises all persons living in urbanized areas and in places of 2,500 inhabitants or more outside urbanized areas. More specifically, according to the definition adopted for use in the 1960 Census, the urban population comprises all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns (except towns in New England, New York, and Wisconsin); (b) the densely settled urban fringe, whether incorporated or unincorporated, of urbanized areas; (c) towns in New England and townships in New Jersey and Pennsylvania which contain no incorporated municipalities as subdivisions and have either 25,000 inhabitants or more or a population of 2,500 to 25,000 and a density of 1,500 persons or more per square mile; (d) counties in States other than the New England States, New Jersey, and Pennsylvania that have no incorporated municipalities within their boundaries and have a density of 1,500 persons or more per square mile; and (e) unincorporated places of 2,500 inhabitants or more. The population not classified as urban constitutes the rural population.

FARM-NONFARM RESIDENCE

The rural population is subdivided into the rural-farm population, which comprises all rural residents living on farms, and the rural-nonfarm population, which comprises the remaining rural population. In the 1960 Census, the farm population consists of persons living in rural territory on places of 10 or more acres from which sales of farm products amounted to \$50 or more in 1959 or on places of less than 10 acres from which sales of farm products amounted to \$250 or more in 1959. All persons living in group quarters are classified as nonfarm except the relatively few living in workers' quarters (including quarters for migratory agricultural workers) that are located on a farm or ranch.

STANDARD METROPOLITAN STATISTICAL AREAS

Except in New England, an SMSA is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county, or counties, containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, SMSA's consist of towns and cities, rather than counties.

URBAN PLACES

Urban places in 1960 include all incorporated and unincorporated places of 2,500 inhabitants or more, and the towns, townships, and counties classified as urban. Unincorporated places are designated by "U."

AGE

The age classification is based on the age of the person in completed years as of April 1, 1960, as determined from the reply to a question on month and year of birth.

RACE AND COLOR

The term "color" refers to the division of population into two groups, white and nonwhite. The color group designated as "nonwhite" includes Negroes, American Indians, Japanese, Chinese, Filipinos, Koreans, Hawaiians, Asian Indians, Malaysians, Eskimos, Aleuts, etc. Persons of Mexican birth or ancestry who are not definitely of Indian or other nonwhite race are classified as white.

There is some interest in the number of persons of nonwhite races who may have Spanish surnames. In processing the 1960 Census schedules, general coders classified all persons, regardless of race, as having a Spanish surname or a non-Spanish surname. Appendix table A-2 presents statistics based on a 5-percent sample, which show the racial composition of the Spanish-surname population in Arizona, California, Colorado, New Mexico, and Texas. All other tables in this report contain statistics for the white population only.

NATIVITY AND PARENTAGE

Native.--This category comprises persons born in the United States, the Commonwealth of Puerto Rico, or a possession of the United States; persons born in a foreign country or at sea who have at least one native American parent; and persons whose place of birth was not reported and whose census report contained no contradictory information, such as an entry of a language spoken prior to coming to the United States.

Foreign born.--This category includes all persons not classified as native. Persons born in Mexico are shown separately.

Native of native parentage.--This category consists of native persons both of whose parents are also natives of the United States.

Native of foreign or mixed parentage.--This category includes native persons one or both of whose parents are foreign born. Persons of Mexican parentage are shown separately.

Foreign stock.--This category includes foreign-born persons and native persons of foreign or mixed parentage.

MOTHER TONGUE

In the 1960 Census, mother tongue is defined as the principal language spoken in the person's home before he came to the United States. Information on

mother tongue, which was obtained only from foreign-born persons, was derived from answers to the following question on the Household Questionnaire: "If this person was born outside the U.S., what language was spoken in his home before he came to the United States?" If a person reported more than one language, the code assigned was the mother tongue reported by the largest number of immigrants from his native country in the 1940 Census.

RESIDENCE IN 1955

Residence on April 1, 1955, is the usual place of residence five years prior to enumeration. The category "same house as in 1960" includes all persons 5 years old and over who were reported as living in the same house on the date of enumeration in 1960 and five years prior to enumeration. Included in the group are persons who had never moved during the five years as well as those who had moved but by 1960 had returned to their 1955 residence. The category "different house in the U.S." includes persons who, on April 1, 1955, lived in the United States in a different house from the one they occupied on April 1, 1960. This category was subdivided into three groups according to their 1955 residence, viz., "different house, same county," "different county, same State," and "different State." The category "abroad" was divided into two groups: "Mexico," comprising those persons whose residence was in Mexico in 1955; and "other," which includes those with residence in another foreign country or an outlying area of the United States in 1955. (In the coding of this item, persons who lived in Alaska or Hawaii in 1955 but in other States in 1960 were classified as living in a different State in 1955.) Persons 5 years old and over who had indicated they had moved into their present residence after April 1, 1955, but for whom sufficiently complete and consistent information regarding residence on April 1, 1955, was not collected are included in the group "moved, place of residence in 1955 not reported."

SCHOOL ENROLLMENT

School enrollment is shown for persons 5 to 34 years old. Persons were included as enrolled in school if they were reported as attending or enrolled in a "regular" school or college at any time between February 1, 1960, and the time of enumeration. Regular schooling is that which may advance a person toward an elementary school certificate or high school diploma, or a college, university, or professional degree. Schooling that was not obtained in a regular school and schooling from a tutor or through correspondence courses were counted only if the credits obtained were regarded as transferable to a school in the regular school system. Schooling which is generally regarded as not regular includes that which is given in nursery schools, in specialized vocational, trade, or business schools; in on-the-job training; and through correspondence courses.

YEARS OF SCHOOL COMPLETED

The data on years of school completed were derived from the answers to the two questions: (a)

"What is the highest grade (or year) of regular school he has ever attended?" and (b) "Did he finish this grade (or year)?" Enumerators were instructed to obtain the approximate equivalent grade in the American school system for persons whose highest grade of attendance was in a foreign school system, whose highest level of attendance was in an ungraded school, whose highest level of schooling was measured by "readers," or whose training by a tutor was regarded as qualifying under the "regular" school definition. Persons were to answer "No" to the second question if they were attending school, had completed only part of a grade before they dropped out, or failed to pass the last grade attended.

The number in each category of highest grade of school completed represents the combination of (a) persons who reported that they had attended the indicated grade and finished it, and (b) those who had attended the next higher grade but had not finished it.

Elementary school, as defined here, includes grades 1 to 8, and high school includes grades 9 to 12. College includes junior or community colleges, regular 4-year colleges, and graduate or professional schools.

MARITAL STATUS

This classification refers to the marital status of the person at the time of enumeration. Persons classified as "married" comprise, therefore, both those who have been married only once and those who remarried after having been widowed or divorced. Persons reported as separated (either legally separated or otherwise absent from the spouse because of marital discord) are classified as a subcategory of married persons. The enumerators were instructed to report persons in common-law marriages as married and persons whose only marriage had been annulled as single. Persons "ever married" are those in the categories married (including separated), widowed, and divorced.

The number of married men may be different from the number of married women for an area because of the absence of husbands or wives from the country, because the husband and wife have different places of residence, because of the methods used to inflate the sample data, or for other reasons.

A married person with "spouse present" is a man or woman whose spouse was enumerated as a member of the same household even though he or she may have been temporarily absent on business or vacation, visiting, in a hospital, etc., at the time of enumeration.

HOUSEHOLD, GROUP QUARTERS, AND RELATIONSHIP TO HEAD OF HOUSEHOLD

A household consists of all the persons who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live and eat with any other persons in the structure and there is either (1) direct access from the outside or through a common hall or (2) a kitchen or cooking equipment for the exclusive use of the

occupants. The population per household is obtained by dividing the population in households by the number of households.

All persons who are not members of households are regarded as living in group quarters. Group quarters are living arrangements for institutional inmates or for other groups containing five or more persons unrelated to the person in charge. Most of the persons in group quarters live in rooming houses, college dormitories, military barracks, or institutions. Inmates of institutions are persons for whom care or custody is provided in such places as homes for delinquent or dependent children; homes and schools for the mentally or physically handicapped; places providing specialized medical care for persons with mental disorders, tuberculosis, or other chronic disease; nursing and domiciliary homes for the aged and dependent; prisons; and jails.

For persons in households, several categories of relationship to head of household are recognized in this report:

1. The head of the household is the member reported as the head by the household respondent. However, if a married woman living with her husband is reported as the head, her husband is classified as the head for the purpose of census tabulations.

2. The wife of a head of a household is a woman married to and living with a household head. This category includes women in common-law marriages as well as women in formal marriages.

3. An other relative of the head is a person related to the head of the household by blood, marriage, or adoption, but not included specifically in another category.

4. A nonrelative of the head is any member of the household who is not related to the household head. This category includes lodgers (roomers and partners, relatives of such persons, and foster children) and resident employees (maids, hired farm hands, etc.).

FAMILY, SUBFAMILY, OWN CHILD, UNRELATED INDIVIDUAL, AND PRIMARY INDIVIDUAL

A family consists of two or more persons in the same household who are related to each other by blood, marriage, or adoption; all persons living in one household who are related to each other are regarded as one family. In a primary family, the head of the family is the head of a household. Other families are secondary families. A "husband-wife" family is a family in which the head and his wife are enumerated as members of the same household.

A subfamily is a married couple with or without children, or one parent with one or more own children under 18 years old, living in a housing unit and related to the head of the household or his wife. The number of subfamilies is not included in the count of families.

An own child of a household head or of a family head is defined here as a single (never married) son, daughter, stepchild, or adopted child of the person in question. This report includes data on own children of the family head and on women by presence of own children.

An unrelated individual is (1) a member of a household who is living entirely alone or with one or more persons all of whom are not related to him, or (2) a person living in group quarters who is not an inmate of an institution. A head of a household living alone or with nonrelatives only is a primary individual.

EMPLOYMENT STATUS

The data on employment status relate to the calendar week prior to the date on which the respondents filled their Household Questionnaires or were interviewed by enumerators. This week is not the same for all respondents because not all persons were enumerated during the same week.

Employed persons comprise all civilians 14 years old and over who were either (a) "at work"--those who did any work for pay or profit, or worked without pay for 15 hours or more on a family farm or in a family business; or (b) were "with a job but not at work"--those who did not work and were not looking for work but had a job or business from which they were temporarily absent because of bad weather, industrial dispute, vacation, illness, or other personal reasons.

Persons are classified as unemployed if they were 14 years old and over and not "at work" but looking for work. A person is considered as looking for work not only if he actually tried to find work but also if he had made such efforts recently (i.e., within the past 60 days) and was awaiting the results of these efforts. Persons waiting to be called back to a job from which they had been laid off or furloughed are also counted as unemployed.

The "civilian labor force" includes all persons classified as employed or unemployed, as described above. The "labor force" also includes members of the Armed Forces (persons on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).

Persons "not in the labor force" comprise all those 14 years old and over who are not classified as members of the labor force, including persons doing only incidental unpaid family work (less than 15 hours during the week).

HOURS WORKED

The statistics on hours worked pertain to the number of hours actually worked, and not necessarily to the number usually worked or the scheduled number of hours. For persons working at more than one job, the figures reflect the combined number of hours worked at all jobs during the week. The data on hours worked presented in this report provide a broad classification of persons at work into full-time and part-time workers. Persons are considered to be working full time if they worked 35 hours or more during the reference week and part time if they worked less than 35 hours.

WEEKS WORKED IN 1959

The data on weeks worked in 1959 pertain to the number of different weeks during 1959 in which a person did any work for pay or profit (including paid

vacation and sick leave) or worked without pay on a family farm or in a family business. Weeks of active service in the Armed Forces are also included.

OCCUPATION AND INDUSTRY

The data on occupation and industry in this report are for employed persons and refer to the job held during the week for which employment status was reported. For persons employed at two or more jobs, the data refer to the job at which the person worked the greatest number of hours. The occupation and industry statistics presented here are based on the detailed systems developed for the 1960 Census; see 1960 Census of Population, Classified Index of Occupations and Industries, U.S. Government Printing Office, Washington, D.C., 1960.

INCOME IN 1959

Information on income for the calendar year 1959 was requested from all persons 14 years old and over in the sample. "Total income" is the sum of amounts reported separately for wage or salary income, self-employment income, and other income. Wage or salary income is defined as the total money earnings received for work performed as an employee. It represents the amount received before deductions for personal income

taxes, Social Security, bond purchases, union dues, etc. Self-employment income is defined as net money income (gross receipts minus operating expenses) from a business, farm, or professional enterprise in which the person was engaged on his own account. "Earnings" are obtained by summing wage or salary income and self-employment income. Other income includes money income received from such sources as net rents, interest, dividends, Social Security benefits, pensions, veterans' payments, unemployment insurance, and public assistance or other governmental payments, and periodic receipts from insurance policies or annuities. Not included as income are money received from the sale of property (unless the recipient was engaged in the business of selling such property), the value of income "in kind," withdrawals of bank deposits, money borrowed, tax refunds, and gifts and lump-sum inheritances or insurance payments.

In the statistics on family income, the combined incomes of all members of each family are treated as a single amount. Although the time period covered by the income statistics is the calendar year 1959, the composition of families refers to the time of enumeration. For most of the families, however, the income reported was received by persons who were members of the family throughout 1959. The number of earners in the family refers to the number of family members who had wage or salary income or self-employment income.

COLLECTION AND PROCESSING OF DATA

COLLECTION OF DATA

Several enumeration forms were used to collect the information for the 1960 Census of Population. A few days before the census date, the Post Office Department delivered an Advance Census Report (ACR) to households on postal delivery routes. This form contained questions which were to be answered for every person and every housing unit. Household members were requested to fill the ACR and have it ready for the enumerator. The census enumerator recorded this information on a form specially designed for electronic data processing by FOSDIC (Film Optical Sensing Device for Input to Computer). The information was either transcribed from the ACR to the complete-count FOSDIC schedule or entered on this schedule during direct interview.

In the densely populated areas, the enumerator left a Household Questionnaire to be completed by each household (or person) in the sample and mailed to the local census office. The population and housing information was transcribed from the Household Questionnaire to a sample FOSDIC schedule. When the Household Questionnaire was not returned or was returned without having been completed, the enumerator collected the missing information by personal visit or by telephone and entered it directly on the sample FOSDIC schedule. In the remaining areas, when the enumerator picked up the ACR, he obtained all the information by direct interview and recorded it directly on the sample FOSDIC schedule.

Soon after the enumerator started work, his schedules were examined in a formal field review. This operation was designed to assure at an early stage of the work that the enumerator was performing his duties properly and had corrected any errors he had made.

More detailed descriptions of the 1960 Census procedures in the collection and processing of the data are given in reports entitled United States Censuses of Population and Housing, 1960: Principal Data Collection Forms and Procedures, 1961; and Processing the Data, 1962, U.S. Government Printing Office, Washington, D.C., 20402.

MANUAL EDITING AND CODING

After the FOSDIC forms had been checked for completeness in the field, they were sent to a central processing office for manual editing and coding and for microfilming. Except where some special problems arose, there was no manual coding of the FOSDIC forms for complete-count data. On the sample forms, the manual operation was limited to those items where coding required the reading of written entries and therefore could not be done effectively by machine. The coding clerks converted the written entries to codes by marking the appropriate circles on the FOSDIC schedules and at the same time were able to correct obviously wrong entries and sometimes supply missing information.

ELECTRONIC PROCESSING

After the enumerators and coders recorded the information by marking the appropriate circles, the schedules were microfilmed. The information on the microfilm was then read by FOSDIC, which converted the markings to signals on magnetic tape. The tape, in turn, was processed in an electronic computer, which was used extensively to edit and tabulate the data and to produce the publication tables.

EDITING

For a majority of items, nonresponses and inconsistencies were eliminated by using the computer to assign entries and correct inconsistencies. In general, few assignments or corrections were required, although the amount varied by subject and by enumerator.

The assignment of an acceptable entry by machine was based on related information reported for the person or on information reported for a similar person in the immediate neighborhood. For example, in the assignment of age in the complete-count tabulations, the computer stored reported ages of persons by sex, color or race, household relationship, and marital status; each stored age was retained in the computer only until a succeeding person having the same characteristics and having age reported was processed through the computer; this stored age was assigned to the next person whose age was unknown and who otherwise had the same characteristics. This procedure insured that the distribution of ages assigned by the computer for persons of a given set of characteristics would correspond closely to the reported age distribution of such persons as obtained in the current census.

The extent of the allocations for nonresponse or for inconsistency is shown for the United States and for States, places of 10,000 inhabitants or more, and other areas in appendix tables in chapters B, C, and D of 1960 Census of Population, Volume I, Characteristics of the Population.

Specific tolerances were established for the number of computer allocations acceptable for a given area. If the number was beyond tolerance, the data were rejected and the original schedules were re-examined to determine the source of the error. Correction and reprocessing were undertaken as necessary and feasible.

ACCURACY OF THE DATA

Human and mechanical errors occur in any mass statistical operation such as a decennial census. Such

errors include failure to obtain required information from respondents, obtaining inconsistent information, recording information in the wrong place or incorrectly, or otherwise producing inconsistencies between entries on interrelated items on the field documents. Sampling biases occur because some of the enumerators fail to follow the sampling instructions. Clerical coding and editing errors occur, as well as errors in the electronic processing operation.

Careful efforts are made in every census to keep the errors in each step at an acceptably low level. Review of the enumerator's work, verification of manual coding and editing, checking of tabulated figures, and ratio estimation of sample data to control totals from the complete count reduce the effects of the errors in the census data.

Very minor differences between tables in this report or between corresponding data in this report and PHC(1), Census Tract reports, result from imperfections in the electronic equipment. No attempt has been made to reconcile these minor discrepancies.

Some innovations in the 1960 Censuses reduced errors in processing and others produced a more consistent quality of editing. The elimination of the card-punching operation removed one important source of error. The extensive use of electronic equipment insured a more uniform and more flexible edit than could have been accomplished manually or by less intricate mechanical equipment. It is believed that the use of electronic equipment in the 1960 Censuses has improved the quality of the editing compared with that of earlier censuses but, at the same time, it has introduced an element of difference in the statistics.

As noted, inconsistencies in the reported data were resolved primarily by machine editing, but occasionally by clerical editing. However, because of limitations of computer capacity and other resources, a number of complicated editing steps were not introduced when the effect upon the final data was considered to be small. Thus, for some characteristics, there may be a small number of cases associated with an unlikely age group. Illustrations include: Husband-wife family heads 14 to 19 years of age with own children under 18 and under 6; persons over 34 years of age enrolled in school.

A group of reports designated "Evaluation and Research Series" will deal with the methods, results, and interpretation of a group of evaluation and research studies of the 1960 Censuses of Population and Housing. A report entitled The Post-Enumeration Survey: 1950, Technical Paper No. 4, presents evaluative material on the 1950 Census.

SAMPLE DESIGN AND SAMPLING VARIABILITY

SAMPLE DESIGN

For persons in housing units at the time of the 1960 Census, the sampling unit was the housing unit and all its occupants; for persons in group quarters, it was the person. On the first visit to an address,

the enumerator assigned a sample key letter (A, B, C, or D) to each housing unit sequentially in the order in which he first visited the units, whether or not he completed an interview. Each enumerator was given a random key letter to start his assignment, and the order of canvassing was indicated in advance, although

these instructions allowed some latitude in the order of visiting addresses. Each housing unit which was assigned the key letter "A" was designated as a sample unit and all persons enumerated in the unit were included in the sample. In every group quarters, the sample consisted of every fourth person in the order listed.

Although the sampling procedure did not automatically insure an exact 25-percent sample of persons or housing units in each locality, the sample design was unbiased if carried through according to instructions; and, generally, for large areas the deviation from 25 percent was found to be quite small. Biases may have arisen, however, when the enumerator failed to follow his listing and sampling instructions exactly. (For discussion of 5-percent sample, see page XVII.)

RATIO ESTIMATION

The statistics based on the sample of the 1960 Census returns are estimates that have been developed through the use of a ratio estimation procedure. This procedure was carried out for each of 44 groups of persons in each of the smallest areas for which sample data are published.² (For a more complete discussion of the ratio estimation procedure, see 1960 Census of Population, Volume I, Characteristics of the Population, Part 1, United States Summary.)

These ratio estimates reduce the component of sampling error arising from the variation in the size of household and achieve some of the gains of stratification in the selection of the sample, with the strata being the groups for which separate ratio estimates are computed. The net effect is a reduction in the sampling error and bias of most statistics below what would be obtained by weighting the results of the 25-percent sample by a uniform factor of four. The reduction in sampling error is trivial for some items and substantial for others. A byproduct of this estimation procedure, in general, is that estimates for this sample are consistent with the complete count with respect to the total population and for the subdivisions used as groups in the estimation procedure.

SAMPLING VARIABILITY

The figures from the 25-percent sample tabulations are subject to sampling variability, which can be estimated roughly from the standard errors shown in

² Estimates of characteristics from the sample for a given area are produced using the formula:

$$x' = \sum_{i=1}^{44} \frac{x_i}{Y_i} Y_1$$

where x' is the estimate of the characteristic for the area obtained through the use of the ratio estimation procedure, x_i is the count of sample persons with the characteristic for the area in one (i) of the 44 groups, Y_i is the count of all sample persons for the area in the same one of the 44 groups, and Y_1 is the count of persons in the complete count for the area in the same one of the 44 groups.

tables C and D. These tables³ do not reflect the effect of response variance, processing variance, or bias arising in the collection, processing, and estimation steps. Estimates of the magnitude of some of these factors in the total error are being evaluated and will be published at a later date. The chances are about 2 out of 3 that the difference due to sampling variability between an estimate and the figure that would have been obtained from a complete count of the population is less than the standard error. The chances are about 19 out of 20 that the difference is less than twice the standard error and about 99 out of 100 that it is less than 2½ times the standard error. The amount by which the estimated standard error must be multiplied to obtain other odds deemed more appropriate can be found in most statistical text books.

Table C.--ROUGH APPROXIMATION TO STANDARD ERROR OF ESTIMATED NUMBER (25-PERCENT SAMPLE)

(Range of 2 chances out of 3)

Estimated number	Standard error	Estimated number	Standard error
50.....	20	5,000.....	150
100.....	30	10,000.....	220
250.....	40	15,000.....	270
500.....	60	25,000.....	350
1,000.....	70	50,000.....	490
2,500.....	110		

Table D.--ROUGH APPROXIMATION TO STANDARD ERROR OF ESTIMATED PERCENTAGE (25-PERCENT SAMPLE)

(Range of 2 chances out of 3)

Estimated percentage	Base of percentage					
	500	1,000	2,500	10,000	25,000	100,000
2 or 98.....	1.8	1.3	0.7	0.4	0.1	0.1
5 or 95.....	2.8	2.0	1.3	0.6	0.3	0.1
10 or 90.....	3.9	2.8	1.7	0.8	0.4	0.3
25 or 75.....	5.3	3.8	2.1	1.0	0.6	0.3
50.....	6.2	4.3	2.2	1.1	0.7	0.4

Table C shows rough standard errors of estimated numbers up to 50,000. The relative sampling errors of larger estimated numbers are somewhat smaller than for 50,000. For estimated numbers above 50,000, however, the nonsampling errors, e.g., response errors and processing errors, may have an increasingly important effect on the total error. Table D shows rough standard errors of data in the form of percentages. Linear interpolation in tables C and D will provide approximate results that are satisfactory for most purposes.

For a discussion of the sampling variability of medians and means and of the method for obtaining standard errors of differences between two estimates, see 1960 Census of Population, Volume I, Characteristics of the Population, Part 1, United States Summary.

³ These estimates of sampling variability are based on partial information on variances calculated from a sample of the 1960 Census results. Further estimates are being calculated and will be made available at a later date.

Illustration: Table 1 shows that there are 33,158 white persons of Spanish surname living in Arizona but born in Mexico. Table C shows that the standard error for an estimate of 33,158 is about 396, which means that the chances are approximately 2 out of 3 that the results of a complete census would not differ by more than 396 from this estimated 33,158. It also follows that there is only about 1 chance in 100 that a complete census result would differ by as much as 990, that is, by about $2\frac{1}{2}$ times the number estimated from table C.

5-percent sample.--The data presented in tables A-1 and A-2 of the appendix are based on a 5-percent sample of the 1960 Census. The 5-percent sample is a subsample of the original 25-percent sample schedules. This subsample was selected on the computer using a stratified systematic sample design. The strata were made up as follows: For persons in regular housing units there were 36 strata, i.e., 9 household size groups by 2 tenure groups by 2 color groups; for persons in group quarters, there were 2 strata, i.e., the 2 color groups.

The ratio estimation procedure for the 5-percent sample was basically the same as that used for the 25-percent sample. The requirements for combining the 44 ratio estimate groups for the 5-percent sample, however, specified that the complete count in a group could not be fewer than 275 persons, or the resulting weight could not be greater than 80. (See section above on ratio estimation for the corresponding requirements for the 25-percent sample.) For a more complete discussion of the ratio estimation procedure used in the 5-percent sample, the reader is referred

to 1960 Census of Population, Subject Reports, Occupation by Industry, PC(2)-7C.

Tables E and F below give rough standard errors for absolutes and percentages, respectively, for the 5-percent sample data shown in appendix tables A-1 and A-2. These tables are used in the same way as tables C and D.

Table E.--ROUGH APPROXIMATION TO STANDARD ERROR
OF ESTIMATED NUMBER (5-PERCENT SAMPLE)
(Range of 2 chances out of 3)

Estimated number	Standard error	Estimated number	Standard error
50.....	40	5,000.....	390
100.....	60	10,000.....	550
250.....	80	15,000.....	670
500.....	130	25,000.....	.870
1,000.....	170	50,000.....	1,230
2,500.....	280		

Table F.--ROUGH APPROXIMATION TO STANDARD ERROR
OF ESTIMATED PERCENTAGE (5-PERCENT SAMPLE)
(Range of 2 chances out of 3)

Estimated percentage	Base of percentage					
	500	1,000	2,500	10,000	25,000	100,000
2 or 98.....	4.6	3.2	1.8	1.1	0.4	0.4
5 or 95.....	7.0	5.6	3.2	1.4	0.7	0.4
10 or 90.....	9.8	7.0	4.2	2.1	1.1	0.7
25 or 75.....	14.0	9.5	5.3	2.5	1.4	0.7
50.....	15.4	10.9	5.6	2.8	1.8	1.1