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Chapter Title: Other Determinants of Professional Income

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physicians as dentists in active practice in the United States. In the West South Central region the corresponding ratio was 3.18 and in the West North Central, 1.78.[10] In the West South Central region physicians are numerous relatively to dentists and their incomes are low relatively to dentists'; in the West North Central region the relation is reversed. These figures are merely suggestive and do not conclusively establish that the observed difference in relative incomes reflects this difference in the relative number of practitioners; indeed, one region, the East South Central, has an even higher ratio of physicians to dentists, 3.27, than the West South Central region; and one region, the Pacific, has an even lower ratio, 1.61, than the West North Central.

CHAPTER 6

Other Determinants of Professional Income

1 TRAINING AND ABILITY

THE KIND OF TRAINING individuals get and the ability they possess play a large role in determining their professional competence, connections, and opportunities; and, through these, their incomes. Unfortunately, data for measuring the influence of these important factors are almost nonexistent. The only information available on the influence of training and ability is from two fragmentary studies of lawyers, one for New York County, the other for Wisconsin. The New York County study

10 See Appendix to Chapter 4, Section 3b, for a more detailed discussion of the relation between the incomes of physicians and dentists and the number of practitioners, and for the source of these figures.

presents data, summarized in Table 30, on the incomes of college graduates and nongraduates and of graduates of full- and part-time law schools. The classifications are of course interrelated: individuals who graduate from college are more likely to attend a full-time law school than those who do not.

The median income of college graduates is almost 50 per cent larger than that of noncollege graduates; similarly, the median income of graduates of full-time law schools is about

TABLE 30

Median Income, by Prelegal Training
and by Type of Law School Attended

New York County Lawyers, 1933 and 1928–1932

	NO. OF LAWYERS REPORTING INCOME FOR		MEDIAN INCOME	
	1933	*1928–32*	*1933*	*1928–32*
				(dollars)
Prelegal training				
College graduate	1,742	1,317	3,570	5,220
Not college graduate	1,026	795	2,480	3,570
Type of law school attended				
Full-time	1,794	1,402	3,555	5,140
Part-time	1,011	786	2,580	3,355

Survey of the Legal Profession in New York County (New York County Lawyers Association, 1936), p. 23.

50 per cent larger than that of graduates of part-time law schools. These results presumably indicate that more extensive training yields higher incomes. However, the results are not unambiguous. On the one hand, the increasing tendency for individuals to go to college means that college graduates are concentrated in younger age groups than other lawyers. Since income tends to increase for a time with age (see Sec. 2), the medians in Table 30 probably understate the difference between the incomes of college graduates and others in practice the same number of years. On the other hand, both college graduates and graduates of full-time law schools doubtless come from wealthier families and have more valuable professional connections than other lawyers. The latter frequently

cannot afford to go to college and often attend part-time schools while earning their living. Hence, lawyers who received the better training would probably have earned higher incomes than their fellow lawyers even if they had received the same training as the latter.

The Wisconsin data relate 1932 incomes to the standing of individuals in their law school classes (Table 31). In general,

TABLE 31

1932 Professional Income, by Grade in Law School

Graduates of University of Wisconsin Law School

GRADE IN LAW SCHOOL	NO. OF LAWYERS REPORTING INCOME	% OF LAWYERS ATTAINING SPECIFIED GRADE IN LAW SCHOOL WHOSE 1932 INCOME WAS			
		Loss	$0– 2,000	$2,000– 4,000	Over $4,000
A	67	.0	29.9	32.8	37.3
B	143	.7	34.9	32.2	32.2
C	136	.7	41.2	32.4	25.7
D	113	.9	41.6	29.2	28.3
E	137	5.1	50.4	29.2	15.3

L. K. Garrison, 'A Survey of the Wisconsin Bar', *Wisconsin Law Review*, Feb. 1935, pp. 161–3. Data are for the graduating classes of University of Wisconsin Law School, 1904–31, excluding 1917–20.

those who received high grades in law school had better success in the practice of law than those who received low grades, although the correlation is far from close. The looseness of the relation between law school grades and income may mean that there is equally little connection between ability and income; probably, however, it means that law school grades are a poor index of the type of ability that spells success in the practice of law. High grades may measure application rather than ability, and individuals may 'loaf' in law school but work hard once they enter practice. In addition, the type of ability needed to get high grades may not be the same as the type of ability needed to make money as a lawyer.
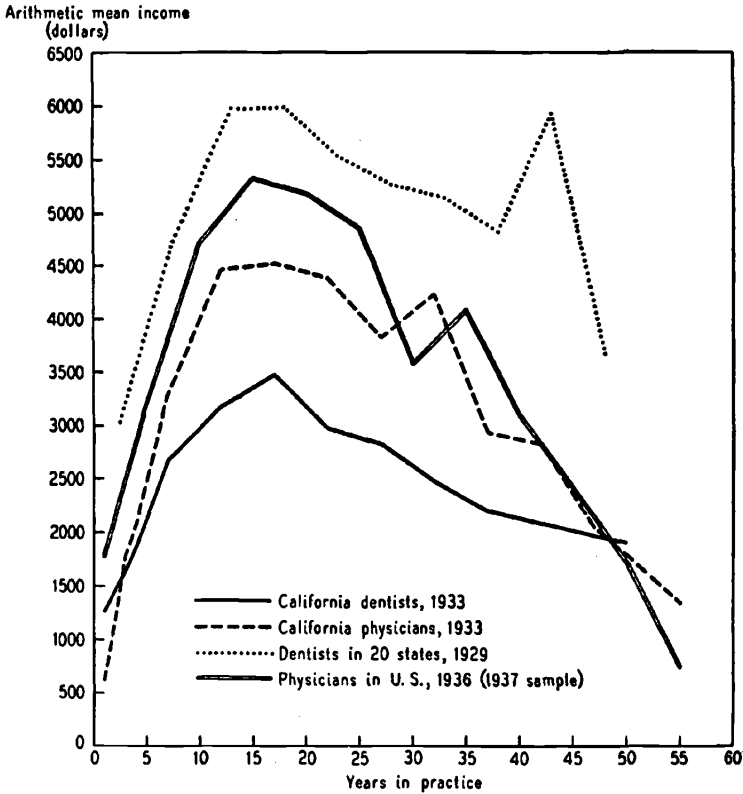
2 NUMBER OF YEARS IN PRACTICE

The early career of an independent professional man is characterized by low earnings. Some time must elapse before his

availability and competence become known—before he can attract 'practice'. To get a client is as a rule more difficult than to keep him. Once started, his practice tends to be cumulative. A satisfied client will return again and again and will recommend the practitioner to his friends or business associates. In the course of time the professional man becomes known, gains a reputation, acquires experience—that is to say, 'builds up a practice', and therefore is able to charge higher fees and to keep more fully occupied. If his reputation is good, his practice and income will continue to grow. But a limit to growth is set by the amount of business he can handle, the size of the market he serves, and the competition of fellow practitioners. This limit may come early or late in a man's professional career. But sooner or later he will have to struggle to retain his clients and to replace those he is unable to retain. And eventually, he will pass the zenith of his career. Long before his physical energies decline, he will find it increasingly difficult to retain his practice in the face of competition of younger men, trained in the latest methods and vigorously striving to make a place for themselves. Some of the more eminent, of course, will easily weather this competition and continue to increase their practice and income long after most other practitioners of their age are experiencing serious difficulty in maintaining their position. But others will find their problem intensified by poor health, while still others will voluntarily relinquish their practice in whole or in part as the urge for retirement overcomes the drive for professional advancement.

The data summarized in Table 32 and Charts 20 and 21 document this picture of an initially rapid rise in average income, followed by a slower rise, relative stability, and ultimately, a decline. In medicine and dentistry, professions in which scientific advance has been rapid and in which physical skill and dexterity are required, younger men are at an advantage and the peak income is reached fairly early—between the thirteenth and twentieth year of practice. In law, the only one of the 'business' professions for which data are available, experience and contacts are more important and physical fit-

CHART 20

Arithmetic Mean Income of Physicians and Dentists
by Years in Practice

Arithmetic mean income
   (dollars)

California dentists, 1933
California physicians, 1933
Dentists in 20 states, 1929
Physicians in U. S., 1936 (1937 sample)

Years in practice

The midpoint for California dentists '40 and over' class has been arbitrarily set at 50; for California physicians '50 and over', at 55.

ness secondary. In consequence, peak income is reached much later. Indeed, according to the data for New York County, the oldest lawyers have the highest median income. However, the last class—in practice 35 years and over—is fairly broad and if subdivided might well reveal a decline. Wisconsin lawyers seem to attain peak incomes between the twentieth and fortieth year of practice.

TABLE 32

Average Income, by Years in Practice

Physicians, Dentists, and Lawyers: Selected Studies

PHYSICIANS IN U.S., 1936 INCOME

Years in practice	Arith. mean income (dollars)
Under 3	1,788
3– 7	3,182
8–12	4,718
13–17	5,326
18–22	5,179
23–27	4,859
28–32	3,575
33–37	4,076
38–42	3,091
43–47	2,402
48–52	1,703
53–57	747
All	3,941
No. of returns in sample	1,409

PHYSICIANS & DENTISTS IN CALIFORNIA, 1935 INCOME

| | PHYSICIANS | | DENTISTS | |
| | Median income | Arith. mean income | Median income | Arith. mean income |
Years in practice	(dollars)		(dollars)	
Under 2	600	616	1,100	1,267
2	1,100	1,175		
3	1,500	1,771	1,500	1,642
4	2,000	2,068	1,500	1,857
5– 9	2,950	3,367	2,400	2,674
10–14	3,600	4,465	2,900	3,168
15–19	3,600	4,508	3,000	3,474
20–24	3,500	4,399	2,500	2,962
25–29	2,900	3,824	2,500	2,828
30–34	3,000	4,227	2,200	2,480
35–39	2,300	2,938	2,100	2,200
40–44	1,900	2,838		
45–49	1,400	2,048	1,650	1,911
Over 49	1,150	1,344		
All	2,700	3,572	2,500	2,762
No. of returns in sample	2,737		1,615	

DENTISTS IN 20 STATES, 1949 INCOME

| Year of graduation | Equiv. no. of years in practice | Median income | Arith. mean income |
		(dollars)	
1929–25	Under 6	2,695	3,025
1924–20	6–10	4,049	4,742
1919–15	11–15	5,047	5,976
1914–10	16–20	4,982	5,995
1909–05	21–25	4,741	5,551
1904–00	26–30	4,261	5,258
1899–95	31–35	3,770	5,144
1894–90	36–40	3,765	4,839
1889–85	41–45	4,167	5,940
1884–80	46–50	3,125	3,682
All		4,094	5,011
No. of returns in sample			4,705

LAWYERS IN NEW YORK COUNTY,[4]
1933 INCOME

Year of admission to bar	Equiv. no. of years in practice	Median income (dollars)
After 1929	Under 5	1,794
1924-29	5-10	3,164
1918-23	11-16	5,547
1911-17	17-23	6,674
1900-10	24-34	6,572
Before 1900	Over 34	8,068
All		3,564
No. of returns in sample		2,938

LAWYERS IN WISCONSIN,[5] 1930 INCOME

ARITH. MEAN INCOME OF LAWYERS PRACTISING IN

Years in practice	Milwaukee	Over 25,000[6]	Communities with populations of		
			10,000-25,000 (dollars)	2,000-10,000	Under 2,000
Under 5	1,772	2,224	1,983	1,937	1,709
5-9	3,196	3,849	3,764	3,184	2,509
10-19	5,035	5,264	5,218	3,223	2,946
20-29	7,846	6,950	5,495	4,286	3,432
30-34	10,415	6,201	5,652	3,759	2,512
35-39	8,853	6,553	4,425	4,290	2,285
Over 39	5,049	5,558	3,716	3,660	2,554
No. of returns in sample	812	525	186	292	161

1 See Table 34a.
2 California Medical-Economic Survey, Formal Report on Factual Data (California Medical Association, 1937), pp. 80, 88.
3 Maurice Leven, Practice of Dentistry and the Incomes of Dentists in Twenty States: 1929 (University of Chicago Press, 1932), p. 135.
4 Survey of the Legal Profession in New York County, p. 20.
5 Garrison, 'A Survey of the Wisconsin Bar', p. 156.
6 Excluding Milwaukee.

CHART 21

Average Income of Lawyers by Years in Practice

——————New York County, median income in 1930
Wisconsin, arithmetic mean income in 1930
— — — — —Milwaukee
══════════Communities over 25,000 (excl. Milwaukee)
············Communities of 10,000 – 25,000
═══════Communities of 2,000 – 10,000
— ···—···—Communities under 2,000

Average net income
(dollars)
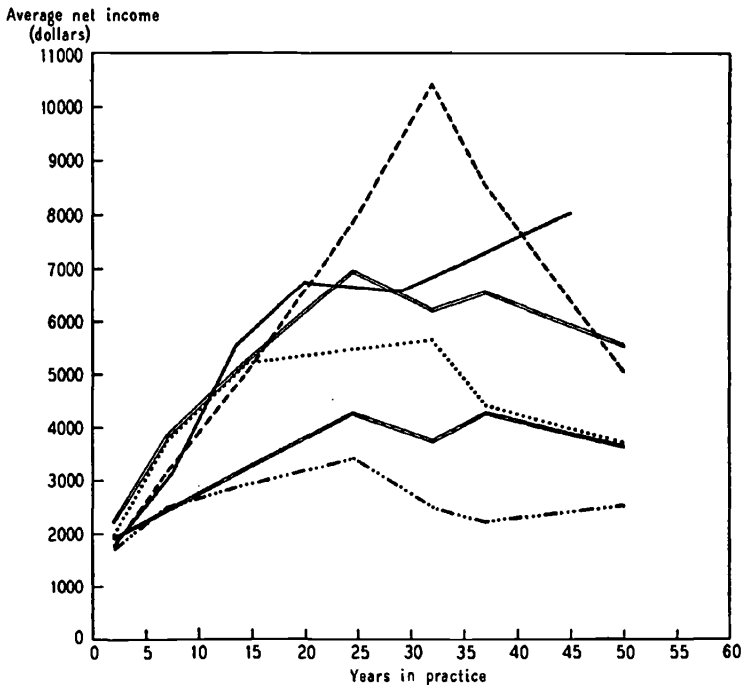
The midpoint for Wisconsin 'over 40' years in practice has been arbitrarily set at 50; for New York 'over 35', at 45.

Both the rise and decline seem larger for physicians than dentists. The factors responsible for this difference are presumably the same as those which account for the greater variability of medical than of dental incomes (see Ch. 4, Sec. 3). The most significant in the present connection is probably the greater importance attached to medical services and the consequent willingness to pay more for the services of a physician

considered superior to another than for the services of a dentist considered superior.

For physicians, information on years in practice from the 1937 sample makes possible a more intensive analysis.[1] The percentage distribution of physicians by years in practice in Table 33 is bimodal. The first mode is in the 3–7 years-in-practice class; the second, in the 23–27 years-in-practice class. The class containing the second mode includes individuals who graduated from medical school about 1910. It will be recalled from Chapter 1 that the initiation shortly before this date of

[1] The available data on years in practice are not unambiguous. The question was "state the number of years you have practised medicine". No other instructions were given. Consequently it is not clear whether the respondents excluded time spent as interns or in postgraduate study, or other interruptions to practice. However, this vagueness cannot be important; with rare exceptions, the maximum possible error is one or two years. For reasons of economy, only the data on income in 1936 have been analyzed by number of years in practice.

The questionnaire sent to lawyers in 1937 contained a question on the number of years in practice, but we have made no use of the answers. We have repeatedly had occasion to question the validity of this sample; in addition, the tabulation of the answers would be exceedingly arduous because of the necessity of both adjusting for the size of community bias and weighting the individual states in combining them. An additional difficulty is the questionnaire used. It was in two parts: the upper half requested data about the legal enterprise, the lower half about the individual lawyer. Additional copies of the lower half were enclosed with questionnaires sent to firm members, who were asked to distribute them among the other members of the firm. Almost all individual practitioners who replied returned both halves; and so did most firm members who returned the upper halves. In many cases, however, additional copies of the lower half were not returned by the other firm members. There is therefore reason to suppose that the sample of completed 'lower halves' is even more biased than the entire sample.

A table of average income of lawyers by years in practice based on this 1937 Department of Commerce sample, which did not seem to us worth tabulating in that fashion, is presented in *Economics of the Legal Profession* (American Bar Association, 1938), p. 21. So far as we can gather, the figures presented are based solely on the lower half of the schedules and are not corrected for the size of community bias or the nonrandomness of the sample by states. As a consequence the average 1936 income of all lawyers computed from this table is $3,446, whereas the average we obtain for 1936 from the same sample is $5,202 (Table 10). The table shows a rising income through 28–37 years in practice, and a decline thereafter.

TABLE 33

Percentage Distribution by Years in Practice; Arithmetic Mean Income and Number of Persons Covered, by Years in Practice and Type of Practice

Physicians, 1936

YEARS IN PRACTICE	% DISTRIBUTION[1]	ARITHMETIC MEAN INCOME (dollars)				NUMBER OF PERSONS COVERED[2]			
		All physicians	General practitioners	Partial specialists	Complete specialists	All physicians	General practitioners	Partial specialists	Complete specialists
Under 3	6.7	1,788	1,770	1,722	1,896	81	37	24	20
3–7	17.3	3,182	3,124	3,085	3,540	228	114	76	38
8–12	13.8	4,718	3,813	4,571	6,133	172	63	68	41
13–17	9.9	5,326	4,071	4,908	7,312	125	37	52	36
18–22	8.2	5,179	3,500	4,744	7,499	105	34	43	28
23–27	12.1	4,859	3,261	5,032	6,742	179	72	61	46
28–32	11.2	3,575	2,605	3,980	4,558	167	71	63	33
33–37	9.1	4,076	2,538	4,282	7,155	146	62	58	26
38–42	6.6	3,091	2,257	2,766	9,085	100	58	30	12
43–47	2.8	2,402	1,967	2,236	10,749	33	19	12	2
48–52	1.6	1,703	1,169	2,403		18	12	6	
53–57	0.7	747	692	922		7	5	2	
All classes[3]	100.0	3,941	2,917	3,957	5,795	1,409	603	513	293

[1] Excludes returns for which the number of years in practice was unknown.

[2] Number of persons covered by the returns used before weighting. These numbers, therefore, cannot be used directly to estimate the percentage distribution of physicians by years in practice.

[3] Includes some returns for which the number of years in practice was unknown.

an intensive drive for higher standards of medical education caused a sharp decrease in medical students and graduates.

Table 33 and Chart 22 give the average 1936 incomes of all physicians, general practitioners, partial specialists, and com-

CHART 22

Arithmetic Mean Income of Physicians by Type of Practice and Years in Practice, 1936

Arithmetic mean income.
(dollars)

Years in practice

Legend:
— All physicians
– – – – General practitioners
·········· Partial specialists
═══ Complete specialists
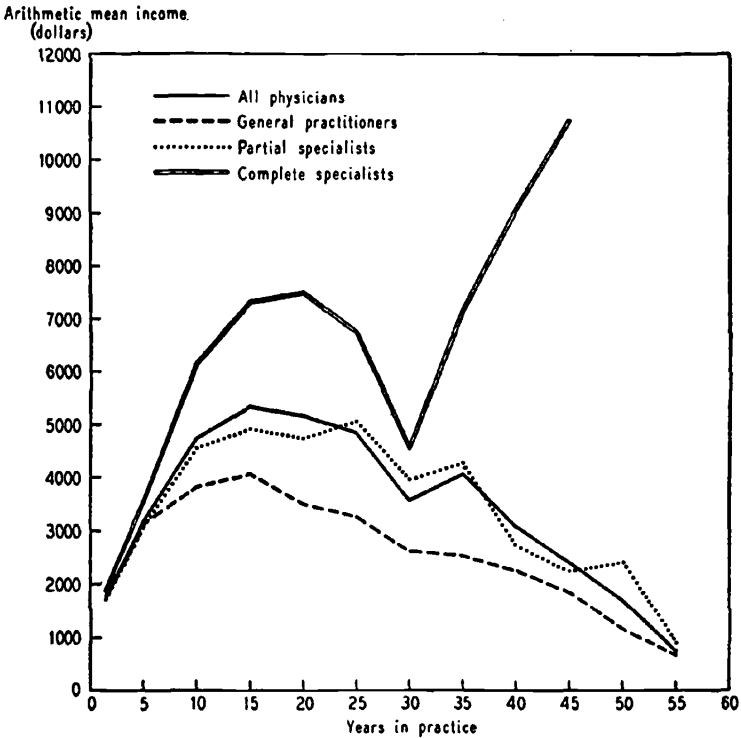
plete specialists by years in practice. According to the averages for all physicians, it takes approximately seven years for physicians to attain an average income equal to the average for the profession; another 10 or 11 years brings them to the peak; and it is then between 15 and 20 years before their incomes fall below the average for the profession. The rise is considerably

steeper than the decline, and the peak income is received by physicians in practice about 17 or 18 years.[2] Strictly speaking, this pattern describes only the relative earnings in a given year of physicians in practice varying periods. However, the pattern for 1936 is very similar to corresponding patterns for the 1933 incomes of California physicians (Table 32 and Chart 20) and the 1928 gross incomes of physicians in all parts of the country.[3] This close similarity among patterns for periods as much as eight years apart suggests that they can also be interpreted as describing the change through time in the earnings of each year's entrants relative to average earnings in the profession as a whole—the earnings 'life cycle', as it were.

While in the early years incomes depend but little on type of practice, beginning with the 8–12 years-in-practice class the averages diverge considerably. The pattern for general practitioners has a peak at about 15 years, for partial specialists, at about 25 years. The peculiar pattern for complete specialists makes it impossible to select any one year as *the* peak. There is one peak at 20 years, another at 45 years, the last class for which we have data. Fluctuations that might arise from chance are so great that either the decline from 25 to 35 years or the rise thereafter might be spurious, although the smoothness of

[2] These statements are more precise than Chart 22 alone would justify, since averages for five-year periods are plotted on the chart. They are based on our examination of the annual averages, which suggests that the curve relating average income to number of years in practice crosses the average for the profession as a whole for the first time between 7 and 8 years and for the second time at about 33 or 34 years, and reaches a peak at about 17 or 18 years.

[3] See Leven, *Incomes of Physicians*, pp. 44–9, 114. Interestingly enough, the rise between 30 and 35 years in practice in the pattern from our data is matched by a similar rise in the pattern from the California 1933 data. There is no such rise in the pattern from the 1928 data. An examination of the averages for each year in practice rather than for the five-year intervals used in Chart 20, reveals that two of the annual averages in the 28–32 years-in-practice class are lower than any in the 33–37 years-in-practice class, and two of the latter are larger than any in the former group. The remaining three in the two groups are about equal. A rough test of the significance of the difference between the two five-year averages indicates that the observed difference would be exceeded in well over one-fifth of random samples. In view of these results and of the absence of any reasonable explanation for such a 'kink' we are disposed to attribute the coincidence between the California and our data to chance.

the decline and subsequent rise argues against such an inter-
pretation.[4] In any event, the pattern for complete specialists
has a much sharper upward 'tilt' than the pattern for partial
specialists, and the latter than the pattern for general practi-
tioners. Consequently, the percentage differences among the
three groups of practitioners display a fairly uniform tendency
to increase with number of years in practice. These patterns
for the three groups of practitioners cannot, like the pattern
for all physicians, be interpreted as describing the 'life cycle'
of earnings. Young men who become physicians ordinarily re-
main physicians throughout the whole of their working life.
Young men who start as general practitioners, however, may
often later become partial specialists or complete specialists.
The patterns for the different groups of practitioners natu-
rally reflect this shift in their composition, and hence cannot be
interpreted as the 'life cycle' of the earnings of a stable group.
(See also Sec. 3a below.)

Chart 23 presents for each type of practitioner and each size
of community the relation between average income and years
in practice. The averages are given in Table 34. The tendency
noted in the countrywide data for the tilt of the patterns to
shift upward as we pass from general practitioners to partial
specialists to complete specialists persists for the larger com-
munities, but is, if anything, reversed for the two smallest
size of community classes. In general, the amplitude of the
patterns increases at first as size of community decreases, and

[4] It is difficult to make an accurate test of these statements: first, because the
particular movements to be investigated are selected from many on the basis
of their peculiarity; second, because the averages are weighted. However, stand-
ard errors of the differences can be computed that neglect these difficulties.
The difference between the average at 20 years in practice and the average at
30 years is about twice its approximate standard error; the difference between
the latter average and the average at 45 years in practice is slightly more than
twice its approximate standard error; and the difference between the average
at 20 years and the average at 45 years in practice is about one and a half
times its standard error. If we disregard the two complications mentioned,
these differences are on the borderline of 'significance'. Since both complica-
tions tend to lessen the 'significance' of the differences, it is not unreasonable to
attribute the differences to chance fluctuation. It should be noted that these
tests do not take into account the regularity of the averages.

CHART 23

Arithmetic Mean Income of Physicians by Type of Practice, Size of Community, and Years in Practice
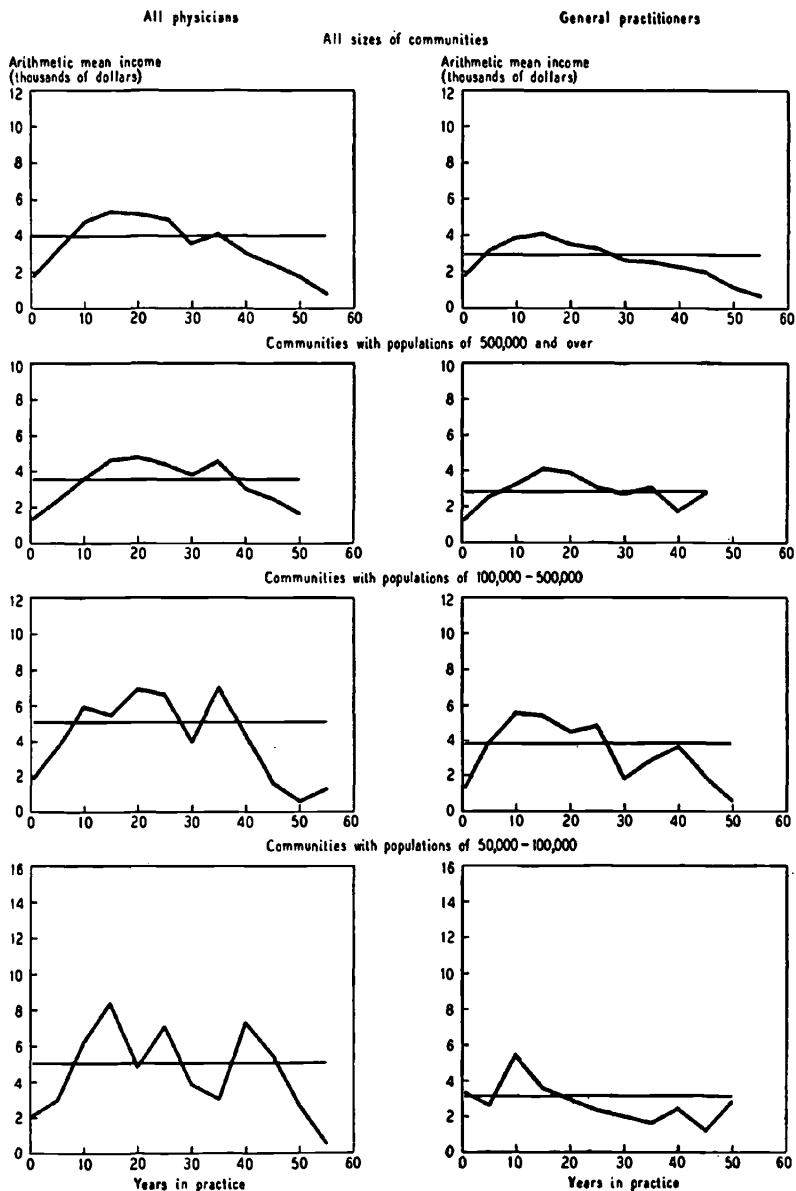
The horizontal line in each diagram represents the arithmetic mean income of all physicians of the specified type in the particular size of community.

CHART 23 (CONT.)

Partial specialists   Complete specialists
All sizes of communities

Communities with populations of 500,000 and over

Communities with populations of 100,000 - 500,000

Communities with populations of 50,000 - 100,000

Years in practice   Years in practice

The horizontal line in each diagram represents the arithmetic mean income of all physicians of the specified type in the particular size of community.

CHART 23 (CONT.)

All physicians   General practitioners

Communities with populations of 25,000 - 50,000

Communities with populations of 10,000 - 25,000

Communities with populations of 2,500 - 10,000

Communities with populations under 2,500

Years in practice   Years in practice

The horizontal line in each diagram represents the arithmetic mean income of all physicians of the specified type in the particular size of community.

CHART 23 (CONCL.)

Partial specialists

Complete specialists

Communities with populations of 25,000 – 50,000

Arithmetic mean income
(thousands of dollars)

Arithmetic mean income
(thousands of dollars)

Communities with populations of 10,000 – 25,000

Communities with populations of 2,500 – 10,000

Communities with populations under 2,500

Years in practice

The horizontal line in each diagram represents the arithmetic mean income of all physicians of the specified type in the particular size of community.

TABLE 34

Arithmetic Mean Income and Number of Persons Covered, by Years in Practice and Size of Community

a All Physicians, 1936

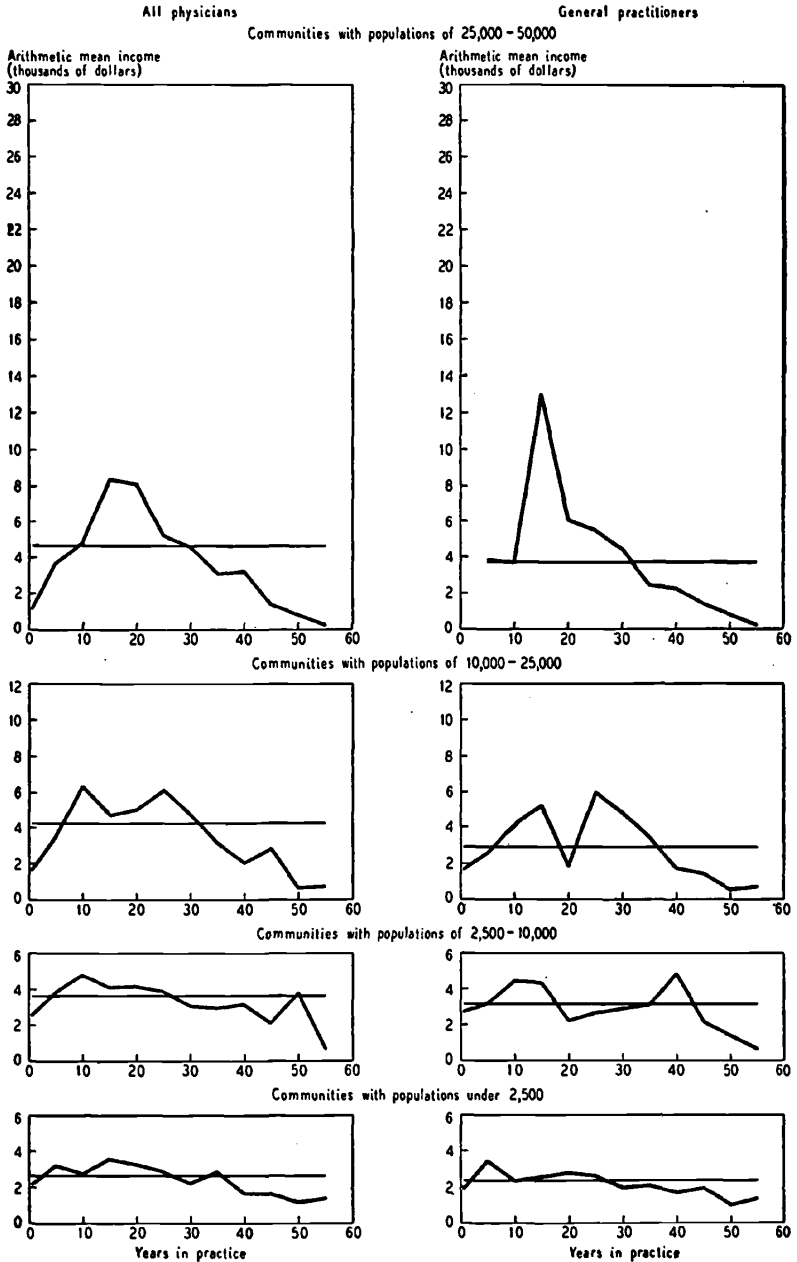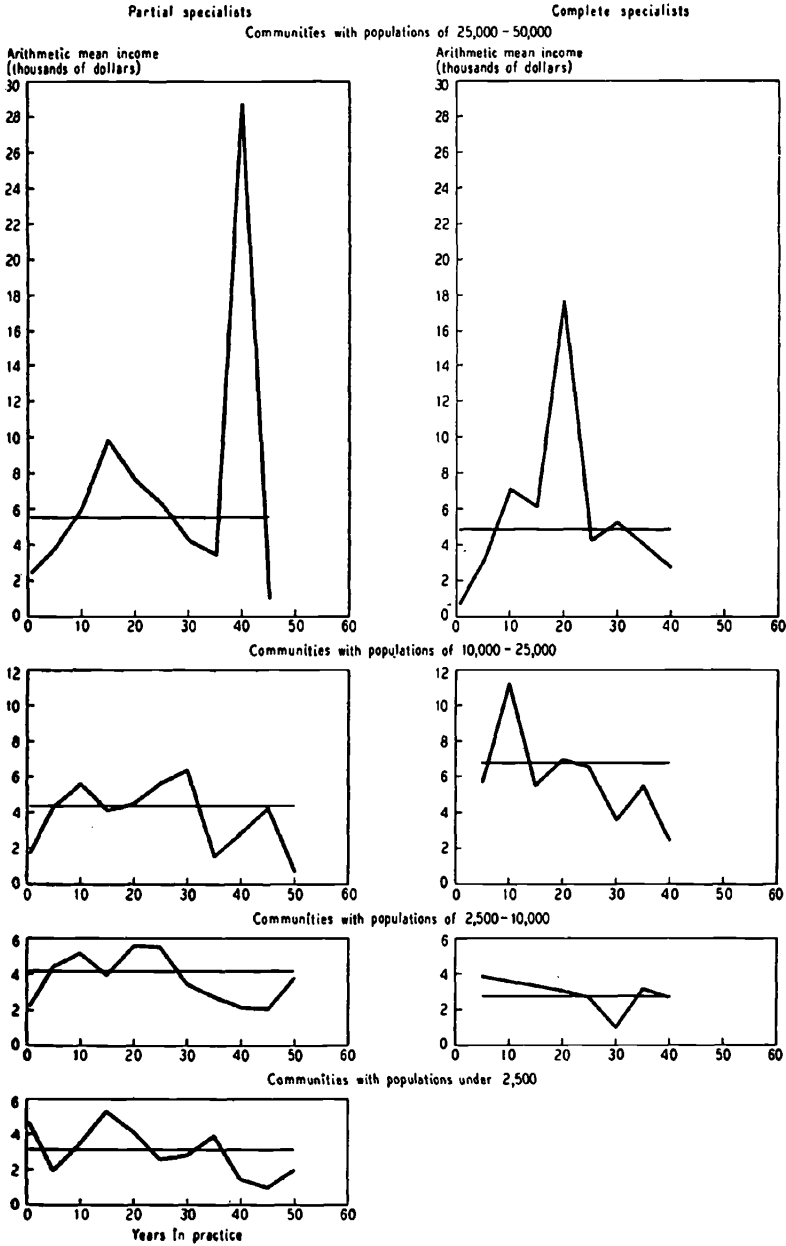| SIZE OF COMMUNITY	ALL	NOT REPORTING YEARS IN PRACTICE	REPORTING YEARS IN PRACTICE AS											
			Under 3	3-7	8-12	13-17	18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57
							Arithmetic Mean Income (dollars)							
500,000 & over	5,525	3,743	1,373	2,357	3,587	4,594	4,733	4,347	3,781	4,503	3,054	2,418	1,600	...
100,000–500,000	5,103	5,155	1,913	2,685	5,991	5,512	6,913	6,675	3,983	7,054	4,342	1,635	600	1,279
50,000–100,000	5,079	...	2,166	2,998	6,277	8,416	4,860	7,122	3,881	3,039	7,340	5,472	2,682	500
25,000– 50,000	4,679	2,086	1,110	3,745	4,819	8,387	8,121	5,320	4,599	3,074	3,328	1,331	...	200
10,000– 25,000	4,256	3,805	1,674	3,492	6,365	4,715	5,014	6,099	4,773	3,119	2,015	2,823	615	700
2,500– 10,000	3,648	3,986	2,556	3,830	4,805	4,111	4,134	3,873	3,060	2,968	3,194	2,106	3,767	640
Under 2,500	2,620	2,794	2,195	3,185	2,731	3,568	3,232	2,853	2,211	2,821	1,653	1,634	1,141	1,353
U. S.	3,941[1]	4,011	1,788	3,182	4,718	5,326	5,179	4,859[1]	3,575	4,076	3,091	2,402	1,703	747
							Number of Persons Covered [a]							
500,000 & over	241	7	18	42	42	26	22	29	22	16	10	6	1	...
100,000–500,000	265	15	22	32	28	26	26	35	24	32	19	4	1	1
50,000–100,000	97	...	6	12	12	13	7	13	8	16	4	3	2	1
25,000– 50,000	110	4	5	16	10	9	10	16	20	9	7	3	...	1
10,000– 25,000	162	5	6	30	24	15	11	16	20	16	10	6	2	1
2,500– 10,000	198	9	7	40	24	18	15	26	25	10	15	6	2	2
Under 2,500	335	8	17	56	32	18	14	43	48	47	35	5	10	2
U. S.	1,409[1]	48	81	228	172	125	105	179[1]	167	146	100	33	18	7

b General Practitioners, 1936

							Arithmetic Mean Income (dollars)							
500,000 & over	2,802	460	1,270	2,541	3,179	4,086	3,844	3,083	2,710	3,048	1,757	2,732	...	...
100,000–500,000	3,819	4,160	1,318	3,914	3,588	5,465	4,531	4,854	1,878	2,888	3,698	1,953	600	...
50,000–100,000	3,171	...	3,589	2,613	5,470	3,562	...	2,352	2,004	1,619	2,465	1,250	2,859	...
25,000– 50,000	3,701	2,250	...	3,838	3,677	13,000	6,048	5,453	4,404	2,439	2,231	1,864	...	200

Number of Persons Covered [a]

10,000–25,000	2,925	4,935	1,665	2,574	4,128	5,251	1,852	5,057	4,805	5,454	1,744	1,432	540	700
2,500–10,000	3,174	1,933	2,725	3,195	4,454	4,534	2,211	2,662	2,903	3,107	4,875	2,122	…	640
Under 2,500	2,581	3,583	1,890	3,473	3,539	2,530	2,754	2,584	1,938	2,087	1,675	1,910	998	1,555
U.S.	2,917	3,265	1,770	3,124	3,813	4,071	3,500	3,261	2,605	2,558	2,257	1,967	1,169	692

500,000 & over	75	1	7	15	9	9	5	11	6	5	4	3	…	…
100,000–500,000	78	7	4	12	4	5	8	7	7	9	7	2	1	…
50,000–100,000	21	…	1	4	5	1	…	2	2	3	1	1	1	1
25,000–50,000	41	2	…	7	5	1	4	6	6	4	5	2	…	1
10,000–25,000	62	1	5	14	9	2	5	5	7	8	5	3	…	1
2,500–10,000	93	3	5	17	9	10	5	14	12	5	8	4	9	2
Under 2,500	238	5	15	45	22	9	9	29	31	28	30	4	…	…
U.S.	605	19	37	114	65	37	34	72	71	62	58	19	12	5

c Partial Specialists, 1936

Arithmetic Mean Income (dollars)

500,000 & over	3,276	4,116	3,011	1,584	3,434	4,852	3,118	4,530	4,551	5,375	3,538	2,122	1,600	…
100,000–500,000	4,595	6,405	1,924	3,404	5,226	4,640	6,487	5,708	4,258	9,432	2,717	1,414	…	1,279
50,000–100,000	4,099	…	2,050	2,900	7,346	3,352	4,882	6,778	3,074	3,218	60	…	2,525	500
25,000–50,000	5,534	1,873	2,435	3,857	5,974	9,841	7,683	6,222	4,277	3,461	28,760	1,088	…	…
10,000–25,000	4,591	3,254	1,709	4,571	5,570	4,185	4,498	5,680	6,565	1,565	2,838	4,225	700	…
2,500–10,000	4,165	5,205	3,200	4,434	5,156	3,050	5,598	5,507	3,418	2,702	2,154	3,081	3,767	…
Under 2,500	3,127	1,145	4,675	1,966	3,484	3,549	4,131	2,602	2,810	3,933	1,471	1,000	3,000	…
U.S.	5,057[1]	4,148	1,722	3,085	4,571	4,908	4,744	5,032[1]	3,980	4,282	2,766	2,236	2,403	922

Number of Persons Covered [a]

500,000 & over	98	2	6	15	19	13	9	8	10	7	5	3	1	…
100,000–500,000	94	3	9	10	10	6	9	14	10	11	9	2	…	1
50,000–100,000	38	…	2	4	4	6	4	5	2	8	1	…	1	…
25,000–50,000	38	2	2	5	3	3	5	4	7	5	1	…	…	…
10,000–25,000	61	3	1	13	9	7	3	7	5	5	4	5	1	1
2,500–10,000	88	5	2	19	13	8	8	9	12	3	5	2	2	…
Under 2,500	95	3	2	10	10	9	5	13	17	19	5	1	1	…
U.S.	512[1]	18	24	76	68	52	43	61[1]	63	58	30	12	6	2

TABLE 34 (concl.)

d Complete Specialists, 1936

SIZE OF COMMUNITY	ALL	NOT REPORTING YEARS IN PRACTICE	REPORTING YEARS IN PRACTICE AS											
			Under 3	3–7	8–12	13–17	18–22	23–27	28–32	33–37	38–42	43–47	48–52	53–57
			Arithmetic Mean Income (dollars)											
500,000 & over	4,705	4,478	2,047	3,179	4,050	4,949	7,137	5,574	3,716	9,387	6,000	...		
100,000–500,000	6,416	5,515	2,109	3,739	6,750	5,930	9,154	9,100	5,859	7,859	11,034	...		
50,000–100,000	7,292	...	1,934	3,611	6,656	13,152	4,827	8,693	5,415	3,849	14,155	10,749		
25,000– 50,000	4,885	...	726	3,159	7,083	6,047	17,657	4,272	5,241	...	2,762	...		
10,000– 25,000	6,729	3,000	...	5,654	11,216	5,476	6,947	6,511	3,542	5,494	2,413	...		
2,500– 10,000	2,717	848	...	3,853	3,600	...	3,053	2,658	1,000	3,184	2,729	...		
Under 2,500	5,875	...	...	3,303	...	...	...	7,500	...	...	...	...		
U. S.	5,795	4,769	1,896	3,540	6,133	7,312	7,499	6,742	4,558	7,155	9,085	10,749		
			Number of Persons Covered [2]											
500,000 & over	68	4	5	12	14	4	8	10	6	4	1	...		
100,000–500,000	98	5	9	10	14	15	9	14	7	12	3	...		
50,000–100,000	38	...	3	4	3	6	1	6	4	5	2	2		
25,000– 50,000	31	...	3	4	2	5	1	6	7	...	3	...		
10,000– 25,000	39	1	...	3	6	6	5	6	8	3	1	...		
2,500– 10,000	17	1	...	4	2	...	2	3	1	2	2	...		
Under 2,500	2	...	...	1	...	...	...	1	...	...	...	...		
U. S.	293	11	20	38	41	36	28	46	33	26	12	2		

[1] Includes one return for which size of community was unknown.
[2] Number of persons covered by the returns used, before weighting.

These numbers, therefore, cannot be used directly to compute percentage distribution of physicians by years in practice.

then declines sharply. Little or no importance can be attached to the initial increase: the patterns for the very large communities are based on more returns than those for communities of an intermediate size; and the differences in amplitude may reflect merely the greater play of random variation in the latter. The lower amplitude of the patterns for small communities may reflect the larger number of returns in such communities for all groups except complete specialists. But the decline in amplitude is so large that it probably cannot be set aside.

Except for the lower amplitude of the patterns for small communities, the most interesting feature of Chart 23 is the fairly persistent but far from uniform tendency for the patterns to assume a greater downward tilt as size of community decreases; i.e., for the decline in income to become steeper relatively to the initial rise. In general, the smaller the community the sooner is the average income of all physicians surpassed, and the peak income received. For all physicians, the peak income is at 20 years in the two largest size of community classes,[5] at 15 years in the next two, at 10 years in the next two, but at 15 years in the smallest communities. For general practitioners, the progression is somewhat less regular: 15, 10, 10, 15, 15 (or 25), 10,[6] 5. For partial specialists and complete specialists, the extreme irregularity of the patterns makes the selection of single peaks difficult, but a similar general tendency is noticeable, particularly for complete specialists.

The difference in the 'tilt' of the patterns is reflected in smaller differences among communities of varying size in the average incomes of younger practitioners than in the average incomes of older practitioners. Indeed, for the first two years-in-practice classes in Table 34a average incomes are highest in communities with populations of 2,500–10,000 and are not much lower in the smallest communities. Nonetheless, the ranking of the size of community classes by average income is

5 For communities of 100,000–500,000 this assumes that the peak at 35 years is to be disregarded.
6 Disregarding peak at 40 years.

much the same for most of the years-in-practice classes separately as for all combined. Differences among the size of community classes in the distribution of physicians by years in practice seem not to be responsible for the size of community differences in average income analyzed in the preceding chapter.[7]

The relatively flat pattern in small communities is probably attributable to the absence of effective direct competition. In large communities there are many physicians and the competitive forces discussed above can operate. The young physician only recently out of medical school appeals to some because he is presumably 'up-to-date' or merely because he is 'new'; the middle-aged man, to others who regard his 'practical experience' as more than counterbalancing the possibility that he may not be familiar with the latest methods; the older man, to still others, whose choice is dominated by habituation, confidence born of long and continuous service, or respect for a reputation gained by many years of practice. The relative income status of physicians in practice varying periods depends on the relative strength of these motives; the general preference for middle-aged men leads to their receiving higher incomes. In villages, on the other hand, there are frequently only one or two physicians. Competition is almost completely ineffective. The income a physician receives depends less on his age than on other factors—the prosperity of the region in which he practises, its proximity to other places, and the like. Of course, there is some competition and hence some tendency for income to rise at first with number of years in practice. Also, the older men become partly retired and hence income eventually declines. But both the rise and decline are mild relatively to those in larger communities.

One possible explanation of the tendency for the tilt of the patterns to shift downward as size of community decreases is the concentration of young physicians in the larger communities (Table 35). In cities with over a million inhabitants more

[7] Size of community averages standardized for differences in distribution by years in practice are almost the same as the original averages.

TABLE 35

Age Distribution, by Size of Community

All Physicians, General Practitioners and Partial Specialists, and
Complete Specialists, 1931: 16 States and the District of Columbia

AGE CLASSES	1,000,000 & Over	500,000– 1,000,000	250,000– 500,000	100,000– 250,000	50,000– 100,000	25,000– 50,000	10,000– 25,000	5,000– 10,000	2,500– 5,000	1,000– 2,500	Under 1,000	ALL CLASSES
All Physicians												
Under 35	28.5	27.1	22.9	21.6	20.2	15.9	15.9	14.2	14.2	12.0	10.3	21.1
35–44	27.9	25.9	25.0	27.7	24.9	23.0	23.6	20.5	18.7	16.9	14.6	23.9
45–54	21.1	21.3	25.3	23.1	26.8	25.4	26.8	25.1	26.7	25.7	24.7	23.5
55 & over	22.5	25.7	26.8	27.6	28.1	35.7	33.7	40.2	40.4	45.4	50.4	31.5
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
General Practitioners and Partial Specialists												
Under 35	35.4	31.8	26.7	25.8	23.3	16.9	17.3	14.8	14.6	12.0	10.3	23.2
35–44	26.2	23.2	22.2	24.7	21.5	21.5	21.8	19.9	18.4	16.7	14.4	21.9
45–54	18.7	18.8	20.6	20.2	25.3	25.4	24.2	24.3	26.2	25.6	24.5	22.0
55 & over	21.7	26.2	30.5	29.3	29.9	36.2	36.7	41.0	40.8	45.7	50.8	32.9
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Complete Specialists												
Under 35	10.9	11.4	11.6	8.8	11.0	12.3	8.4	9.1	7.8	9.2	8.9	10.6
35–44	34.0	34.6	35.1	36.6	34.7	31.3	29.3	25.9	23.8	25.8	22.6	33.1
45–54	29.7	29.6	31.5	32.1	31.3	31.7	31.7	31.3	33.5	28.4	35.1	30.8
55 & over	25.4	24.4	23.8	22.5	23.0	24.7	30.6	33.7	34.9	36.6	33.4	25.5
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

R. G. Leland, *Distribution of Physicians in the United States* (American Medical Association, 1936), pp. 56–7. The age classes are combinations of finer classes for which the original data are presented.

than a quarter of the physicians were under 35 years of age in 1931, while fewer than a quarter were 55 or over; in places of less than a thousand inhabitants, on the other hand, only a tenth of the physicians were under 35 years of age while half were 55 or over. The exact proportions are very different for the two groups segregated—complete specialists, and general practitioners and partial specialists—but the general picture is the same.[8]

The average income of young physicians will depend not only on the preferences of the community for physicians in practice varying periods, but also on the relative number of young physicians. For any given community, the higher the proportion of young physicians, the lower their average income will tend to be relatively to the average income of older men. We have, of course, no evidence on whether or how preferences for physicians vary with size of community. But we do know that the smaller the community the better the relative income status of the young physician. And it seems reasonable to attribute this to the relative scarcity of young physicians in the small communities. Of course, this explanation must be related to the preceding discussion·of the degree of competition in communities of varying size. It can be considered valid only for communities sufficiently large to permit a moderate degree of competition, say for communities over 10,000 in population.

Why are the age distributions of physicians so different in communities of different size? Two explanations may be suggested. Perhaps the less important is the increasing need for extensive equipment and adequate facilities that has tended to make large cities seem more desirable to the physician than rural communities where facilities are likely to be limited. Probably of far greater importance is the secular increase in the proportion of the nation's population living in big cities,

8 Distributions by years in practice and size of community computed from our sample suggest the same tendency. But the estimated distributions vary so much and so irregularly among size of community classes that the tendency could not be established from our data alone.

largely a result of migration from rural to urban communities. The corresponding shift in the distribution of physicians among communities of different size [9] probably took place less through actual movement of physicians already in practice than through concentration in the larger cities of physicians just entering practice. The shift in population might be expected to lead to low medical incomes in rural communities relatively to incomes in large communities, and thus provide a strong incentive for new physicians to begin practice in large communities—indeed, the proverbially low income of physicians in rural areas is amply supported by our data. The small number of new entrants who started practice in rural areas presumably led to a smaller decline, or greater rise, in incomes in those areas relative to incomes in urban communities than would otherwise have taken place. Further, it led to a relatively favorable income status of young physicians, and hence to smaller size of community differences in the average incomes of young physicians than in the average incomes of older physicians.

If our analysis is correct, and the distribution of the population among communities of different size remains fairly stationary for a moderately long period, or at least changes less rapidly than in the past, we may expect a lessening of the difference between average incomes in small and large communities, and between the age distributions of physicians in communities of different size, and as a consequence, a greater similarity in the relation between income and years in practice. It follows that while the pattern for all physicians relating income to years in practice may be interpreted as describing the 'life cycle' of earnings, the patterns for the separate size of community classes cannot be so interpreted.

Differences in age distribution are not, of course, the only cause of size of community differences in the relation between income and years in practice. Differences in clientele, the variability of physicians' incomes, the opportunity to obtain

[9] See Leland, *Distribution of Physicians,* pp. 50, 51, for evidence that such a shift has taken place.

salaried posts, and numerous other factors doubtless play a
role. Consequently, even if differences in age distribution were
eliminated, the relation between income and years in practice
might still be expected to differ among communities of vary-
ing size.

3 TYPE AND ORGANIZATION OF PRACTICE

The increasing complexity of professional activity has led to
considerable specialization. The accompanying division of
function has taken different forms in different professions. In
medicine and dentistry it has taken the form of a differentia-
tion in the kind of service rendered by individuals practising
independently and coordinated by the impersonal mechanism
of the market place. Sharing of office space, nonprofessional
help, and equipment is frequent, but formal organization into
partnerships or firms, exceedingly rare. Few physicians or
dentists employ others; only about 20 per cent of all physicians
and dentists are salaried employees and many of these are em-
ployed by business and government. In accountancy, engineer-
ing, and to some extent law, division of function has taken the
form not only of specialization by separate professional units,
but also of larger professional units, the individual members
or employees frequently concentrating on specific fields of
practice. The larger professional units are sometimes con-
ducted by an individual practitioner who hires other profes-
sional men as employees; more frequently, they are organized
as partnerships or firms of several independent professional
men who may or may not employ others. Our data suggest that
about a third of the accountants, almost half of the engineers,
and about a quarter of the lawyers who practise independently
are members of firms.

The form division of function has taken is primarily at-
tributable to the type of consumer served and the nature of the
services rendered. The curative professions serve almost ex-
clusively individuals in their capacity as ultimate consumers.
The 'unit' of professional service is therefore small and can

seldom be delegated in large part to subordinates. The individual customer usually requires only a single type of service at any time; he seldom purchases a 'bundle' of different kinds of service. The kinds of service needed can rarely be predicted or contracted for in advance. The necessary professional equipment can ordinarily be almost as efficiently and intensively utilized by one man as by many, or by a sharing arrangement that does not affect other aspects of practice. Since prestige and judgment of quality attach to the individual practitioner, little is to be gained by organization into 'firms', or by the hiring of many professional employees.

If hospitalization had developed as a private enterprise under the direct control of physicians, instead of as a semipublic enterprise under the control of nonprofit or governmental organizations, these statements would not be valid. The elaborate physical equipment and the large number of subordinates that would then have been needed might have led to a very different organization of medical practice than we now have. Firms and even incorporated enterprises might have become common. Whatever private hospitals do exist are frequently conducted by 'firms' of physicians.

The increasing complexity of medical practice and the increasing emphasis on preventive care and periodic physical examinations are giving rise to a greater need for extensive equipment as well as a greater possibility of cooperation among physicians in rendering medical services. In addition, the widespread agitation for some form of health insurance or cooperative purchase or provision of medical care is tending to enlarge the 'unit' of service purchased and to facilitate advance contractual arrangements for an assortment of specialized services. Both factors seem to be leading to an extension of the 'group' practice of medicine, and, to some extent, of dentistry as well.

Law, to a significant degree, and accountancy and consulting engineering almost exclusively, render services to business enterprises. The 'unit' of professional services tends to be

larger and can more easily be delegated to subordinates than
in the curative professions. In addition, individual customers
are more likely to purchase a variety of services and can more
easily predict and contract for them in advance. Organization
into firms seems to be least frequent among lawyers, the
only one of the three 'business' professions that renders a sig-
nificant part of its services to individuals.

The difference in clientele that accounts for the difference in
the form that division of function has taken and for the conse-
quent difference in the size of professional units has also af-
fected another aspect of the organization of professional
activity, namely, the relative importance of independent and
salaried practice. As we have seen, few independent physicians
or dentists hire others as salaried employees. In addition, few
users of medical or dental service need or can afford a full-time
physician or dentist. Only when business enterprises or gov-
ernmental bodies provide medical care for their employees or
when government engages in public health activities is there
an opportunity for salaried employment by nonprofessional
enterprises; and even in these cases, the part-time services of a
physician or dentist engaged principally in independent prac-
tice often suffices. As a result, about 80 per cent of all physi-
cians and dentists are in independent practice. In the business
professions, on the other hand, not only is salaried employ-
ment by professional units proper more common, but also the
principal consumers are business enterprises and govern-
mental bodies that can afford to hire full-time professional
employees, and that use the independent professional units
only for specialized services their own employees cannot ren-
der. Over nine-tenths of all engineers and accountants and
auditors (certified and noncertified) and about a third of all
lawyers are salaried employees.

a Type of practice
Specialization is far more widespread in medicine than in
dentistry. Of the physicians listed in the 1931 Directory of the

American Medical Association, 16 per cent considered them-
selves complete specialists, 16 per cent, partial specialists, and
68 per cent, general practitioners.[10] According to our 1937
medical sample, the only one of our samples in which the
respondent was asked type of practice,[11] 22 per cent of the
physicians considered themselves complete specialists, 38 per
cent, partial specialists, and 40 per cent, general practition-
ers.[12] The study of the Committee on the Costs of Medical
Care, on the other hand, indicates that in 1929 only 3 per cent
of the dentists considered themselves complete specialists, 8
per cent, partial specialists, and 89 per cent, general practi-
tioners.[18] Unfortunately, no data are available on the trend of
specialization in dentistry. While in this, as in other respects,
dentistry is likely to develop in the same manner as medicine,
but with a considerable lag, it is doubtful that specialization
will ever be as widespread in dentistry as in medicine, since,

[10] Leland, *Distribution of Physicians*, p. 31.
[11] The actual wording of the question was:
   "Indicate the type of practice in which you are engaged:
      General practice ....
      Specialized practice (such as surgery, neurology, obstetrics, etc.)............
      Special interest with general practice (such as pediatrics, surgery, gyne-
         cology, etc.) ...."
[12] The percentage of complete specialists in our sample checks fairly closely
with other estimates, but the percentage of partial specialists is considerably
higher (see Table 36 and Appendix A, Sec. 2c i). This difference does not neces-
sarily reflect bias in the sample. It may more reasonably be interpreted as a
result of differences in the way the question on specialization was asked and
the answers were edited, since the distinction between general practitioners
and partial specialists is exceedingly vague. There are no commonly accepted
objective criteria to segregate general practitioners from physicians giving
'special attention' to a subject but not limiting their practice to it. In most
cases, therefore, physicians are asked to classify themselves. In a survey for
Michigan, however, an attempt was made to go behind this classification by
asking the public relations committee of each county medical society to classify
the society's members. The results show that a considerable percentage of the
physicians who classified themselves as partial specialists were considered by
their colleagues to be general practitioners. See *Report of the Committee on
Survey of Medical Services and Health Agencies* (Michigan State Medical So-
ciety, 1933), pp. 57–64.
[18] See Table 36, which gives also the estimates of the California Medical-Eco-
nomic Survey. The two sets of estimates are very close.

in a very real sense, dentistry is itself a specialized branch of medicine. In medicine the available data suggest, though the evidence is by no means conclusive, that specialization is still increasing.[14]

In both professions, complete specialists receive higher average incomes than partial specialists, and partial specialists than general practitioners. Though the differentials cannot be estimated with any exactitude from the studies summarized in Table 36, they are sizable. In dentistry, the average income of complete specialists seems to be about 30 per cent larger than that of partial specialists, and the average income of partial specialists about 30 per cent larger than that of general practitioners. In medicine, for the period 1929–36, according to our 1937 sample, the average income of complete specialists was approximately $5,900; of partial specialists, $3,800; of general practitioners, $2,900; i.e., the average income of complete specialists was about 50 per cent larger than that of partial specialists, and the average income of partial specialists, about 30 per cent larger than that of general practitioners. These estimates of the differentials in medicine are in general between those suggested by the other two studies of medical incomes cited in the table: the estimates from the study of the Committee on the Costs of Medical Care are higher, from the California survey, lower. Although based on fewer returns, the estimates from our 1937 medical sample are probably more

[14] See Leven, *Incomes of Physicians*, pp. 50–65; H. G. Weiskotten, 'Tendencies in Medical Practice', *Journal of the Association of American Medical Colleges*, March 1932, pp. 65–85.

Dean Weiskotten's study gives data on the type of practice in 1926 of 1,834 physicians who graduated in 1915, and 1,947 who graduated in 1920 and on the type of practice in 1931 of 3,230 physicians who graduated in 1925. The data suggest that the proportion of graduates who became or who planned to become specialists was fairly stable for the classes of 1920 and 1925, and greater for both than for the class of 1915 or all physicians. The increasing specialization among physicians as a whole seems to reflect the replacement of older physicians by younger, associated with a relatively stable degree of specialization among the younger. The evidence on this point, however, is fairly meagre.

Our 1937 medical sample provides no information on changes over time in the degree of specialization, since the questionnaires requested merely the type of practice when the questionnaire was received (early 1937).

TABLE 36

Arithmetic Mean Income and Percentage Distribution, by Type of Practice

Physicians and Dentists: Selected Studies

	PHYSICIANS			DENTISTS	
				Comm. on	
		Comm. on Costs of	Cal. Medical-	Costs of Medical	Cal. Medical-
	1937 sample[1]	Medical Care[2]	Economic Survey[3]	Care[4] (20 states)	Economic Survey[3]
	1929–36	*1929*	*1929–34*	*1929*	*1929–34*
Arithmetic mean income (dollars)					
General practitioners	2,922	3,900	3,836	4,791	3,564
Partial specialists	3,777	6,100	5,060	6,129	4,847
Complete specialists	5,904	10,000	6,039	8,623	5,894
All practitioners	3,916	5,700	4,916	5,011	3,762
% excess of					
Partial specialists over general practitioners	29	56	32	28	36
Complete specialists over general practitioners	102	156	57	80	65
Complete specialists over partial specialists	56	64	19	41	22
% of practitioners who were [8]					
General practitioners	40	56	42	89	90
Partial specialists	38	21	24	8	5
Complete specialists	22	23	34	3	5
All practitioners	100	100	100	100	100
No. of returns	1,408[5]	5,380[6]	2,737[7]	4,705	1,615[7]

[1] See Tables 37, 41, and 43. Percentage distribution is for early 1937.

[2] Maurice Leven, *Incomes of Physicians* (University of Chicago Press, 1932), pp. 13, 15, 55, 109.

[3] *California Medical-Economic Survey*, pp. 73, 79, 94, 100. Percentage distributions are for 1934.

[4] Leven, *Practice of Dentistry*, pp. 14, 88, 89.

[5] Number of persons reporting 1936 income, before weighting.

[6] Estimated number of returns received, before weighting or adjusting; computed from Leven, *Incomes of Physicians*, pp. 13, 15, 109.

[7] Number of persons reporting 1933 incomes; fewer reported for other years. Percentage distribution based on 3,206 returns for physicians and 1,802 for dentists.

[8] Distributions are based on the number reporting in the last·year of the period indicated above.

TABLE 37

Arithmetic Mean Income, by Type of Practice

Physicians, 1929–1936

	1929	1930	1931	1932	1933	1934	1935	1936	Average 1929–36
Arithmetic mean income (dollars)									
General practitioners	4,096	3,571	3,067	2,404	2,266	2,478	2,584	2,914	2,922
Partial specialists	5,337	4,467	4,015	3,018	2,788	3,215	3,412	3,962	3,777
Complete specialists	8,290	7,787	6,461	4,694	4,187	4,836	5,174	5,805	5,904
% excess of									
Partial specialists over general practitioners	30.3	25.1	30.9	25.5	23.0	29.7	32.0	36.0	29.3[1]
Complete specialists over general practitioners	102.4	118.1	110.7	95.3	84.8	95.2	100.2	99.2	102.1[1]
Complete specialists over partial specialists	55.3	74.3	60.9	55.5	50.2	50.4	51.6	46.5	56.3[1]
No. of returns [a]									
General practitioners	382	359	379	401	434	531	554	603	
Partial specialists	342	325	337	365	388	450	468	512	
Complete specialists	188	183	190	207	221	256	272	293	

[a] Number of returns received, before weighting.

[1] Computed from the averages for 1929–36.

accurate than those from the other studies.[15] (The annual figures from the 1937 medical sample are given in Table 37.)

As might be expected from these differences in income level,

TABLE 38

Median and Quartile Incomes, by Type of Practice

Physicians, 1934–1936

	1934	1935	1936
		(dollars)	
		Third Quartile	
All physicians	4,290	4,473	5,056
General practitioners	3,436	3,472	3,968
Partial specialists	4,338	4,441	5,066
Complete specialists	6,113	6,902	7,775
		Median	
All physicians	2,690	2,824	3,100
General practitioners	2,221	2,220	2,484
Partial specialists	2,749	2,900	3,230
Complete specialists	3,798	4,165	4,375
		First Quartile	
All physicians	1,554	1,588	1,824
General practitioners	1,234	1,251	1,394
Partial specialists	1,798	1,806	2,014
Complete specialists	2,238	2,329	2,599

absolute variability of income is much greater for complete specialists than for partial specialists, and for partial specialists than for general practitioners (Tables 38–40). The greater part of these differences in absolute variability is accounted

15 The estimates from the Committee on Costs of Medical Care study were obtained indirectly from data on gross income; the relation between gross and net income was derived from a study of 1928 incomes made by the American Medical Association; see Leven, *Incomes of Physicians*, p. 109. This indirect procedure might easily have introduced substantial errors. Not only are the California data for a single state, but also the percentage of complete specialists seems too high. Only 20 per cent of California physicians were listed as complete specialists in the 1931 Directory of the American Medical Association (Leland, *Distribution of Physicians*, p. 17), and only 25 per cent of the returns from California in our 1937 medical sample were from complete specialists. The relatively low percentage differences between the average incomes from the California study for complete specialists and the other two groups may reflect the inclusion of some individuals as complete specialists who should have been considered partial specialists or general practitioners.

for by the differences in income level. Relative variability is in general somewhat less for general practitioners than for the other two groups, but the difference is neither large nor consistent.

Complete specialists naturally tend to be concentrated in

TABLE 39

Measures of Variability of Income, by Type of Practice

Physicians, 1934–1936

	1934	1935	1936
	Interquartile Difference (dollars)		
All physicians	2,736	2,885	3,232
General practitioners	2,202	2,221	2,574
Partial specialists	2,540	2,635	3,052
Complete specialists	3,875	4,573	5,176
	Standard Deviation (dollars)		
All physicians	2,965	3,057	3,631
General practitioners	1,857	1,996	2,242
Partial specialists	2,431	2,644	3,572
Complete specialists	4,453	4,308	4,831
	Relative Interquartile Difference		
All physicians	1.017	1.022	1.043
General practitioners	.991	1.000	1.036
Partial specialists	.924	.909	.945
Complete specialists	1.020	1.098	1.183
	Ratio of Quartiles		
All physicians	2.761	2.817	2.772
General practitioners	2.784	2.775	2.846
Partial specialists	2.413	2.459	2.515
Complete specialists	2.731	2.964	2.992
	Coefficient of Variation		
All physicians	.886	.862	.902
General practitioners	.733	.755	.752
Partial specialists	.739	.758	.882
Complete specialists	.903	.816	.817

the larger communities where the more extensive 'market' for professional services affords greater opportunity for division of function. In addition, specialists are more likely than general practitioners to be at the peak earnings stage of their working life. Many men begin their careers as general practitioners and become specialists only after receiving additional training

and experience. On the other hand, most of the older men received their professional education before specialization had progressed very far and when formal training was less extensive than it later became. These differences between specialists and general practitioners help to explain the large differences between their average incomes. In effect, countrywide averages by type of practice compare one group in the best locations—at least in money terms—and in the prime of life with

TABLE 40

Median and Quartile Incomes, and Measures of Variability,
by Type of Practice

Dentists in 20 States, 1929:
Committee on Costs of Medical Care Study

	ALL DENTISTS	GENERAL PRACTITIONERS	PARTIAL SPECIALISTS	COMPLETE SPECIALISTS
Third quartile (dollars)	6,203	5,955	7,222	11,765
Median (dollars)	4,094	3,989	4,756	6,980
First quartile (dollars)	2,669	2,618	3,031	4,422
Interquartile difference (dollars)	3,534	3,337	4,191	7,343
Standard deviation (dollars)	4,080	3,476	5,930	6,781
Relative interquartile difference	.863	.837	.881	1.052
Coefficient of variation	.808	.728	.952	.764
No. of returns	4,705	4,189	377	139

Computed from frequency distributions in Leven, *Practice of Dentistry*, p. 88.

another containing many who are in poorer locations and who are just getting started or are on the verge of retiring.

Limitations of data make it necessary to restrict further analysis of these factors to physicians. Both Table 41, based on our sample, and Table 42, based on a comprehensive count of the 1931 Directory of the American Medical Association, indicate that the percentage of all physicians who are specialists varies markedly among communities of different size. According to our sample, slightly over 38 per cent of all physicians in communities with populations of 50,000–500,000 considered

TABLE 41

Distribution by Type of Practice,
by Size of Community and by Region

Physicians, 1936

| | % OF PHYSICIANS WHO WERE | | |
| | General | Partial | Complete |
Size of community	practitioners	specialists	specialists
500,000 & over	30.8	41.6	27.6
100,000–500,000	25.2	36.3	38.5
50,000–100,000	24.8	37.1	38.1
25,000– 50,000	38.0	37.8	24.2
10,000– 25,000	41.7	38.0	20.3
2,500– 10,000	44.8	50.1	5.1
Under 2,500	71.9	27.0	1.0
Region			
New England	40.3	36.8	22.9
Middle Atlantic	33.0	44.0	23.0
E. N. Central	48.7	32.8	18.5
W. N. Central	47.8	28.3	24.0
S. Atlantic	39.0	37.8	23.2
E. S. Central	48.7	36.0	15.3
W. S. Central	32.6	42.2	25.2
Mountain	44.5	37.4	18.1
Pacific	33.1	43.2	23.6
U. S.	40.2	38.0	21.9

TABLE 42

Distribution by Type of Practice, by Size of Community

Physicians Listed in 1931 Directory
of American Medical Association

| | % OF PHYSICIANS WHO WERE | | | |
| | General practitioners | | Complete | |
Size of community	& partial specialists		specialists	
1,000,000 & over	79.1	} 77.7	20.9	} 22.3
500,000–1,000,000	74.7		25.3	
250,000– 500,000	74.9	} 75.3	25.1	} 24.7
100,000– 250,000	75.8		24.2	
50,000– 100,000	76.3	76.3	23.7	23.7
25,000– 50,000	79.8	79.8	20.2	20.2
10,000– 25,000	84.0	84.0	16.0	16.0
5,000– 10,000	88.8	} 91.2	11.2	} 8.8
2,500– 5,000	93.6		6.4	
1,000– 2,500	97.2	} 97.7	2.8	} 2.3
Under 1,000	98.0		2.0	

Leland, *Distribution of Physicians*, p. 31.

themselves complete specialists while only 25 per cent considered themselves general practitioners. In communities under 2,500 on the other hand, only 1 per cent considered themselves complete specialists, while over 70 per cent considered themselves general practitioners. Perhaps the most surprising feature of the tables is the lower percentage of complete specialists in the largest communities than in communities of an intermediate size.[16] For the other classes, the percentage of complete specialists declines consistently with size of community.

Size of community differences in the average income of each

[16] The lower percentage of complete specialists in the largest communities is not accounted for by differences among the size of community classes in the distribution of physicians by number of years in practice; for each years-in-practice class separately, the percentage of complete specialists tends to be lower in the largest communities than in those of intermediate size.

To test this point we computed from the 1937 sample the percentage of all physicians who are complete specialists for each size of community and 9 classes by number of years in practice (in practice 2 years or less, 3 to 7 years, 8 to 12 years, . . . , 38 to 42 years). In 7 of the 9 years-in-practice classes the percentage of complete specialists was less in communities over 500,000 in population than in either of the next two size of community classes. The exceptions were the 8–12 and 23–27 years-in-practice classes. Standardized percentages, using as weights the distribution of all physicians in the United States by number of years in practice, were also computed. They differ only slightly from the percentages in Table 41.

More extensive data for 16 states and the District of Columbia on the age distribution of physicians in 1931 by type of practice and size of community yield a similar conclusion (Leland, *Distribution of Physicians*, pp. 56–7). Data are given for two groups: 'general practice or special attention' and 'specialists'. The latter group may be taken to correspond to our 'complete specialists'. Data are given for 12 five-year age classes between 20 and 80 (20–24, 25–29, etc.) and for a final class of 80 and up, and for the size of community classes in Table 42. In 6 of the 12 age classes for which there were complete specialists in all or almost all size of community classes, the percentage of complete specialists in communities over 500,000 was less than in communities between 100,000 and 500,000 or between 50,000 and 100,000; in only three classes was the percentage of complete specialists in communities over 500,000 greater than in either of the other two size of community classes. Standardized percentages using the age distribution of all physicians in the country as weights differed little in magnitude or order from the original percentages. It is significant, however, that the three age classes in which the largest communities had the highest percentage of specialists included the older physicians, the age classes being 55–59, 65–69, and 70–74.

TABLE 43

Arithmetic Mean Income, Relatives of Arithmetic Mean Income, and Number of Persons Covered, by Size of Community and by Region

All Physicians, General Practitioners, Partial Specialists, and Complete Specialists

	ARITHMETIC MEAN INCOME,[1] 1929-36 (dollars)				RELATIVES OF ARITHMETIC MEAN INCOME (U. S. = 100)				NUMBER OF PERSONS COVERED,[2] 1936			
	All physicians	General practitioners	Partial specialists	Complete specialists	All physicians	General practitioners	Partial specialists	Complete specialists	All physicians	General practitioners	Partial specialists	Complete specialists
Size of community												
500,000 & over	3,875	3,290	3,439	5,268	99.0	110.5	91.1	89.2	241	75	98	68
100,000–500,000	5,026	3,683	4,310	6,708	128.3	126.0	114.1	113.6	265	73	94	98
50,000–100,000	4,826	3,153	3,860	6,778	123.2	107.9	102.2	114.8	97	21	38	38
25,000– 50,000	4,486	3,336	5,029	5,275	114.6	114.2	133.1	89.3	110	41	38	31
10,000– 25,000	4,024	3,054	3,859	5,804	102.8	104.5	102.2	98.3	162	62	61	39
2,500– 10,000	3,530	3,377	3,711	3,032	90.1	115.6	98.3	51.4	197	93	87	17
Under 2,500	2,448	2,170	3,131	3,672	62.5	74.3	82.9	62.2	335	238	95	2
Region												
New England	4,745	3,426	4,406	7,142	121.2	117.2	116.7	121.0	131	62	39	30
Middle Atlantic	4,062	2,782	3,698	6,041	103.7	95.2	97.9	102.3	207	69	91	47
E. N. Central	3,852	3,147	3,890	5,602	97.9	107.7	103.0	94.9	197	98	62	37
W. N. Central	3,810	2,580	2,916	5,376	84.5	88.3	77.2	91.1	182	88	50	44
S. Atlantic	4,235	3,042	4,648	5,762	108.1	104.1	123.1	97.6	155	64	56	35
E. S. Central	3,038	2,476	3,406	4,955	77.6	84.7	90.2	83.9	70	33	27	10
W. S. Central	3,387	1,800	2,984	5,996	86.5	61.6	79.0	101.6	106	35	46	25
Mountain	4,284	3,029	4,287	7,144	109.4	103.7	113.5	121.0	199	96	74	29
Pacific	4,231	3,919	3,996	5,166	108.0	134.1	105.8	87.5	161	58	67	36
U. S.[3]	3,916	2,932	3,777	5,904	100.0	100.0	100.0	100.0	1,408	603	512	293

[1] Computed by adding the averages for the years covered by the 1937 sample and dividing by the number of years—8.

[2] Number of persons covered by the returns used, before weighting.

[3] Includes 1 return for which size of community was unknown.

of the three groups of physicians are similar in character, though in general somewhat smaller in magnitude, than the corresponding differences in the average income of all physicians (Table 43). The peak income of general practitioners is in the same size of community class as the peak income of all practitioners—communities with populations between 100,000 and 500,000. The peak income of partial specialists is in the 25,000–50,000 class and of complete specialists, in the 50,000–100,000 class. However, the average income of complete specialists is only a trifle smaller in the 100,000–500,000 class than in the 50,000–100,000 class, and is considerably larger in either than in any other class. In general, average incomes are lowest in the smallest communities. The one exception—complete specialists—is hardly significant in view of the few complete specialists in our sample for the two smallest size of community classes. The variation in average income from one size of community class to the next is less regular for each type of practitioner than for all physicians. Presumably, this, too, is attributable to the fewness of the returns on which the separate averages are based. As a result, little confidence can be attached to the exact quantitative differences in the table.

Standardized averages provide a simple and efficient tool for eliminating the effect of differences in the location of the several types of physicians. Table 44 gives standardized averages for general practitioners, partial specialists, and complete specialists for 1929–36. They are weighted combinations of the size of community averages, the weights being the total number of physicians of all types in the corresponding size of community class.[17] The use of the same weights for all types of practice eliminates the influence of size of community.[18]

[17] The total number of physicians in each size of community class was taken from Leland, *Distribution of Physicians,* and is for 1931, the latest year for which such figures are available.

[18] The standardized averages do not eliminate the influence of regional variation in the distribution of physicians by type of practice except as such variation reflects differences in the size of community composition of the regions. Experimental computations for 1936 indicated that eliminating the influence of regional variation would affect the averages but slightly and the differences

The correction for the influence of size of community sharply reduces the income differentials. The difference between the original averages for complete specialists and general practitioners is 102 per cent; for complete specialists and partial specialists, 56 per cent; for partial specialists and general practitioners, 29 per cent (Table 37, averages for 1929–36). The corresponding differences between the standardized averages are 64, 36, and 20 per cent. Roughly a third of the difference between the original averages is attributable to the concentration of specialists in the larger communities. The remaining two-thirds measures the difference between the average incomes of physicians differing in type of practice but practising in communities of the same size.

The countrywide standardized averages might of course conceal important differences among size of community classes or regions in the relative incomes of the three types of practitioners. To test whether there are any consistent differences we computed, for each size of community in each region, the ratios between the average 1936 incomes of complete specialists and partial specialists, complete specialists and general practitioners, and partial specialists and general practitioners. We found no evidence that these ratios differed significantly among communities of varying size or among regions.[19] How-

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among the averages even less. These computations were made by weighting the average income of each type of practitioner in each size of community and regional 'cell' by the total number of physicians in that 'cell' as shown by Leland. The averages for the different types of practice were made comparable by excluding those cells in which there were no returns for one or more types of practice. The resulting standardized averages are $3,114 for general practitioners, $4,035 for partial specialists, and $5,587 for complete specialists. All are somewhat higher than the averages in Table 44 because the excluded cells included mainly the smaller communities. According to these averages the income of complete specialists exceeds that of general practitioners by 79.4 per cent, and of partial specialists by 38.5 per cent, while the income of partial specialists exceeds that of general practitioners by 29.6 per cent. The corresponding figures from Table 44 are 78.1, 39.0, and 28.2.

[19] The existence of regional or size of community differences was tested by an analysis of ranks of the same sort as that used in the Appendix to Chapter 5 to test the significance of regional and size of community differences in average income.

TABLE 44

Arithmetic Mean Income Standardized with Respect to Size of Community, by Type of Practice

Physicians, 1929–1936

	1929	1930	1931	1932	1933	1934	1935	1936	Average 1929–36
*'Standardized' arithmetic mean income*¹ *(dollars)*									
General practitioners	4,391	3,850	3,328	2,563	2,392	2,589	2,681	3,044	3,105
Partial specialists	5,292	4,432	3,984	2,993	2,775	3,169	3,356	3,901	3,738
Complete specialists	8,041	6,311	5,180	3,787	3,493	3,979	4,673	5,421	5,104
% excess of									
Partial specialists over general practitioners	20.5	15.1	19.7	16.8	16.0	22.4	25.2	28.2	20.4²
Complete specialists over general practitioners	83.1	63.9	54.1	47.8	46.0	53.7	74.3	78.1	64.4²
Complete specialists over partial specialists	51.9	42.4	28.8	26.5	25.9	25.6	39.2	39.0	36.5²

¹ Weighted averages of averages for size of community classes. For all years and types of practice, weights are the total number of physicians in each size of community class in 1931 (see Leland, *Distribution of Physicians*).

² Computed from the average incomes in the first three lines.

ever, many of the 'cells' contained few returns. Consequently, the ratios show erratic fluctuations that may have prevented small but real discrepancies from being detected.[20]

Table 45 and Chart 24 show the relation between number of years in practice and type of practice. The percentage of general practitioners declines at first, reaching a trough of about 28 per cent in the 13–17 years-in-practice class, and rises thereafter. The percentage of complete specialists, on the other hand, rises at first, reaching a peak of about 30 per cent in the 18–22 years-in-practice class, and declines thereafter. The percentage of partial specialists fluctuates irregularly around 38 per cent. The striking feature of the chart is the exceedingly small percentage of specialists among physicians who have been in practice more than 37 years. In part, this merely reflects the relatively large percentage of the older physicians who practise in small communities in which specialization is rare. But this is not the whole story. In com-

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[20] The frequency distributions of the ratios for individual size of community and regional cells indicate the wide variability of the ratios. The frequency distributions are given below. I stands for average income and the subscripts c, p, and g, for complete specialists, partial specialists, and general practitioners respectively.

VALUE OF RATIOS	NO. OF SIZE OF COMMUNITY AND REGIONAL CELLS FOR WHICH INDICATED RATIOS FALL BETWEEN SPECIFIED VALUES		
	$\dfrac{I_c}{I_g}$	$\dfrac{I_c}{I_p}$	$\dfrac{I_p}{I_g}$
0 – .5	3	3	1
.5–1.0	6	7	11
1.0–1.5	11	18	21
1.5–2.0	5	10	11
2.0–2.5	10	3	7
2.5–3.0	4	3	2
3.0–3.5	3	1	..
3.5–4.0	3	..	..
4.0–4.5	..	..	1
4.5–5.0	1	..	..
Over 5	..	1	..
All values	46	46	54

The differences in the total number of cells arise from the absence in some cells of returns from one or more types of practitioner.

munities of each size, there is the same tendency toward a drastic decline in the percentage of specialists. The basic reason seems rather to be that mentioned earlier: the substantial improvement in the standards of medical training since 1910 which implemented the increasing need for specialists arising from the rapid progress of medical science.

For 1936, we have computed average incomes by number of years in practice and can therefore estimate the influence of the concentration of complete specialists in the intermedi-

TABLE 45

Distribution by Type of Practice, by Years in Practice

Physicians, 1936

| | % OF ALL PHYSICIANS WHO WERE | | |
YEARS IN PRACTICE	General practitioners	Partial specialists	Complete specialists
Under 3	42.9	31.2	25.9
3– 7	47.4	35.4	17.2
8–12	33.8	40.4	25.8
13–17	28.5	44.3	27.3
18–22	31.2	38.8	29.9
23–27	37.1	34.5	28.3
28–32	38.5	39.8	21.6
33–37	40.7	41.8	17.5
38–42	55.4	35.0	9.6
43–47	56.9	39.3	3.7
48–52	56.7	43.3	
53–57	76.2	23.8	

In computing the percentages, returns for which number of years in practice was unknown were excluded. The actual number of persons reporting in each class is shown in Table 34b, c, and d.

ate years-in-practice classes in which average incomes are relatively high. The accompanying table compares the percentage differences among average incomes standardized for differences in the distribution of the various types of practitioner not only by size of community but also by years in practice [21] with the

[21] The actual standardized averages are: complete specialists, $5,504, partial specialists, $4,204, and general practitioners, $3,486. These averages are based only on those size of community and years-in-practice classes containing returns from all three types of practitioner. They are weighted averages of the average incomes in such cells, the weights being the estimated number of physicians of all types in each cell.

percentage differences previously presented for 1936. The third line of this table gives estimates of the percentage difference between the incomes of physicians in communities

| | PERCENTAGE EXCESS IN 1936 AVERAGE INCOME OF | | |
	COMPLETE SPECIALISTS OVER GENERAL PRACTITIONERS	COMPLETE SPECIALISTS OVER PARTIAL SPECIALISTS	PARTIAL SPECIALISTS OVER GENERAL PRACTITIONERS
Original averages	99.2	46.5	36.0
Averages standardized with respect to distribution by:			
Size of community	78.1	39.0	28.2
Size of community and			
no. of years in practice	57.9	30.9	20.6

of the same size and in practice the same number of years but differing in type of practice. Correction for the influence of number of years in practice reduces the percentage differences by about the same amount as correction for the influence of size of community. The final differences are much more moderate than the differences among the original averages.

Presumably, the differences that remain are largely attributable to differences in training and skill. Physicians who specialize often get additional training; frequently they become specialists because they have been successful and have attained good reputations as general practitioners. Hence, men who specialize would probably earn higher incomes as general practitioners than those who remain general practitioners. The higher income of specialists is probably not a transitory phenomenon that will lead to or be eliminated by a rush to specialization; but rather a permanent concomitant of a segregation of practitioners by criteria related to their chances of success.[22]

[22] This interpretation is supported by the apparent temporal stability in the proportion of graduates who become or plan to become specialists suggested by Weiskotten's study (see footnote 14).

The growing tendency in recent years to formalize the distinctions among types of practitioner by establishing boards to 'certify' specialists in particular fields may introduce an additional element of rigidity.

CHART 24

Distribution of Physicians by Type of Practice,
by Years in Practice

Percentage of physicians
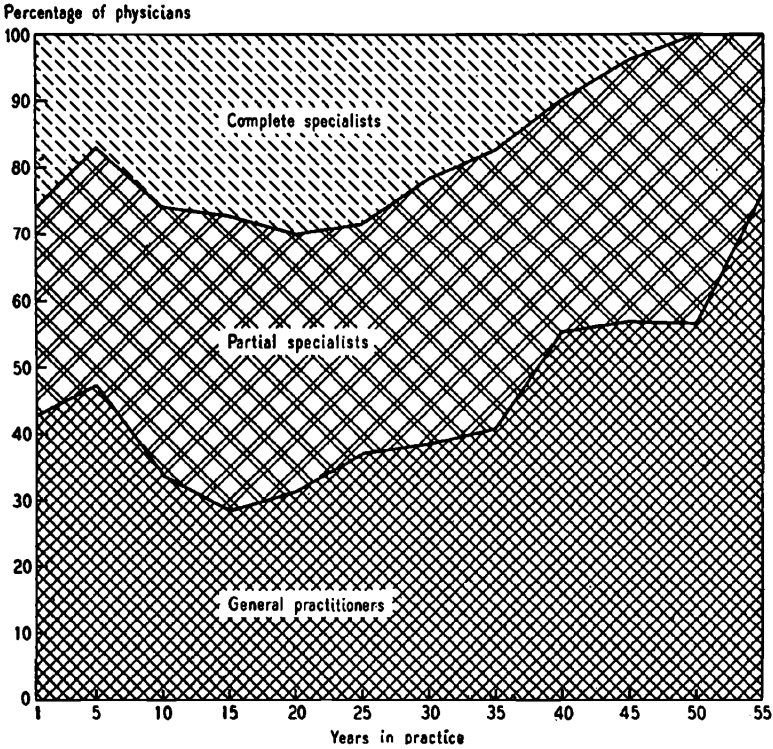
b Organization of independent practice
A classification of lawyers, accountants, and engineers into firm
members and individual practitioners is much less clear-cut
from an analytical point of view than a classification of physi-
cians and dentists into complete specialists, partial specialists,
and general practitioners. On the whole, firm members are
more likely to specialize than individual practitioners; but
there are many firm members who specialize little if at all
and there are many individual practitioners who restrict prac-

TABLE 46

Percentage of Persons in Independent Practice Who are Members of Firms and Number of Persons Covered

Certified Public Accountants, Lawyers, and Consulting Engineers

PROFESSION & SAMPLE	1929	1930	1931	1932	1933	1934	1935	1936
				% Who are Members of Firms				
Certified public accountants								
1933	48.8	48.3	47.3	47.3				
1935				32.1	31.5	30.2		
1937	35.9					30.7	32.5	33.3
Lawyers								
1935				23.8	23.0	22.7		
1937	28.7			28.3	25.3	25.1	26.3	25.3
Consulting engineers								
1933	44.2	44.3	43.5	43.5				
				Number of Persons Covered *				
Certified public accountants								
1933								
Individual practitioners	373	393	409	426				
Firm members	590	609	611	637				
1935								
Individual practitioners				792	842	883		
Firm members				623	647	635		
1937								
Individual practitioners	343					506	525	551
Firm members	346					395	446	512
Lawyers								
1935								
Individual practitioners				694	743	771		
Firm members				575	589	606		
1937								
Individual practitioners	504			566	696	676	733	865
Firm members	220			239	249	253	283	303
Consulting engineers								
1933								
Individual practitioners	263	268	269	268				
Firm members	208	213	207	206				

* Number of persons covered by returns used, before weighting or adjusting. These numbers, therefore, cannot be used to compute percentage of persons who are members of firms.

tice to small segments of the entire field. With these qualifications, a classification by organization of practice is essentially similar to a classification by type of practice. Like specialists and for the same reasons, firm members are concentrated in the larger communities, are seldom in the initial stages of their

careers, and tend to receive higher average incomes than other members of the profession in the same community and of the same age.

The percentage of all practitioners who are members of firms, as estimated from our samples, is given in Table 46 for each year and profession.[28] The different accountancy samples yield widely divergent estimates of the percentage of firm members. According to the 1933 sample, slightly under 50 per cent of all practitioners are firm members; according to the other two samples, only slightly over 30 per cent. This difference is much too large to be attributed to chance fluctuation; [24] and it cannot be interpreted as reflecting a marked decline in the percentage of firm members, since for 1932 and

[28] Information on the number of members in a firm was requested separately for each year for which income information was obtained.

[24] Because of the weighting introduced to correct for the firm member bias, it is difficult to make a logically valid test of the significance of the differences among the successive samples in the estimated proportion of firm members. As an approximate test we computed χ^2 for the accompanying table.

SAMPLE AND YEAR FOR WHICH INCOME WAS REPORTED	ACTUAL NO. OF INDIVIDUAL PRACTI-TIONERS REPORTING INCOME	NO. OF FIRM MEMBERS WEIGHTED TO CORRECT FOR FIRM MEMBER BIAS	TOTAL
1933 sample for 1932	426	382	808
1935 sample for 1934	883	383	1,266
1937 sample for 1936	531	289	820
Total	1,840	1,054	2,894

The next to the last column gives our estimates of the number of firm members who would have replied if the questionnaire had requested information about the individual recipient rather than the firm of which he is a member. The logical difficulty with using these estimates is that they are actually based on fewer separate returns, and hence are less accurate than the numbers alone might suggest. Their use tends to accentuate the significance of the differences. However, since χ^2 is 63.8, while a value of 13.8 would be exceeded only once in a thousand times, it seems clear that allowance for this difficulty would leave the differences statistically significant.

1929 we have estimates from two samples.[25] We are forced to conclude that the difference is attributable to a bias in one or more of our accountancy samples. In view of the marked agreement between the second sample, the largest of the three, and the latest sample, we are disposed to set the proportion of all certified public accountants who are members of firms at about one-third.

In all three professions the proportion of firm members seems to have decreased somewhat from 1929 to 1932. In the two professions for which the data cover a longer period—law and accountancy—this decrease continues until 1934. From then to 1936 the proportion of firm members increases. These changes are all exceedingly small, but their consistency is a reason for believing that they reflect the facts accurately. Moreover, it seems reasonable that firms are more likely to disintegrate and less likely to be formed when economic conditions are becoming worse than when they are improving.

Table 47 reveals that the average incomes of firm members are considerably higher than those of individual practitioners. The differentials vary considerably from sample to sample. This time the second sample of accountants disagrees with the other two; the first and third samples suggest that the average income of firm members is about 25 or 30 per cent larger than the average income of individual practitioners; the second sample, that it is almost 60 per cent larger. For lawyers, the

25 The lapse of time between the dates at which the two samples were chosen might well have led to an underestimate of the proportion of firm members in the overlapping year from the later sample and an overestimate from the earlier sample, for reasons discussed in Chapter 2. The proportion of firm members would presumably be relatively high among individuals retiring from practice between say, 1933—when the first sample was chosen—and 1935—when the second sample was chosen—and relatively low among individuals inadvertently excluded from the 1933 sampling list because of recent entry into the profession. But it is hardly credible that this factor could account for so large a difference as that between the 1932 estimates from the 1933 and 1935 samples since only two years separated the dates at which these samples were chosen. It is somewhat more reasonable, though still exceedingly doubtful, that the difference between the 1929 estimates from the 1933 and 1937 samples can be explained in this way.

TABLE 47

Arithmetic Mean Income, by Organization of Practice

Certified Public Accountants, Lawyers, and Consulting Engineers

PROFESSION & SAMPLE	1929	1930	1931	1932	1933	1934	1935	1936
				Arithmetic Mean Income (dollars)				
Certified public accountants								
1933								
Individual practitioners	6,941	6,289	5,282	4,313				
Firm members	8,962	8,414	6,951	5,294				
1935								
Individual practitioners				3,544	3,275	3,664		
Firm members				5,643	5,213	5,682		
1937								
Individual practitioners	5,469					3,620	3,817	4,248
Firm members	6,552					4,803	4,926	5,120
Lawyers								
1935								
Individual practitioners				2,883	2,515	2,656		
Firm members				5,511	5,048	5,260		
1937								
Individual practitioners	5,762			3,205	2,826	2,848	2,996	3,189
Firm members	13,973			10,613	9,859	9,706	9,844	11,153
Consulting engineers								
1933								
Individual practitioners	8,535	7,472	4,943	2,483				
Firm members	16,019	13,264	7,114	3,940				
			% by which Arithmetic Mean Income of Firm Members Exceeds Arithmetic Mean Income of Individual Practitioners					
Certified public accountants								
1933	29.1	33.8	31.6	22.7				
1935				59.2	59.2	55.1		
1937	19.8					32.7	29.1	20.5
Lawyers								
1935				91.2	100.7	98.0		
1937	142.5			231.1	248.9	240.8	228.6	249.7
Consulting engineers								
1933	87.7	77.5	43.9	58.7				

1935 sample suggests a difference of about 100 per cent; the 1937 sample, if we ignore the comparison for 1929, a difference of almost 250 per cent.[26] The one sample for consulting engineers suggests a difference between 40 and 90 per cent. While there is some overlapping among the several professions it seems clear that the difference between firm members and individuals is greatest for lawyers and least for accountants.

According to the measures in Tables 48 and 49, absolute

[26] However, if the one extreme questionnaire repeatedly mentioned is eliminated, the difference is reduced to about 125 per cent.

TABLE 48

Median and Quartile Incomes, by Organization of Practice

Certified Public Accountants, Lawyers, and Consulting Engineers

(dollars)

	1933 SAMPLES				1935 SAMPLES			1937 SAMPLES		
	1929	1930	1931	1932	1932	1933	1934	1934	1935	1936
Third Quartile										
Certified public accountants										
All	9,308	8,560	7,326	5,993	5,029	4,724	5,232	4,967	5,073	5,687
Individual practitioners	8,565	7,670	6,252	5,486	4,325	3,908	4,541	4,494	4,754	5,384
Firm members	9,968	9,372	8,268	6,509	6,565	6,031	6,502	5,926	5,989	6,295
Lawyers										
All					4,339	3,620	3,936			
Individual practitioners					3,334	3,010	3,192			
Firm members					7,008	6,241	7,108			
Consulting engineers										
All	14,805	11,721	8,631	4,785						
Individual practitioners	10,650	9,384	6,411	3,955						
Firm members	18,800	14,896	12,500	5,735						
Median										
Certified public accountants										
All	6,116	5,647	4,780	4,017	3,336	3,129	3,515	3,358	3,460	3,963
Individual practitioners	5,186	5,000	4,157	3,509	2,884	2,763	3,122	3,099	3,290	3,660
Firm members	6,727	6,322	5,411	4,452	4,624	4,288	4,876	4,292	4,069	4,514

Lawyers				
All	7,943	6,016	4,041	2,178
Individual practitioners	6,414	5,125	3,190	1,524
Firm members	9,545	6,841	6,125	3,300
Certified public accountants				
All	4,099	3,883	3,217	2,541
Individual practitioners	3,629	3,297	2,789	2,294
Firm members	4,894	4,380	3,776	2,985
Consulting engineers				
All	3,570	2,719	1,456	33
Individual practitioners	2,769	2,000	570	0
Firm members	4,867	4,343	2,653	575

First Quartile

Lawyers			
All	2,218	1,906	2,028
Individual practitioners	1,900	1,581	1,747
Firm members	4,004	3,275	3,742
Consulting engineers			
All	2,296	2,479	2,684
Individual practitioners	2,143	2,304	2,532
Firm members	2,747	2,861	3,111
Certified public accountants			
All	2,235	2,127	2,356
Individual practitioners	1,975	1,936	2,074
Firm members	3,162	2,886	3,236
Lawyers			
All	1,140	982	967
Individual practitioners	970	840	854
Firm members	2,149	1,778	1,892

TABLE 49

Measures of Variability of Income, by Organization of Practice

Certified Public Accountants, Lawyers, and Consulting Engineers

	1933 SAMPLES				1935 SAMPLES			1937 SAMPLES		
	1929	1930	1931	1932	1932	1933	1934	1934	1935	1936
	Interquartile Difference (dollars)									
Certified public accountants										
All	5,209	4,677	4,109	3,452	2,794	2,597	2,876	2,671	2,594	3,003
Individual practitioners	4,936	4,373	3,463	3,192	2,350	1,972	2,467	2,351	2,450	2,852
Firm members	5,574	4,992	4,492	3,524	3,403	3,145	3,266	3,179	3,128	3,184
Lawyers										
All					3,199	2,638	2,969			
Individual practitioners					2,364	2,170	2,338			
Firm members					4,859	4,463	5,216			
Consulting engineers										
All	11,235	9,002	7,175	4,752						
Individual practitioners	7,881	7,384	5,841	3,955						
Firm members	13,933	10,553	9,847	5,160						
	Standard Deviation (dollars)									
Certified public accountants										
All	6,723	6,410	5,152	3,708	3,568	3,360	3,483	3,072	3,334	3,240
Individual practitioners	5,810	4,856	4,407	3,266	3,211	2,987	3,019	2,866	2,925	3,103
Firm members	7,481	7,534	5,819	4,075	3,881	3,815	4,023	3,352	3,956	3,410
Lawyers										
All					4,369	4,368	4,164			
Individual practitioners					3,921	3,859	3,713			
Firm members					5,099	5,306	4,921			
Consulting engineers										
All	14,580	16,669	9,010	6,462						
Individual practitioners	10,363	10,724	9,391	6,139						
Firm members	17,580	21,615	8,455	6,835						

Relative Interquartile Difference

	1	2	3	4	5	6	7	8	9	10
Certified public accountants										
All	.852	.828	.860	.859	.838	.890	.818	.795	.750	.758
Individual practitioners	.952	.874	.832	.910	.815	.714	.790	.759	.745	.779
Firm members	.829	.790	.830	.792	.736	.733	.670	.741	.769	.705
Lawyers										
All					1.442	1.384	1.464			
Individual practitioners					1.244	1.373	1.338			
Firm members					1.214	1.363	1.394			
Consulting engineers										
All	1.414	1.496	1.776	2.182						
Individual practitioners	1.228	1.440	1.830	2.596						
Firm members	1.460	1.543	1.608	1.564						

Ratio of Quartiles

	1	2	3	4	5	6	7	8	9	10
Certified public accountants										
All	2.271	2.204	2.279	2.357	2.250	2.221	2.221	2.163	2.046	2.119
Individual practitioners	2.360	2.386	2.242	2.391	2.190	2.019	2.189	2.097	2.063	2.126
Firm members	2.269	2.140	2.190	2.181	2.076	2.090	2.009	2.157	2.093	2.023
Lawyers										
All					3.806	3.686	4.070			
Individual practitioners					3.437	3.583	3.738			
Firm members					3.261	3.510	3.757			
Consulting engineers										
All	4.147	4.311	5.928	145.000						
Individual practitioners	3.846	4.692	11.247	∞						
Firm members	3.863	3.430	4.712	9.974						

Coefficient of Variation *

	1	2	3	4	5	6	7	8	9	10
Certified public accountants										
All	.843	.865	.843	.768	.840	.854	.803	.761	.784	.700
Individual practitioners	.837	.772	.834	.757	.893	.883	.811	.780	.750	.717
Firm members	.834	.883	.836	.765	.691	.727	.698	.691	.793	.659

TABLE 49 (concl.)

Coefficient of Variation * (cont.)

	1933 SAMPLES				1935 SAMPLES			1937 SAMPLES		
	1929	1930	1931	1932	1932	1933	1934	1934	1935	1936
Lawyers										
All										
Individual practitioners	1.231	1.647	1.548	2.124	1.236	1.390	1.266			
Firm members	1.214	1.435	1.900	2.472	1.340	1.508	1.377			
Consulting engineers										
All										
Individual practitioners	1.120	1.636	1.239	1.759	.930	1.040	.929			
Firm members										

* Under the assumptions outlined in the footnote to Table 13 we can estimate roughly the effect, on the coefficient of variation, of the downward bias arising from dividing the income of a firm equally among its members. If all firms contained two members, and if there were no correlation between the incomes of members of the same firm, the 'true' standard deviation for firm members, and consequently the 'true' coefficient of variation, would tend to be 1.41 (square root of 2) times the measures as we compute them. If the correlation were .5, the correction factor would be 1.15. Applying these factors gives the accompanying results for the coefficients of variation for firm members.

ASSUMED CORRELATION	1933 SAMPLES				1935 SAMPLES			1937 SAMPLES		
	1929	1930	1931	1932	1932	1933	1934	1934	1935	1936
Accountants										
.5	.962	1.019	.965	.883	.797	.899	.805	.797	.915	.760
0	1.179	1.249	1.182	1.082	.977	1.028	.987	.977	1.121	.932
Lawyers										
.5					1.073	1.200	1.072			
0					1.315	1.471	1.314			
Engineers										
.5	1.292	1.888	1.430	2.030						
0	1.584	2.313	1.752	2.487						

variability of income is larger for firm members than for individual practitioners but relative variability is smaller. The measures for firm members are, however, much affected by the downward bias discussed in Chapter 4, Section 1b. Its elimina-

TABLE 50

Percentage of Persons in Independent Practice Who Are Members of Firms, by Size of Community and by Region

Certified Public Accountants, Lawyers, and Consulting Engineers

	% WHO ARE MEMBERS OF FIRMS [1]					
	Certified public accountants			Lawyers		Consulting engineers
Size of community	1932	1934	1936	1934	1936	1932
1,500,000 & over	53.0	30.9	33.5	23.1	33.3	57.7
500,000–1,500,000	39.0	33.4	34.9	4.6	22.3	42.1
250,000– 500,000	55.8	37.1	47.0	23.4	31.0	37.2
100,000– 250,000	46.3	35.0	30.5	30.6	18.9	29.7
25,000– 100,000	51.1	25.4	40.2	30.0	34.0	45.7
10,000– 25,000	} 11.3	12.2	22.1	27.1	23.0	} 16.3
2,500– 10,000				23.9	20.3	
Under 2,500				17.8	11.0	
Region						
New England	42.7	33.6	34.3	22.0	18.6	46.5
Middle Atlantic	49.6	30.4	34.3	20.8	18.8	55.6
E. N. Central	53.3	37.0	41.0	21.0	38.0	39.7
W. N. Central	48.8	42.0	54.7	27.3	18.4	40.0
S. Atlantic	34.2	20.3	34.1	21.5	25.9	} 25.0
E. S. Central	45.4	32.1	31.5	33.2	9.7	
W. S. Central	56.6	26.2	35.1	30.5	20.8	40.0
Mountain	56.9	22.1	33.5	19.9	19.5	40.0
Pacific	36.7	22.3	24.0	15.5	39.9	31.4
U. S.[2]	47.3	30.2	35.3	22.7	25.3	43.5

[1] Percentages are based on numbers reporting for the last year covered by each sample.
[2] Includes a few returns for which size of community or region was unknown.

tion would increase the difference in absolute variability, but might well erase or even reverse the observed difference in relative variability.[27]

Organization into firms is least frequent in small communities (Table 50). There is little difference among the profess

27 Rough estimates of coefficients of variation corrected for this bias are given in the footnote to Table 49. For accountants the coefficients of variation for individual practitioners are below both sets of corrected coefficients for firm members for the first and third samples, and between the two sets for the second sample. For lawyers the coefficients of variation for individual practitioners exceed both sets of corrected coefficients for firm members. For engineers the coefficients for individual practitioners are below both sets of corrected

sions in this respect. Except for the single erratic value from the 1935 legal sample, firm members are uniformly least numerous in communities with populations of less than 25,000; the variation among the other size of community classes in the percentage of firm members seems to be random. The regional differences in the percentage of firm members, while larger than can be accounted for by chance, are in general less consistent from profession to profession than the differences among the size of community classes.[28]

In the smallest communities, where firms are few, the advantage of organization into firms is apparently least; indeed, according to three of the six samples for which data are given in Table 51, firm members in the smallest communities actu-

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coefficients for firm members for two years, between them for one, and above them for one. This evidence suggests that, in accountancy, relative variability of income is greater for firm members than for individual practitioners; in law, the situation is reversed, and in engineering, relative variability is about the same for individual practitioners and firm members. The roughness of our estimates of the corrected coefficients of variation, the margin of error attaching to the original measures, and the neglect of other measures of variability mean that these conclusions must be considered exceedingly tentative.

[28] To test the significance of the differences between the distributions of individual practitioners and firm members by size of community and region we used the χ^2 test. In each case χ^2 was computed from a table giving in one column the number of individual practitioners in the sample in each size of community (or region), and in a second column, the number of firm members.

For accountants we used the actual number of individual practitioners, but the number of firm members weighted to correct for the firm member bias. For the 1935 legal sample, we used the number of firm members weighted to correct for the firm member bias but we adjusted neither the number of individuals nor the number of firm members for the size of community bias. The original number of individuals and of firm members was used for the 1937 legal sample, no adjustment being made for either the size of community bias or the nonrandomness of the sample by states. The use of figures for lawyers not adjusted for the size of community bias and the nonrandomness of the 1937 sample by states is partly justified by the 'null' hypothesis being tested—namely, that the proportion of firm members is the same in all regions or in all size of community classes. In any event, this procedure is almost unavoidable if any attempt is to be made to interpret the results in probability terms. The sample of consulting engineers is the only one that raises no problems, since it is subject to no biases for which we have attempted to adjust. The values of χ^2 are summarized in the accompanying table. For reasons given in footnote 24, the procedure used led to overestimates of the significance of the differences,

ally have lower average income than individual practitioners. There is some indication that the advantage of organization into firms increases consistently with size of community. Consulting engineers seem to be an exception to this statement; but no reliance can be placed on the figure in Table 51 for consulting engineers in communities under 25,000. The firm

since in all cases, the number of firm members is greater than the number of separate returns for firm members.

TEST OF SIGNIFICANCE OF DIFFERENCE BETWEEN
DISTRIBUTIONS OF FIRM MEMBERS AND OF
INDIVIDUAL PRACTITIONERS BY

| | SIZE OF COMMUNITY | | REGION | |
	No. of degrees of freedom	χ^2	No. of degrees of freedom	χ^2
Certified public accountants				
1933 sample for 1932	5	38.0‡	8	14.9
1935 sample for 1934	5	26.2‡	8	21.9†
1937 sample for 1936	5	14.9*	8	13.7
All samples	5	64.6‡	8	38.4‡
Lawyers				
1935 sample for 1934	7	23.3†	8	9.1
1937 sample for 1936	7	44.4‡	8	32.2‡
Both samples	7	45.3‡	8	14.9
Consulting engineers				
1933 sample for 1932	5	27.4‡	7	18.8†

* Greater than the value that would be exceeded by chance once in twenty times.
† Greater than the value that would be exceeded by chance once in a hundred times.
‡ Greater than the value that would be exceeded by chance once in a thousand times.

For 5 degrees of freedom these values are 11.070, 15.086, and 20.517 respectively; for 7 degrees of freedom, 14.067, 18.475, 24.322; for 8 degrees of freedom, 15.507, 20.090, 26.125.

On this showing, the significance of the difference between the distribution of firm members and individuals by size of community is indisputable, even though large allowance is made for deficiencies in the tests. The differences between the regional distributions are less marked, though it seems fairly certain that on the whole they are larger than could be expected from chance alone. In each comparison the value of χ^2 is greater for the size of community distributions than for the regional, although more degrees of freedom are available for the latter.

member average used in deriving this figure is based on only one firm for the two years that are responsible for its relatively high value.[29]

As already suggested, it seems reasonable to interpret these results in terms of the clientele to whom services are rendered.

TABLE 51

Difference between Arithmetic Mean Income of Firm Members and of Individual Practitioners

Certified Public Accountants, Lawyers, and Consulting Engineers

	% BY WHICH ARITHMETIC MEAN INCOME OF FIRM MEMBERS EXCEEDS ARITHMETIC MEAN INCOME OF INDIVIDUAL PRACTITIONERS [1]					Consulting engineers
	Certified public accountants			Lawyers		
Size of community	1929-32	1932-34	1934-36	1932-34	1934-36	1929-32
1,500,000 & over	40.8	88.5	56.0	197.9	456.1	82.8
500,000-1,500,000	17.6	30.2	59.5	336.1	195.9	87.5
250,000- 500,000	40.5	70.1	35.5	99.1	168.5	—18.4
100,000- 250,000	11.8	29.5	2.4	65.4	34.6	—1.4
25,000- 100,000	—0.4	13.9	—9.1	90.4	128.8	—38.8
10,000- 25,000				11.2	109.5	
2,500- 10,000	−5.9	−1.5	18.9	65.7	47.8	208.8
Under 2,500				38.9	—28.0	
Region						
New England	51.8	48.2	35.6	296.8	232.9	61.8
Middle Atlantic	31.5	79.0	35.2	117.1	209.4	95.6
E. N. Central	34.8	58.8	10.2	115.7	437.11	—25.1
W. N. Central	—14.4	43.4	54.7	46.5	24.2	64.9
S. Atlantic	35.9	17.4	—2.1	66.2	185.6	
E. S. Central	47.6	78.5	64.5	85.4	181.7	−16.5
W. S. Central	13.2	74.0	35.2	94.0	—28.2	—52.9
Mountain	4.0	66.9	87.6	57.9	31.5	—64.8
Pacific	16.8	42.4	9.5	70.8	169.1	9.0
U. S.[2]	29.8	57.8	27.1	96.4	239.9	72.1

[1] For all professions, percentage difference is computed from simple unweighted averages of the annual averages.
[2] Based on averages that include a few returns for which size of community or region was unknown.

In small communities much more than in large, the clientele is likely to be composed of small businesses and individual consumers; and the 'unit' of service is likely to be small and personal. Organization into firms is less advantageous and less frequent.

The difference between the average incomes of firm mem-

[29] The percentage differences for the individual years are of interest in this connection: 1929, 474.5; 1930, 167.2; 1931, —342.5; 1932, —181.9.

bers and individual practitioners in communities of the same size is in general less than the difference between the country-wide averages. (Compare Tables 47 and 52.) For accountants, correction for the influence of size of community reduces the difference between the incomes of firm members and indi-

TABLE 52

Difference between Arithmetic Mean Incomes of Firm Members and of Individual Practitioners, Based on Averages Standardized with Respect to Size of Community

Certified Public Accountants, Lawyers, and Consulting Engineers

PROFESSION & SAMPLE	% BY WHICH STANDARDIZED ARITHMETIC MEAN INCOME OF FIRM MEMBERS EXCEEDS STANDARDIZED ARITHMETIC MEAN INCOME OF INDIVIDUAL PRACTITIONERS [1]							
	1929	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*
Certified public accountants [2]								
1933	25.1	32.7	24.6	15.5				
1935					53.3	54.3	51.2	
1937						30.6	27.9	19.6
Lawyers [3]								
1935				102.0	108.9	105.2		
1937						142.1	138.5	169.0
Consulting engineers [4]								
1933	94.4	54.6	10.1	39.3				

[1] The standardized averages from which the percentage differences are computed are weighted averages of the averages for the size of community classes. The same weights are used for both individual practitioners and firm members.
[2] The weights used in computing the standardized averages are, for each size of community class, the total number of accountants, adjusted for the firm member bias, in both the 1935 and 1937 samples who reported 1934 incomes.
[3] The weights used in computing the standardized averages are, for each size of community class, the total number of lawyers, adjusted for the size of community and firm member biases, in the 1935 sample who reported 1934 incomes.
[4] The weights used in computing the standardized averages are, for each size of community class, the total number of engineers reporting 1932 incomes.

vidual practitioners only slightly: in 1936, the year for which the reduction is least, from 20.5 to 19.6, but in the 1932 averages from the 1933 sample, the year and sample for which the reduction is greatest, from 22.7 to 15.5, i.e., by almost a third. The correction for the influence of size of community actually increases the differential shown by the first legal sample. This anomalous result is entirely accounted for by one size of com-

munity class—500,000–1,500,000. The percentage of firm members in this class in the 1935 sample is exceedingly low—4.6 per cent in 1934—but the average income of the firm members reporting was 323 per cent higher than the average income of the individual practitioners.[30] The 1937 legal sample yields a very different result; correction for the influence of size of community reduces the differential by a third. As usual, the engineering sample yields erratic results: the differential

TABLE 53

Distribution by Organization of Practice
and Year of Admission to Bar

New York County Lawyers, 1933

YEAR OF ADMISSION TO BAR	NO. IN SAMPLE IN INDEPENDENT PRACTICE	NUMBER OF		% FIRM MEMBERS ARE OF ALL LAWYERS IN INDEPENDENT PRACTICE
		INDIVIDUAL PRACTITIONERS	FIRM MEMBERS	
1930–1934	730	583	147	20.1
1924–1929	1,023	747	276	27.0
1918–1923	433	275	158	36.5
1911–1917	377	230	147	39.0
1900–1910	508	339	169	33.3
Before 1900	257	152	105	40.9
All years	3,328	2,326	1,002	30.1

Survey of the Legal Profession in New York County, p. 28.

in 1929 is increased from 88 to 94 per cent; the differential in 1931 is reduced from 44 to 10 per cent.

We have evidence on the relation between organization of practice and number of years in practice only for lawyers. A study of New York County lawyers indicates that the percentage of firm members at first increases sharply with number of years in practice and then remains fairly constant (Table 53). Studies of young lawyers in California and Wisconsin confirm the initial sharp rise.[31] As we saw in Section 2, the average in-

30 The number of firm members in that class in 1934, weighted for the firm member bias, was 5.
31 See summary of results for California and Wisconsin lawyers in *Economics of the Legal Profession*, p. 48.

come of lawyers in the years-in-practice groups in which firm members are most numerous is considerably higher than in the years-in-practice groups in which firm members are fewest. Consequently, the difference between the average incomes of individual practitioners and firm members in practice the same number of years would be considerably smaller than the difference between the countrywide averages; or between the averages standardized with respect to size of community distribution. Unfortunately, the available data are too meagre for even rough estimates of the quantitative effect of this factor.

c Salaried and independent practice

As noted above, independent practice is likely to dominate professions that serve primarily individuals; salaried practice, professions that serve primarily business enterprises and public agencies. Accordingly, independent practice is dominant among physicians and dentists and the numerically small groups of authors, composers, etc. In contrast to these are accountants, engineers, chemists, metallurgists, etc., groups in which independent practice is relatively rare. Certified public accountants may seem an exception, since they are predominantly individual practitioners. However, as previously noted, they belong to the same professional group as the large number of accountants and auditors employed by business firms and government. In any profession that is largely salaried, some men, either because of superior skill or for other reasons, find it advantageous to practise without an attachment to a business or governmental organization. Consulting engineers, economists, chemists, etc., are other examples of such auxiliary groups of independent practitioners.

Law serves individuals, business enterprises, and governmental agencies, and in consequence occupies an intermediate position between these two groups. Initially dominated by independent practice, it has become increasingly salaried as large business enterprises have grown in importance and the government's role as an employer has expanded.

The independent practitioner must make a larger capital investment in equipment, expense of building up a practice, etc., than the salaried man, and must assume a greater risk. These factors that would tend to make the average income of the independent practitioner larger than the average income of the salaried man [32] are common to all professions. In addition, in medicine and dentistry, and to a considerable extent, law, salaried employment is ordinarily a step toward independent practice. Salaried employees are therefore likely to be younger than independent practitioners and to include a larger proportion of men who have not yet reached their peak earnings. The salaried employee of a physician, dentist, or lawyer is unlikely to receive more than his employer, though of course he may receive more than other independent practitioners. Since prestige plays so large a role in attracting custom, the salaried man will find it advantageous to enter independent practice as he gains experience and acquires a reputation on his own account.

In accountancy and engineering, most men are salaried employees throughout their professional career. The independent practitioners are an auxiliary group. The business enterprises and governmental agencies that are the major consumers of the services of these professions are likely to purchase from independent practitioners solely highly specialized services: services that their own professional employees cannot render and that are required in such small amounts that it is not profitable to employ additional full-time employees; or services that they would prefer to have performed by outside agencies whose findings will be respected as objective and impartial (e.g., an independent audit). Independent practitioners in these professions are likely to be recruited from men who have done particularly well as salaried employees and have be-

[32] Independent practice may, of course, have greater appeal for other reasons than the expectation of larger pecuniary returns. But it may be hazarded that the 'net advantages' are not so clearly or generally on the side of independent practice as to affect the general tenor of this analysis.

come fairly well known; men who would earn relatively high incomes as salaried employees.[88]

The relative status of the salaried and independent groups may be reversed during cyclical depressions when large numbers of previously salaried individuals may become unemployed and enter independent practice because they find it impossible to obtain salaried employment. Such a condition is unlikely to become chronic, however, unless there is a definitely inferior group of professionally trained persons who can manage to stay in private practice but would not be hired by employers, or unless competition plays little or no role in the pricing of professional services; for otherwise competition, slow and halting though its workings may be, will tend to drive down salaries until the situation again approaches that outlined above.

The incomes of independent practitioners are likely to be not only higher but also more variable than those of salaried employees. Independent practitioners are likely to be a heterogeneous group, including at the one extreme, some men who are in independent practice as a temporary expedient because they cannot get a salaried post, at the other extreme, men who render highly specialized services for which no one consumer can provide an adequate outlet. Salaried employees are ordinarily a more homogeneous group: a man is not likely to be employed at all unless he is worth the usual 'starting' salary; and while in time he may have a fairly responsible and well-paid position, he is unlikely to become a 'top' executive unless he subordinates professional work to general managerial activity. Two other factors, touched on in Chapter 4, Section 3, also make for greater variability of income from independent practice. In the first place, the incomes of independent practitioners include an element of entrepreneurial return, a typi-

[88] Of course, these considerations apply only to men engaged in rendering services strictly related to their specialty; they do not apply to men trained, for example, as lawyers or accountants, who become corporate executives or occupy other posts in which they perform tasks largely unconnected with their particular profession.

cally variable element greatly subject to 'random' influences. In the second place, 'nonrational' factors, which make for wide variation in consumers' judgments of the quality of the services rendered by different men, affect independent practitioners more than salaried employees since the former are more likely to sell services to individuals and in small quantities.

The National Resources Committee estimates of the distribution of income by size, cited in Chapter 3, tend to support these statements. The arithmetic mean income of independent professional families in 1935–36 was more than twice that of salaried professional families, and the variability of income was greater among independent than among salaried families (Table 8 and Chart 3). However, these data are for all professions combined, whereas the considerations just presented apply to each profession separately. The larger and more variable incomes of independent professional families may merely mean that independent practitioners are concentrated in those professions in which incomes are largest and most variable. They do not necessarily mean that independent practitioners receive larger and more variable incomes than salaried men in the same profession.

The estimates summarized in Table 54 bear more directly on the relative income of salaried and independent practitioners in the same profession, but are based on much smaller samples. They indicate that salaried employees tend to have lower arithmetic mean incomes than their independent brethren but may have higher median incomes. This difference reflects, of course, a greater skewness in the distribution of income from independent practice. In general, the data on which the estimates in Table 54 are based show greater variability of income from independent practice than from salaried employment. The available data, though hardly adequate to establish the conclusions suggested by the considerations outlined above, are entirely consistent with them.

TABLE 54

Arithmetic Mean and Median Incomes of Salaried Employees
and Independent Practitioners

Physicians and Lawyers: Selected Studies

	YEAR TO WHICH ESTIMATES RELATE	NO. OF RETURNS	ARITH. MEAN INCOME	MEDIAN INCOME
Physicians			(dollars)	
American Medical Association Study [1]	1928			
Salaried		853	5,428	4,718
Independent		5,475	6,499	4,938
Committee on the Costs of Medical Care, 'accepted' estimate [2]	1929			
Salaried		....[6]	4,524	4,213
Independent		....[6]	5,467	3,705
California Medical-Economic Survey [3]	1933			
Full-time salaried [4]		....[6]	3,345	3,000
Full- & part-time salaried		....[6]	3,674	3,300
All physicians		2,737	3,572	2,700
Lawyers				
New York County Study [5]	1933			
Employed in law offices on 'salary basis'		320	4,316	3,400
All employed in law offices		558	4,011	2,885
Independent		2,667	6,664	3,210

[1] Leven, *Incomes of Physicians*, p. 105.

[2] *Ibid.*, p. 20. The 'accepted' estimate is based on the American Medical Association study and data for special groups of salaried physicians.

[3] *California Medical-Economic Survey*, pp. 90 and 94.

[4] Estimates of 1934 salary.

[5] *Survey of the Legal Profession in New York County*, pp. 18, 34. This report does not contain arithmetic averages for any group, or medians for salaried employees. We computed them from frequency distributions. The lawyers employed on other than a 'salary basis' presumably receive commissions or perquisites. The averages are for total professional income, not only income from salaried employment.

[6] Data not available.