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tioned above, 4 per cent of the engineers professionally active prior to 1930, but only 0.3 per cent of those entering the profession in 1930–32, were independent consultants in 1934.[76]

CHAPTER 2

The Data on Income from Independent Professional Practice

THE FIVE PROFESSIONAL GROUPS we study include over 300,000 persons in independent practice; the primary data on which the analysis is based are for 13,000 persons in all and considerably fewer for any single year. What is true of the 13,000 need not be true of the 300,000. Whether we can pass with confidence from our samples to the universes they purport to represent depends on how the samples were selected, what biases they have, what corrections can be made for these biases, the internal consistency of the samples, their consilience with

[76] *Monthly Labor Review,* April 1937, p. 868. The sample on which these percentages are based included 31,252 'older engineers' and 9,469 engineers entering the profession between 1930 and 1932. Among the 7,403 in the sample who entered the profession in 1933 and 1934, 0.2 per cent were independent consultants in 1934.

An earlier study of engineering graduates, which covered every fifth class from 1889 to 1919, showed that in 1924, 2.7 per cent of the sample for the class of 1919, and 18.8 per cent of the combined classes of 1884 and 1889 were engaged in the consulting branch of the profession. The total sample included 2,336 graduates, of whom approximately 445 were in the class of 1919 and 95 in the classes of 1884 and 1889. *Study of Engineering Graduates and Non-Graduate Former Students* (Society for the Promotion of Engineering Education, 1926), p. 34.

other comparable studies, and the like. These questions are investigated in detail in Appendix A; the results are summarized in this chapter.

1 THE ORIGINAL DATA

The original data analyzed were collected by questionnaires sent to professional men by the U. S. Department of Commerce as part of a broad study of the size of the national income. In conformity with the needs of the larger study, data were collected only for professional men practising independently, and their analysis by the Department of Commerce was restricted in the main to the derivation of the countrywide average income of each profession.[1]

Table 4 lists the samples that we have used and summarizes the salient features of each. Four of the 11 samples were collected in 1933, 4 in 1935, and 3 in 1937. They provide data for physicians and certified public accountants for the entire period 1929–36; for dentists, for 1929–34; for lawyers, for 1929 and 1932–36; and for consulting engineers, for 1929–32. (The basic data from these samples are given in some detail in Appendix B.) As the last column of Table 4 indicates, the usable returns in each sample are a small fraction of the universe they purport to represent. For physicians, dentists, and lawyers the coverage is between 1 and 3 per cent; for consulting engineers, about 5.5 per cent; and for accountants, between 9 and 15 per cent.

The information obtained varies from profession to profession and from sample to sample for the same profession.[2] All

[1] This investigation was initiated in 1933 in cooperation with the National Bureau of Economic Research. The original study covered 1929–32 and was summarized in *National Income in the United States, 1929–32*, Senate Doc. 124 (Washington, 1934), pp. 148–50, 206–9, 245–58. Results for later years appeared in *National Income in the United States, 1929–35* (U. S. Department of Commerce, 1936), pp. 213–6, 226–7, 290–3, 300–1; and in Walter Slifer, 'Income of Independent Professional Practitioners', *Survey of Current Business*, April 1938, pp. 12–6. In addition to national averages, the first reference presents average incomes for each profession by states; the third, a brief summary analysis of the distribution of income by size.

[2] The questionnaire forms are shown in Appendix C.

TABLE 4

Methods of Selecting Samples and Coverage of Samples

SAMPLE & YEAR SENT	YEARS FOR WHICH INCOME WAS OBTAINED	LIST USED FOR SAMPLING	METHOD OF SELECTING NAMES	QUESTIONNAIRES SENT	QUESTIONNAIRES RETURNED[1]			% USABLE QUESTIONNAIRES ARE OF	
					Total	Usable[2]	Not usable	Total sent	Universe[3]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Physicians									
1 (1933)	1929–32	Latest issue of annual Directory of the American Medical Association	Specified no. of names taken from each page by laying straight edge marked off at equally spaced intervals against a column. For samples 1 & 2 the no. taken from each page was the same for all pages; for sample 3 it varied from state to state.	8,893	2,882	2,438	444	27.4	2.0
2 (1935)	1932–34			8,000[4]	1,686	1,588	98	19.8	1.3
3 (1937)	1929–36			9,472	1,647	1,577	70	16.6	1.2
Dentists									
1 (1933)	1929–32	Membership list of the American Dental Association for year in which questionnaires were sent out	Details of method uncertain. Presumably every n-th addressograph plate. Same proportion of names for all states.	5,000[4]	1,609	1,499	110	30.0	2.5
2 (1935)	1932–34			5,000[4]	1,171	1,122	49	22.4	1.9
Lawyers[5]									
1 (1935)	1932–34	Latest issue of annual *Martindale-Hubbell Law Directory*	Same as for physicians. For sample 1 the no. taken from each page was the same for all pages; for sample 2 it varied from state to state.	6,000[4]	1,161	1,050	111	17.5[6]	1.1[7]
2 (1937)	1929, 1932–36			10,182	1,260	1,063	197	10.4[6]	0.9[7]

Certified public accountants [5]									
1 (1933)	1929–32	Mailing list of the American Society of Certified Public Accountants for year in which questionnaires were sent out. List included both members & nonmembers.	Every 2d or 3d name. Proportion varied from sample to sample.	5,000 [4]	977	679	298	13.6 [6]	11.5 [7]
2 (1935)	1932–34			7,000 [4]	1,255	1,062	193	15.2 [6]	13.7 [7]
3 (1937)	1929, 1934–36			7,809	853	752	101	9.6 [6]	9.4 [7]
Consulting engineers [6]									
1 (1933)	1929–32	Directories of American Institute of Electrical Engineers, American Institute of Mining & Metallurgical Engineers, American Society of Mechanical Engineers, American Society of Civil Engineers	American Engineering Council checked the names of individuals recognized as consultants. Every name checked was used.	3,286	804	415	389	12.6 [6]	5.5 [7]

[1] Excludes questionnaires returned by post offices as undeliverable.

[2] Includes all returns containing any usable information. The numbers in this column are therefore somewhat greater than the numbers on which most of the results in later chapters are based.

[3] The numbers in the universe on which these percentages are based were computed from estimates in Table 1 by straight line interpolation or extrapolation.

[4] Approximate; exact figure not known.

[5] Number of returns equals the number of persons practising individually plus the number of firms. The number of practitioners covered by the returns would be considerably larger, since firm members were requested to report for the entire firm.

[6] Questionnaires were sent to individuals, whereas replies were requested for firms, as units. More than one member of a firm may have been included among the individuals to whom questionnaires were sent, although only one return from the firm is presumably included among the usable returns. This would tend to lower these percentages artificially.

[7] For reasons mentioned in notes 5 and 6 it would be meaningless to express the number of usable returns as a percentage of the number of persons in the professions. Hence, these percentages were computed by expressing the number of persons covered by usable returns as a percentage of the total number of persons in the professions. This should give approximately the same result as expressing the number of usable returns as a percentage of the total number of professional units (i.e., firms plus individual practitioners).

questionnaires asked gross and net income for a period of years; most of them, the number and salaries of employees; those for the business professions—law, accountancy, and engineering—the number of partners in the firm; the questionnaire sent to physicians in 1937, the type of practice (general, specialized, special interest with general practice), and the number of years in practice; and the questionnaire sent to lawyers in 1937, detailed information on training and experience. Only the questionnaires sent in 1937 explicitly asked the name of the community in which the individual or firm practises; in the other samples the location of the practice was inferred from the postmark on the envelope in which the questionnaire was returned.

Almost no use is made in this study of the data on gross income. Net income, to which the analysis is mainly restricted, was defined on the questionnaires to include net income from independent practice alone; income from salaried employment, nonprofessional activities, property, or other sources was excluded. Net income from independent practice was defined as gross income less professional expenses, but no explicit instructions were given about the items to be included in professional expenses.

2 CORRECTION FOR BIAS

The process of obtaining a sample involves first, the designation of a list of names to serve as the basis for sampling; second, the choice of the persons on the list to whom questionnaires are to be sent; third, the return of the questionnaires by the respondents; and fourth, the editing of the returned questionnaires before final use. Biases may enter at each stage: the list may be defective, the method of choosing names may not yield a truly 'random' sample, those who reply may differ from those who fail to reply, the answers of those who reply may have a systematic bias, and the questionnaires rejected in the process of editing may differ systematically from those retained.

Examination of the methods used to obtain our samples and of the final samples themselves discloses that biases have

entered at all stages. Some affect all samples, others do not; some can be eliminated by adjusting the data, others cannot.

a Biases affecting all samples

None of the biases affecting all samples seem substantial. The most important is probably the upward bias in the trend of income over time. The questionnaires requested information for a period of years from a sample of professional men chosen from a list presumed to be comprehensive for the end of the period. Such a sample might be entirely random for the end of the period, yet it would be biased for the earlier years since it would exclude those who had meanwhile left the profession. Moreover, a list that purports to be comprehensive for a given year seldom is: it tends to cover new entrants to the profession incompletely. The effect of these deficiencies in the lists depends on the income characteristics of the persons excluded. For the professions, the persons excluded in the earlier years appear to have an average income higher than the average for all persons, and new entrants excluded in the terminal year clearly have an average income lower than the average for all persons. Consequently, the incompleteness of the lists tends to impart a downward bias to the average incomes for the earlier years and an upward bias to both the average income for the latest year and the trend of income over the period. The earlier of two samples for the same profession would therefore tend to yield a higher average for an overlapping year—a tendency that is reflected in our data after correction is made for the specific biases discussed below. Of the ten differences summarized in Table 5, seven are in the expected direction. The only sizable differences in the opposite direction are for lawyers, for whom the 1937 sample, as we shall show below, is suspect on other grounds. Except for one of the comparisons for accountants, the positive differences are moderate, the largest being 13 per cent. And even the 35 per cent difference between the 1929 averages from the 1933 and 1937 accountancy samples is not disturbing since the bias in question should be larger the longer the time elapsing between the selection

of the two samples, and between these dates and the date for which the comparison is made. We have not adjusted the data for this bias.

The inclusion of salaried employees in the lists from which the samples were chosen is a minor source of bias since it may mean that our final samples are not restricted exclusively to

TABLE 5

Arithmetic Mean Income in Years Covered by More than One Sample for the Same Profession

SAMPLES COMPARED	YEAR OF COMPARISON	ARITH. MEAN INCOME* FROM EARLIER SAMPLE	ARITH. MEAN INCOME* FROM LATER SAMPLE	DIFFERENCE	% BY WHICH AVG. FROM EARLIER SAMPLE EXCEEDS AVG. FROM LATER SAMPLE
			(dollars)		
		Physicians			
1933 & 1935	1932	3,434	3,107	+327	+10.5
1933 & 1937	1932	3,434	3,165	+269	+8.5
1935 & 1937	1932	3,107	3,165	−58	−1.8
1935 & 1937	1934	3,296	3,276	+20	+0.6
		Dentists			
1933 & 1935	1932	2,943	2,704	+239	+8.8
		Lawyers			
1935 & 1937	1932	3,508	5,303	−1,795	−33.8
1935 & 1937	1934	3,248	4,567	−1,319	−28.9
		Certified Public Accountants			
1933 & 1935	1932	4,777	4,218	+559	+13.3
1933 & 1937	1929	7,926	5,858	+2,068	+35.3
1935 & 1937	1934	4,274	3,984	+290	+7.3

* Arithmetic means are adjusted for specific biases, as described in Section 2b of this chapter.

professional men in independent practice. It is unlikely, however, that many salaried employees are included in the final samples. The questionnaires emphasized that information was desired solely from persons in independent practice; in addition, the many items on the questionnaires not applicable to salaried employees facilitated the identification of questionnaires inadvertently returned by them.

A third bias affecting all samples is more conjectural than the other two. Examination of the returns suggests that erroneous interpretations of the questions by the respondents may have resulted in a tendency to understate net income: some respondents seem to have interpreted 'net income' as 'net taxable income'; others seem to have deducted personal as well as professional expenses from gross income in arriving at net income. In general, the instructions on this point were more detailed and explicit in the later samples. The higher averages for the overlapping years yielded by the earlier samples thus suggest that this bias is considerably less important than the first bias discussed.

b Biases affecting specific samples

The biases in the samples and the devices used to correct them are listed below, profession by profession.

Medicine

1) Physicians in small communities are underrepresented in all samples. The samples were obtained by taking a specified number of names from each page of the Directory of the American Medical Association. Unfortunately, the total number of names on a directory page is somewhat greater for small communities than for large. Such variation obviously tends to introduce a bias into a sample obtained by taking the same number of names from each page: communities for which the total number of names per page is relatively large tend to be underrepresented. Tests indicate that the bias, while present, is small and its effect on the national averages slight. Consequently, no correction was made.

2) The 1937 sample is intentionally nonrandom among states: the number of names taken from each page of the directory was varied from state to state. To correct for the nonrandomness of the sample, all averages and frequency distributions were computed for each state separately and combined by weighting by the estimated number of physicians in active practice in each state in 1936. (More exactly, each return has

been weighted by the ratio of the estimated total number of physicians in the state to the number in the sample for that state.) In the two earlier medical samples (1933 and 1935 samples), the same number of names was taken from each page for all states.

3) Specialists may be slightly overrepresented in all samples. The samples were chosen by laying a straight edge marked at equally spaced intervals along a column of names. More lines tend to be devoted to a specialist than to a general practitioner since the directory indicates his specialty and the professional societies to which he belongs. The chance that a mark on a straight edge will fall opposite an individual's name is clearly greater the more space devoted to him; hence a specialist is more likely to be included in the sample than a general practitioner. However, comparison of the proportion of specialists in the 1937 sample—the only sample for which this information is available—with the proportion indicated by other studies does not confirm the existence of this suspected bias. No correction was made.

Dentistry

1) Dentists with low incomes are underrepresented in both samples because the samples were restricted to members of the American Dental Association. Previous studies—one of incomes in 1929 and another of incomes in 1933—suggest that the average net income of American Dental Association members is approximately 30 per cent larger than that of nonmembers. Since approximately 46 per cent of all dentists were American Dental Association members when our samples were selected, a difference of 30 per cent between the incomes of members and nonmembers would imply that the average income of all dentists is 87.6 per cent of the average of members alone. In deriving the final estimates of the average incomes of dentists (Table 11) we use this percentage to correct for the bias arising from the exclusion of nonmembers. The average incomes obtained in this way are almost identical with the averages from a more recent and more comprehensive study

by the Department of Commerce. (Comparison is possible for two years; the difference is a trifle greater than 2 per cent in one year and 0.5 per cent in the other.) Except for the averages in Table 11, none of the data presented for dentists have been corrected for this bias. Consequently, the data for dentists in all other tables should be interpreted as referring solely to members of the American Dental Association.

Law

1) Lawyers in large communities are underrepresented in both samples because of variation in the number of names on a directory page. This bias is similar to the one described under point 1 for physicians but larger and in the opposite direction. In the legal directory the number of names per page varies from approximately 148 for cities over 1,500,000 in population to about 86 for cities under 100,000. The samples were corrected for the bias by computing averages and frequency distributions for each size of community class separately. The number of lawyers in the sample in each size of community class was then adjusted on the basis of the estimated number of names per page for communities of that size. These adjusted numbers were used as weights in combining the results for different size of community classes.

2) The 1937 sample, like the corresponding sample for physicians (see point 2 under physicians), is intentionally nonrandom among states. The averages and frequency distributions were therefore computed for each state separately and combined by weighting by the number of lawyers in each state listed in the *Martindale-Hubbell Law Directory* for 1936. In the 1935 sample the same number of names was taken from each page for all states.

3) There is *a priori* reason to expect an overrepresentation of firm members in both samples. The list used for sampling was a list of lawyers, not of firms plus individual practitioners, but each lawyer to whom a questionnaire was sent was requested, if a member of a firm, to reply for the firm as a whole. By the procedure followed, a firm had a greater chance of

being included in the sample than an individual practising alone, since it was included if *any one* of its members was included. Tests indicated the presence of the firm member bias in the 1935 sample but not in the 1937 sample. The 1935 sample was adjusted to eliminate the firm member bias by computing averages and frequency distributions for firms of each size separately. The results for firms of different size were combined by weighting inversely to the expected overrepresentation. The 1937 sample was not adjusted. The failure of this sample to confirm expectation renders its results suspect.

4) Older and prominent lawyers may be overrepresented in both samples because the samples were selected by laying a straight edge marked at equally spaced intervals along a column of names. More space tends to be devoted to established and prominent lawyers (see point 3 for physicians). However, comparisons with studies of lawyers in Wisconsin and in New York County suggest that the bias is not very important since our samples yielded lower average incomes than the other studies. No correction was made for the suspected bias.

Certified public accountancy

1) An overrepresentation of firm members is to be expected for reasons discussed under point 3 for lawyers. All three samples seem to fulfill this expectation. Consequently, the type of adjustment used to correct the 1935 legal sample was applied to the three accountancy samples.

2) The more affluent accountants may be overrepresented in the 1937 accountancy sample. The questionnaire requested a recipient who was a salaried employee of an accounting firm to hand the questionnaire to his employer. Consequently, an accountant with salaried professional employees would be more likely to be included in the final sample than an accountant without such employees since the former might receive a questionnaire either directly or from one of his employees. However, the two bits of evidence that we have on this bias suggest that it is unimportant.

Consulting engineering

1) Consulting engineers with low incomes are probably greatly underrepresented because of deficiencies in the list used for sampling. The American Engineering Council selected the names of consulting engineers from the directories of four national engineering societies. The names selected totaled fewer than 3,500, yet apparently there were approximately 10,000 independent consulting engineers in 1930 (Table 1). The list clearly excludes consultants not members of engineering societies. In addition, it excludes engineers who may have been consultants but whose status was not known by the American Engineering Council. Both deficiencies operate in the same direction: that is, to exclude the less prominent and less well-known engineers, who might be expected to have relatively low incomes. No correction for this bias was possible.

3 TESTS OF THE RELIABILITY OF THE CORRECTED DATA

Examination of the methods used to obtain a sample is an indispensable step in evaluating the reliability of the sample. Alone, however, it cannot be conclusive. Even though no biases are discovered, or correction is made for any biases that are discovered, the sample may still yield inaccurate or biased results. Examination of the methods must be supplemented by objective tests of the reliability of the data. We have applied three types of objective tests to our data: (1) comparison of the distribution of each sample by geographic units with the estimated distribution of all practitioners, (2) comparison of the different samples for the same profession with one another, (3) comparison of our samples with other studies.

The major general conclusion that emerges from these tests is the great difference in the presumptive reliability of our data on the *number* and *proportion* of practitioners in various geographic units and our data on *income*: we have good reason to suspect the former, but we also have good reason for confidence in the latter.

Every test of the geographic distributions of our samples impugns their reliability: the proportion of the questionnaires sent out that were returned differs significantly from state to state; the distributions of our samples by states or by regions and size of community classes differ significantly from the estimated distributions of all practitioners; successive samples for the same profession differ significantly from one another though less than each differs from the universe it is supposed to represent. There are several possible explanations of these discrepancies other than the unreliability of our data: inadequacies in the lists from which the samples were chosen that affect the tests but not the samples themselves; errors in the estimated distributions of all practitioners; differences among the universes the successive samples are supposed to represent; etc. But it is not possible to establish satisfactorily that these explanations tell the whole story. Whatever their causes, the discrepancies revealed by the tests mean that no great confidence can be placed in our data on the number and proportion of professional men in various states, regions, or size of community classes.

The presumptive unreliability of the geographic distributions of our samples is in itself not serious, since we have little interest in using our samples to study the geographic distribution of professional men. But it inevitably arouses suspicion about the reliability of the income data, since biases in the geographic distributions of the samples might be expected to be associated with income. None of our tests confirm this expectation: the ratio between the number of practitioners in a state who replied and the number to whom the questionnaires were sent is uncorrelated with the average income of those who replied; the ratio between the number of practitioners who replied and the estimated total number of practitioners is uncorrelated with the average income of those who replied whether the correlation is computed from data for states or for regions and size of community classes; the ratio for a state between the number of returns in one sample

and the number in another for the same profession is uncorrelated with the difference between the average incomes for the same year from the two samples.

The apparent absence of any relation between average income and the biases in the geographic distribution of our samples leads to two inferences about the reliability of our data on income. First, it suggests that income figures for groups of states will not be contaminated by the nonrandomness of the geographic distributions; such figures will of course be subject to random errors but not, on this score at least, to bias. Second, it suggests that an individual's willingness to reply is not closely related to his income. If such a relationship existed, the considerable geographic differences in income would tend to give rise to biases in geographic distributions that would be correlated with income. We cannot, of course, regard it as conclusively established that the incomes of those who reply do not differ widely from the incomes of those who fail to reply, since differences that were not the same for all parts of the country might not be revealed by our tests, and since the differences might affect aspects of the frequency distribution of income other than the average. Unfortunately, other studies add little to our knowledge. The results of the few relevant studies are inconsistent, and each is tinged with special circumstances that make generalization hazardous. If they reveal any tendency, it is toward somewhat greater reluctance to reply on the part of the lower income groups; but this tendency is exceedingly uncertain.

Further evidence on the reliability of the income data is furnished by the average incomes from different samples for the same profession. As noted above, most of the differences between the national averages for the overlapping years are moderate in size and in the expected direction (see Table 5). The differences between the state averages for the overlapping years that do not reflect the general bias arising from the time elapsing between the selection of the samples seem entirely attributable to random factors.

TABLE 6

Summary of Comparisons between the Department of Commerce and Other Samples

Physicians, Dentists, Lawyers, and Consulting Engineers

SAMPLES WITH WHICH COMPARISON IS MADE	D. OF C. SAMPLES	GEOGRAPHIC UNIT	YEARS OF COMPARISON	BRIEF SUMMARY OF RESULTS
		Physicians		
Committee on the Costs of Medical Care and American Medical Association	1933, 1937	Primarily country as a whole, also regional and size of community groups	1929	Checked rather closely in practically all respects. If anything, avg. from 1933 D. of C. sample trifle higher.
California Medical-Economic Survey	1933, 1935, 1937	California	1929–34	Avg. net incomes from 1935 sample significantly below C.M.E.S. avg. Other comparisons very satisfactory.
Wisconsin State Medical Association	1933, 1937	Wisconsin	1930	Close agreement.
Michigan State Medical Society	1933, 1937	Michigan	1929, 1931	Close agreement.
Utah State Medical Association	1933, 1935, 1937	Utah	1929–31, 1933	Avg. incomes from 1933 sample significantly below Utah avg. Other samples agree closely.
		Dentists		
Committee on Costs of Medical Care	1933	20 states	1929	Differences among results are of kind to be expected from restriction of D. of C. sample to members. Corrected avg. reasonably close, with D. of C. avg. lower.
California Medical-Economic Survey	1933, 1935	California	1929–34	Close agreement after correction for restriction of D. of C. sample to members.
University Relations Committee	1935	Minnesota	1933–34	Close agreement after correction for restriction of D. of C. sample to members.
		Lawyers		
L. K. Garrison	1935, 1937	Wisconsin	1932	1935 sample agrees closely; 1937 sample yields very much lower avg. than Garrison's though difference is within range of sampling variation.

TABLE 6 (cont.)

SAMPLES WITH WHICH COMPARISON IS MADE	D. OF C. SAMPLES	GEOGRAPHIC UNIT	YEARS OF COMPARISON	BRIEF SUMMARY OF RESULTS
		Lawyers (cont.)		
New York County Lawyers Association	1935, 1937	New York City	1933	1937 sample agrees very well; 1935 sample yields much lower avg. than Association's though difference is within range of sampling variation.
		Consulting Engineers		
BLS	1933	United States	1929, 1932	Poor agreement; BLS measures lower for 1929, as might be expected from known bias in D. of C. sample, but higher for 1932.

The comparisons, summarized in Table 6, between our samples and other studies suggest that our failure to find substantial biases in the income figures is attributable to their absence. On the whole, our samples, after allowance is made for specific biases, agree very well with the other studies. This agreement extends not only to average incomes but also to quartile measures, standard deviations, and the distribution of income by size. The few differences do not indicate persistent or uniform biases. For example, our 1933 medical sample yields average incomes for 1929 that seem a trifle high compared with the 1929 study of the Committee on Costs of Medical Care; yet the same sample yields average incomes for Utah that are decidedly too low compared with the special Utah study. Compared with the results of the California Medical-Economic Survey, the averages for California from the 1933 medical sample seem entirely satisfactory, but the averages from the 1935 medical sample seem too low. Comparison with the Utah sample seems to warrant exactly the opposite conclusion: the 1935 sample is satisfactory, but the averages from the 1933 sample are low.

Admittedly, these comparisons are fragmentary and, alone, inconclusive. While most of the other studies are based on much larger samples, they are subject to error and bias; in

addition, sampling fluctuations are so great, especially when comparisons are made for individual states, that they may have concealed real differences. At the same time, in conjunction with other parts of our analysis, the comparisons give important confirmatory evidence of the general reliability of our data on income.

CHAPTER 3

Incomes in the Professions and in Other Pursuits

THE INCOMES that individuals receive from professional practice fluctuate widely from year to year, and the differences among individuals in any one year are even more striking. Of the 1,500 physicians in our 1935 sample, 3 had incomes above $40,000 in 1934, and 261 had incomes below $500—25 of them suffering losses. Of the 1,100 dentists, 4 had incomes above $16,000 in 1934, and 6 suffered losses. This wide variability of income characterizes not only professions but also other pursuits. Frequency distributions of income by size are very similar for the different professions, and are well illustrated by the sample distribution in Chart 1. Considerable skewness, wide variability, and great peakedness—these are the hallmarks of distributions of income from independent professional practice.

1 THE PLAN OF THE STUDY

General observation and previous studies suggest numerous factors responsible for variability of income. We know that