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## INTERCOMPANY COMPARISONS

An examination of the differences in top executive compensation policy among the corporations included in the sample rounds out the analysis. Is there a systematic relationship between the size of a firm and the rewards enjoyed by its senior executives? If so, which measure of size seems to be the most reliable predictor of compensation levels? Do large firms make more use of deferred and contingent forms of reward than small ones? Answers to such questions should serve to highlight at least some of the factors which have contributed to the generation of the collective experience described above.

### *Focus*

Although data were not available on all five highest-paid executives in every one of the fifty companies studied in every year, this was not a significant problem when dealing with the aggregate compensation figures. There were enough observations at each executive level in each year to permit meaningful averages to be obtained. The regularity and consistency of the observed trends in remuneration within all five positions supports that contention. If the sample corporations are considered individually, however, gaps in the data do become an issue, since it is obviously inappropriate to attempt to compare the compensation of one firm's top five executives with that of the same group in a second firm, if for either or both companies a record for all five cannot be developed for the year to which the comparison is to apply.

Even though it was possible to provide data for 5,300 of the 6,000 man-years of remuneration experience that would comprise a complete sample between 1940 and 1963, the remaining 700 turn out to be widely distributed among the companies studied. As a consequence, a good many of the fifty would have to be excluded from consideration in

certain years if the compensation differences among them were examined in terms of all five top executive positions.<sup>1</sup> That being the case, the comparisons here will concentrate on the remuneration of only the highest-paid individual in each firm. This will permit the maximum number of companies to contribute data to those comparisons, but it will not, importantly, mean that we will sacrifice much in the way of the reliability of the results obtained. The amount and the form of the rewards of a corporation's top executive are, in fact, a dependable guide to the experience of his colleagues in relation to executives in other firms.

For example, for thirty-nine corporations in the sample, information on all five top executive positions is available for 1940. If these firms are ranked first according to the total amount of after-tax compensation received by their highest-paid executive alone and then by the amount received by all five together, the Spearman rank correlation coefficient ( $\rho$ ) between the two schedules turns out to be 0.934 and is easily significant at the .0001 level.<sup>2</sup> A similar conclusion applies to any year we might care to consider:

Year	$\rho$	Sample Size	Critical "t" at .0001 Level	Computed "t"
1940	0.934	39	4.129	15.890
1945	0.916	43	4.085	14.631
1950	0.922	45	4.067	15.571
1955	0.959	35	4.185	19.465
1963	0.971	25 <sup>a</sup>	4.415	19.470

<sup>a</sup>The 1963 computations are based on a comparison of rankings by (1) top executive total compensation and (2) total compensation of the top *three*, since there are only six firms in that year for which data on all five positions could be compiled.

For all practical purposes, therefore, the remuneration of the top executive in each firm should be a suitable proxy for the circumstances of his four closest subordinates. As such, it provides a convenient and efficient vehicle for the intercorporate analysis which is of concern here.<sup>3</sup>

<sup>1</sup> This, parenthetically, is an advertisement for the random nature of the missing data.

<sup>2</sup> Using a one-tailed "t" test for significance.

<sup>3</sup> A case could also be made for the proposition that, in any event, the experience of just the top executive is the most appropriate focus for such com-

*Compensation and Company Characteristics: Distributions*

A comparison of the attributes of the firms in the sample with the remuneration enjoyed by their respective top executives indicates that there is a much greater degree of variation in characteristics among the companies themselves than there is in the amount of compensation they provide for their senior officers. This conclusion holds not only for the current structure of managerial rewards but for that which existed prior to World War II as well. Consider the following:

A. FOR 1940:			
	Sample Mean ( $\mu$ )	Standard Deviation ( $\sigma$ )	$\sigma/\mu$
Company assets	\$330.0	\$351.0	1.064
Company sales	254.7	298.7	1.173
Before-tax profits	32.6	50.5	1.549
After-tax profits	22.0	31.8	1.445
Equity market value	243.7	383.8	1.574
Top executive's before- tax salary and bonus	137	95	0.693
Top executive's total after-tax compensation	102	80	0.787
B. FOR 1963:			
	Sample Mean ( $\mu$ )	Standard Deviation ( $\sigma$ )	$\sigma/\mu$
Company assets	\$1,583.0	\$1,615.0	1.020
Company sales	1,910.5	2,337.9	1.223
Before-tax profits	248.5	495.1	1.992
After-tax profits	137.0	244.9	1.787
Equity market value	2,366.1	3,850.0	1.627
Top executive's before- tax salary and bonus	210	82	0.391
Top executive's total after-tax compensation	187	144	0.768

parisons because there is little question as to differences in the nature or scope of his job from one firm to the next. Problems of consistent job definition can become more acute in connection with lower-ranking individuals.

The figures pertaining to company characteristics are in millions of dollars, while those which refer to compensation are in thousands. Data from forty-nine companies are included in the calculations for 1940 and from forty-six companies for 1963—these being the number of firms out of the fifty studied for which full information about the remuneration of their top executive was available in those years.<sup>4</sup>

The significant column in the tabulations is that which records the ratio of the standard deviation of each distribution to its mean—the so-called “coefficient of variation.” This parameter is a dimensionless index which measures the degree of dispersion of each item about its average value and thus provides a common basis for a comparison of variations in quantities which have quite different original dimensions. It is apparent from these calculations that both at the beginning and at the end of the time period covered there was a much wider diversity of characteristics among the corporations examined than there was in their compensation policies, at least at the top of the organization. If there is a secular trend in the figures, it seems to be in the direction of reinforcing this phenomenon. The coefficient of variation of all but one of the features of the companies in the sample increased between 1940 and 1963, while the corresponding values for their salary and total compensation awards decreased.<sup>5</sup>

A second noteworthy attribute of the data is the fact that the dispersion of the distribution of total after-tax compensation is considerably greater than that of the distribution of salary and bonus payments. This situation, of course, is a result of the impact of a wider range of factors on the value of the various deferred and contingent rewards enjoyed by executives than are relevant to their salaries and bonuses. In

<sup>4</sup> It should be noted that there is no reason to suspect that in this or any subsequent discussions a bias is introduced because several firms are excluded from the comparisons for lack of data. The inadequacy of some of the proxy statement information is not peculiar to any particular category or size of firm. The fact that we are unable in every case to include all fifty corporations in the analysis should therefore be of no more concern than if the original sample simply consisted of fewer firms to begin with.

<sup>5</sup> After-tax salary and bonus data were not included in the tabulations because the degree of variation in those figures is predictable from the given before-tax distribution, i.e., a progressive income tax schedule guarantees that the coefficient of variation of after-tax current remuneration will necessarily be less than that of its pretax counterpart. The contrast with the several company characteristics would therefore be even more marked on that basis.

addition to those parameters of company compensation policy and position attained which determine the amount of an individual's current remuneration each year, his aggregate earnings depend also on his age, his previous experience under whatever noncurrent compensation arrangements he enjoys, the market's most recent appraisal of the value of his firm's common stock, and his skill or good fortune in taking advantage of any stock option grants. It is reasonable to expect, therefore, that this aggregate would differ more substantially among executives than would the direct cash payments they enjoy. Because supplements to salary and bonus have become relatively more important over the years, it is also not surprising to find that the difference between the degree of dispersion in the total pay package and in current remuneration has widened since 1940. In that year the coefficient of variation for before-tax salary and bonus was 0.693 and for total compensation 0.787. In 1963 the figures were 0.394 and 0.768, respectively.<sup>6</sup>

### *Compensation Growth Rates*

The rates of growth in the remuneration associated with the senior executive positions in the companies studied varied extensively around the average rate for the sample as a whole. The distribution of the relevant compound annual rates between 1940 and 1963 for the forty-five companies for which compensation data in both years were available is recorded in Table 30 and in Chart 26.<sup>7</sup> Those observations may be summarized as follows:

	Mean Growth Rate (per cent)	Standard Deviation of Distribution of Growth Rates (per cent)
Before-tax salary and bonus	2.6	2.0
After-tax salary and bonus	0.1	1.4
Total after-tax compensation	2.7	2.9

<sup>6</sup> Again, if after-tax salary and bonus were included in the comparisons, the contrast and its trend over time would be sharper still.

<sup>7</sup> The numerical designation of the individual firms in the table does not correspond to their alphabetic order as listed in Appendix 1. The missing numbers denote the five companies for which either or both the 1940 and 1963 top-executive compensation figures could not be obtained.

TABLE 30

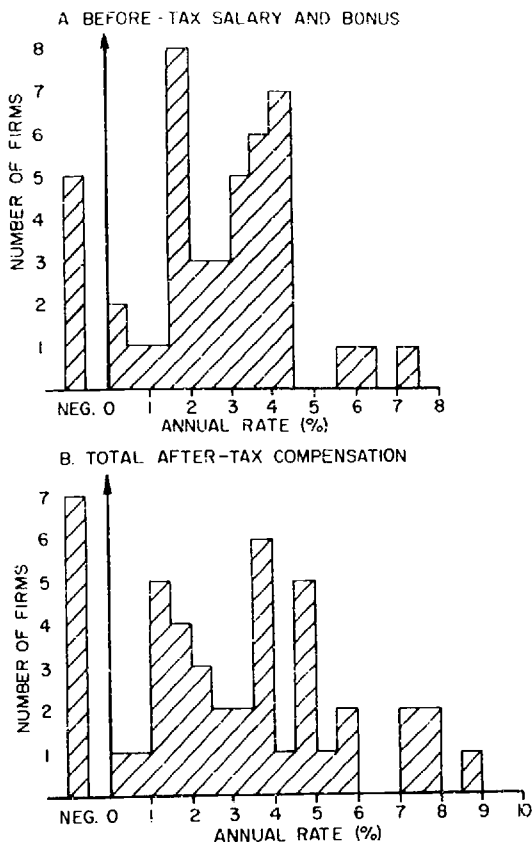
Distribution of Compensation Annual Growth Rates, 1940-63  
(per cent)

Company Number	Before-Tax Salary	After-Tax Salary	Total Compensation	Company Number	Before-Tax Salary	After-Tax Salary	Total Compensation
1	1.5	-0.7	1.5	26	0.1	1.7	1.3
2	3.1	0.8	3.9	27	1.7	0.0	1.2
3	3.8	0.9	3.0	28	3.2	0.0	4.1
4	1.8	0.1	1.0	30	3.5	0.2	5.8
5	3.3	0.5	5.7	31	2.9	0.4	3.9
6	4.4	1.0	0.3	32	4.3	1.9	7.4
8	4.3	0.9	7.6	33	-0.7	1.8	0.9
9	4.0	0.9	4.6	34	0.4	1.3	1.3
10	0.8	0.5	1.0	36	1.9	0.2	2.3
11	2.0	0.6	3.4	37	5.6	2.3	4.7
12	-1.4	-2.4	-0.2	38	1.6	-1.0	8.8
13	7.2	4.4	7.8	39	2.8	-0.2	7.1
15	2.6	-3.8	4.9	40	2.6	0.2	1.7
16	4.0	0.3	4.7	41	3.6	1.1	2.5
17	1.8	0.0	4.9	42	6.0	2.2	2.4
18	4.6	1.5	1.6	43	1.7	0.0	-1.3
19	2.2	0.3	3.9	44	3.1	0.4	3.1
20	3.8	1.2	3.9	45	1.8	-0.1	-4.1
21	2.3	0.4	1.7	46	-2.7	-3.9	-3.1
22	3.6	0.6	3.9	48	4.5	1.7	2.6
23	1.4	-0.5	2.0	49	3.8	-0.2	3.8
24	0.0	-1.2	0.4	50	3.4	0.0	5.0
25	4.2	0.6	-2.2				

The mean values thus computed differ slightly from those determined in Chapter 8 because in this case each company's rate of growth is weighted equally, while earlier the weights were based on the absolute amount of compensation paid by each firm.

It is obvious both from this summary and from Chart 26 that executives had quite different experiences depending on the company they worked for. Particularly striking is the fact that in seven instances the total after-tax compensation received by the senior officer in the firm actually was *smaller* in 1963 than it was in 1940, i.e., the observed rate of growth is negative. The same is true of before-tax salary and bonus in

CHART 26

*Distribution of Compensation Growth Rates, 1940-63*

five firms and of its after-tax counterpart in fully sixteen firms—over one-third of the indicated sample. It is worth noting, however, that while such situations certainly contribute to a poor collective historical performance of remuneration compared with the rates of growth of the employer companies, they do not by any means dominate or distort that comparison by affecting the aggregate figures disproportionately. In only one of the forty-five instances tabulated did all three measures of the compensation enjoyed by the top executive of a firm grow more rapidly than even the slowest-growing of the five indexes of the size of the firm itself. In two instances, two of the compensation measures

grew more rapidly, and in four cases, one of them did so. Thus, for all but a small minority of companies in the sample, the assertions made in Chapters 8 and 9 on the basis of the aggregate data are unconditionally valid, and even for that minority the evidence is mixed.<sup>8</sup>

As judged by the standard deviations of the several distributions, the dispersion of the relevant growth rates is greatest in the case of total after-tax compensation and least for after-tax salary and bonus. That pattern is, of course, consistent with the "dampening" influence of a progressive tax structure on after-tax salary variations and with the fact that a broader range of factors has an impact on executives' total compensation than on their salaries and bonuses.

#### *Growth Rate Comparisons: Salary vs. Total Compensation*

Given the collection of data in Table 30 and the opportunity to compile similar tabulations for other intervals of time, it is possible to determine the extent to which differences among firms in the rates of growth of the most visible indexes of the rewards enjoyed by their senior officers—their salary and bonus receipts—are reliable indicators of differences among them with respect to rates of growth of aggregate remuneration as well.

A convenient way to examine this issue is provided by the rank correlation technique referred to above. If the corporations in the sample are ranked according to the rate of growth of their highest-paid executive's salary and bonus and according to the rate of growth of the same individual's total compensation, the degree of correspondence between the two schedules can be appraised by means of the Spearman rank correlation coefficient,  $\rho$ , where:

<sup>8</sup> Individual comparisons of the same sort are not possible in relating increases over time in executives' rewards to the rate of growth of the incomes of other professional groups, since collective data concerning the latter is all that is available here. However, it can be seen from Table 30 that the aggregate after-tax remuneration associated with the top executive position in thirty-seven of the forty-five firms grew more slowly between 1940 and 1963 than the 5.2 per cent per annum figure observed for physicians and dentists. In twenty-six of the forty-five cases, aggregate remuneration grew more slowly than the 3.9 per cent per annum increase experienced by lawyers. It seems fair to conclude, then, that in these comparisons as well the aggregate results apply also to the large majority of individual situations.

$$\rho = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n^3 - n}$$

$d_i$  refers to the difference between the two rankings assigned to firm  $i$  under the respective criteria, and  $n$  denotes the number of firms in the sample. This coefficient is designed in such a manner that when the two sets of rankings are identical,  $\rho$  has a value of plus 1; when one ranking is exactly the reverse of the other,  $\rho$  becomes minus 1. The possibility that the indicated degree of correspondence could have arisen by chance may be tested, for situations in which  $n \geq 10$ , by calculating Student's "t," where in this context:

$$t = \rho \left[ \frac{n-2}{1-\rho^2} \right]^{1/2}$$

with  $n - 2$  degrees of freedom. A value for  $t$  greater than that associated with whatever level of confidence is chosen implies that the extent of the agreement between the two schedules suggested by  $\rho$  is significant at that level.<sup>9</sup>

The concern at the moment, then, is whether the firms in the sample which have awarded their top executives the most substantial increases in salary and bonus over time have displayed the same sort of leadership with regard to total compensation. In that connection, rates of growth during the postwar years seem as relevant as those covering the full period 1940 to 1963. As was indicated in Chapter 8, virtually all the observed appreciation in the several items tabulated occurred within the ten years subsequent to 1945. Therefore, the degree of correspondence between the rankings was examined for the intervals 1945 to 1955 and 1945 to 1963 as well. The results are shown in the tabulations on page 236. The difference in the correlation coefficients calculated for the before-tax and after-tax salary and bonus comparisons is, of course, accounted for by the differential impact of progressive income taxes on after-tax rates of growth.<sup>10</sup>

<sup>9</sup> For a complete discussion, see Sidney Siegel, *Nonparametric Statistics for the Behavioral Sciences*, New York, 1956, pp. 202-213.

<sup>10</sup> The problem of ties in the various rankings, which would necessitate a slight modification of the rank correlation computations, does not arise here. It turned out to be possible in almost every instance to resolve any apparent

## EXECUTIVE COMPENSATION

A. BEFORE-TAX SALARY AND BONUS VS. TOTAL  
AFTER-TAX COMPENSATION GROWTH RATES:

Interval	<i>n</i>	$\rho$	Computed <i>t</i>	Critical <i>t</i> at .01 Level
1940-63	45	0.428	3.104	2.416
1945-55	50	0.264	1.900	2.406
1945-63	46	0.164	1.102	2.414

B. AFTER-TAX SALARY AND BONUS VS. TOTAL  
AFTER-TAX COMPENSATION GROWTH RATES:

Interval	<i>n</i>	$\rho$	Computed <i>t</i>	Critical <i>t</i> at .01 Level
1940-63	45	0.433	3.149	2.416
1945-55	50	0.284	3.053	2.406
1945-63	46	0.183	1.237	2.414

As is evident, the data suggest at best only a very loose connection over the time periods considered, especially from 1945 on. While two of the coefficients obtained are significant at the .01 level, they are still not really large enough to generate much confidence on the part of an observer that a rapid rate of growth in the level of salary and bonus awarded the top executive in a particular firm provides a good basis for assuming that the aggregate value of the compensation package associated with that position will have grown in like manner.

It could happen, however, that some peculiar feature of a single year's equivalence between two or more of the observed rates of growth simply by carrying out the calculations to a greater number of significant digits. In those few cases in which the growth rates *were* precisely the same—e.g., a situation wherein salary and bonus exactly doubled in two different firms—the tie was broken by determining which of the two displayed the greater growth rate in payments to all five senior executive positions combined. Thus, one of the rationales for the appropriateness of confining the intercompany comparisons to only the highest-paid executive in each firm as a means of including as many of the fifty companies in the sample as possible in those comparisons was that the rewards enjoyed by such individuals were a very good index of the relative magnitude of the rewards received by their immediate subordinates. It is therefore consistent with the nature of our interest that the experience of lower-ranking executives be used to establish a difference between two firms when that difference is not apparent at the top of the organization alone.

data—extraordinary stock option profits realized by a few individuals, for example—might distort the growth rate figures on which the analysis is based and lead to an overly pessimistic appraisal of the degree of agreement between the several schedules. Such situations, if they exist, are most likely to occur in the later years of the study when, as we have seen, the volatility of executives' rewards increased substantially. Any adjustment of the data to eliminate possible problems of this sort should therefore focus on those years. Accordingly, the rates of growth between 1940 and 1963 and between 1945 and 1963 were recalculated, substituting for the original 1963 figures the average values for each item over the years 1960 through 1963. The new set of rankings generated did not, however, improve the correlation results. Thus:

A. BEFORE-TAX SALARY AND BONUS VS. TOTAL  
AFTER-TAX COMPENSATION GROWTH RATES:

Interval	$n^a$	$\rho$	Computed t	Critical t at .01 Level
1940 to 1960/63	44	.449	3.257	2.418
1945 to 1960/63	45	.209	1.401	2.416

B. AFTER-TAX SALARY AND BONUS VS. TOTAL  
AFTER-TAX COMPENSATION GROWTH RATES:

Interval	$n^a$	$\rho$	Computed t	Critical t at .01 Level
1940 to 1960/63	44	.363	2.525	2.418
1945 to 1960/63	45	.134	0.887	2.416

<sup>a</sup> The number of companies which can be included in the analysis is smaller in this case because we now require that compensation data be available in each of four years at the end of the relevant interval instead of just one.

Indeed, the various schedules seem to be rather less in agreement than before. The intervals which begin with 1940 still provide the better basis of comparison, but none of the relationships appear to be very strong.

The conclusion this suggests, then, is that increases in deferred and contingent rewards dominate the compensation policy differences among firms over time. Historical patterns of salary and bonus payments are

not only in the aggregate poor indexes of the rate of growth in the total remuneration received by senior corporate executives—as Chapter 8 made clear—but are also unreliable as guides to relative growth rates in individual companies.

*Salary vs. Total Compensation: Absolute Levels*

A substantially better set of results is obtained from an examination of the absolute level of rewards. In each of six separate years spanning the time period under consideration, and on the basis of the annual averages computed for five different subperiods within that interval, the corporations in the sample were ranked according to the amount of salary and bonus paid their senior officers and according to the size of the same individuals' total pay packages.<sup>11</sup> The extent of the agreement between the schedules derived was then tested as above, with the following outcome:

SALARY AND BONUS VS. TOTAL COMPENSATION RANKINGS:

Year	<i>n</i>	<i>p</i>	Computed <i>t</i>	Critical <i>t</i> at .01 Level
1940	49	.793	8.916	2.408
1945	50	.433	3.327	2.406
1950	50	.599	5.186	2.406
1955	50	.343	2.533	2.406
1960	50	.588	5.038	2.406
1963	46	.625	5.308	2.414
1940-49 Average	49	.752	7.812	2.408
1951-55 Average	50	.455	3.540	2.406
1956-60 Average	50	.527	4.295	2.406
1955-63 Average	45	.594	4.840	2.416
1960-63 Average	45	.617	5.134	2.416

All the indicated coefficients are significant—most of them by a comfortable margin.<sup>12</sup>

<sup>11</sup> In this case, it was not necessary to compute two different sets of rankings for before- and after-tax salary and bonus, since on an absolute level scale, an executive will enjoy the same relative standing in the sample by either criterion.

<sup>12</sup> Except for that associated with the year 1955, they are significant even at the .001 level.

The pattern of the results, especially as summarized by the correlation coefficients for the five period-average rankings, is in accord with what one might expect from the compensation history outlined in the preceding chapters. The two schedules being compared correspond quite closely during the early years of the study when, of course, salary and bonus comprised the bulk of the executive pay package. This relationship drops off considerably in the interval 1951 through 1955 in response to the first really heavy use by corporations of the newer forms of deferred and contingent compensation. Thereafter, as firms' experience with such arrangements accumulates, as their employment becomes more widespread and systematic, and as the often sharp initial impact on certain individual executives' rewards starts to level off, the rankings begin steadily, if slowly, to converge again. By the early 1960's, the two schedules are in substantially greater agreement than they were ten years earlier.

Despite this improvement, however, a corporation's salary and bonus scale has not for some time been a truly satisfactory index of its overall compensation policy vis-à-vis other firms. Correlation coefficients on the order of .4 to .6 do not, after all, imply a very close relationship. Accordingly, while these results are markedly better than those generated by a comparison of rates of growth they still fall short of yielding a value for  $\rho$ —of, say, .9 or higher—which, in the view here, would suggest that the salary and bonus and total compensation rankings are in fact sufficiently alike that the former could confidently be used as a proxy for the latter.<sup>13</sup> Any empirical study which, either explicitly or implicitly, treats the two as interchangeable should therefore be suspect.

### *Company Growth and Compensation Growth*

If, then, for many of the companies in the present sample, the policies which determine the direct current remuneration of the senior executive of the firm seem to create a rather different pattern of rewards than those which establish the amount of his aggregate remuneration, the next logical question is whether there may exist some systematic relationship between either of these items and the observable characteristics

<sup>13</sup> By, for example, the shareholders of a firm who were interested in appraising its executive compensation policy relative to other firms.

of the individual company. Consider this question first in terms of secular changes in the relevant quantities: Do the most rapidly growing corporations also provide their top executives with the most rapid increases in compensation?

For this purpose, the firms in the sample were ranked according to their respective rates of growth in each of the five dimensions of company size tabulated earlier: assets, sales, before-tax profits, after-tax profits, and the total market value of their common stock. That set of rankings—and corresponding ones for the rates of growth in top-executive before-tax salary and bonus, after-tax salary and bonus, and total after-tax compensation—were constructed for the intervals 1940 to 1963, 1945 to 1955, and 1945 to 1963. Once again, in order to eliminate any possible problems with unusual compensation data for a single year, separate rankings obtained by substituting for the 1963 figures the pertinent 1960 through 1963 averages were also compiled. The rank correlation coefficients between the schedules for each of the three measures of growth in compensation and those for each of the five indexes of company growth were then calculated. The results are recorded in Table 31 (see page 242).

As was true of the comparisons above, the paired rankings agree least over the period 1945 to 1955. Indeed, in two instances the correlation coefficients, even though not significant, turn out to be negative, suggesting that during these years the more vigorous the firm's expansion, the *slower* its senior officer's remuneration increased. Perhaps the most plausible explanation for such poor results can be found simply in the chronology of postwar compensation policy developments. It was at about this time that corporations began to take advantage of those deferred and contingent rewards whose value to the individual executive is particularly dependent not only upon his personal circumstances—e.g., his age—when they are initiated but also upon what were then rather rapidly changing stock market conditions. Since experience with these devices had not yet stabilized, it is not unusual that we observe an erratic pattern among firms in the late 1940's and early 1950's. Whatever permanent relationships may exist between company characteristics and executive rewards are unlikely to be reflected very accurately in the data for this period.

On the other hand, there seems to be only scattered evidence of such

a relationship even in those comparisons which are concerned with rates of growth over what should be more suitable intervals of time. The remaining coefficients recorded display the "correct" sign, but just twelve of the sixty are significant at the .01 level. Averaging the data over several years again does not materially improve the comparisons. In the majority of cases, in fact, it reduces both the magnitude and the significance of the resulting coefficients. Apparently, any peculiarities that may be present in a particular year are not severe enough to require adjustment—or, perhaps more accurately, are not peculiarities at all.

The only generalizations worth attempting would seem to be the following:

1. The *total* compensation growth rankings correspond somewhat more closely to those of company growth rates than do either of the salary and bonus schedules.<sup>14</sup> Of the twelve correlation coefficients which are significant, eight are in the total compensation column.

2. All three indexes of compensation growth appear linked more to the rate of growth of a company's sales than to the other measures of its performance over time. In particular, a comparison with sales increases provides better results in every period than with the most frequently proposed alternative "explanatory" variable—company profits.

Even these conclusions, however, rest on fairly weak evidence, since the computations indicate at best only a very mild correspondence between the various rankings.

### *Company Size and Compensation Levels*

The story in terms of absolute magnitudes is rather different, as Table 32 records. Virtually every coefficient of correlation between the several measures of a company's size and its senior officer's rewards in a given year or term of years is significant at the .01 level.<sup>15</sup> In the case of the salary and bonus comparisons there is not a single exception—all

<sup>14</sup> Exceptions occur primarily among the suspect 1945-to-1955 comparisons.

<sup>15</sup> As was noted previously, the before-tax and after-tax salary and bonus rankings are identical at a *point* in time, and it is not necessary to develop two separate schedules here as it was for the growth rate computations.

TABLE 31  
 Growth in Top Executive Compensation vs. Employer Company Growth: Rank Correlation Results

Interval	Company Characteristic	Correlation with Before-Tax Salary and Bonus		Correlation with After-Tax Salary and Bonus		Correlation with Total After-Tax Compensation		Sample Size (n)	Critical t at .01 Level
		$\rho$	Computed t	$\rho$	Computed t	$\rho$	Computed t		
1940 to 1963	Assets	.228	1.536	.244	1.655	.481 <sup>a</sup>	3.599	45	2.416
	Sales	.449 <sup>a</sup>	3.292	.472 <sup>a</sup>	3.510	.477 <sup>a</sup>	3.558		
	Profits b.t.	.274	1.872	.294	2.015	.355 <sup>a</sup>	2.486		
	Profits a.t.	.245	1.656	.260	1.764	.277	1.887		
	Market value	.180	1.199	.188	1.258	.290	1.988		
1940 to 1960/63	Assets	.174	1.146	.218	1.450	.475 <sup>a</sup>	3.500	44	2.418
	Sales	.444 <sup>a</sup>	3.207	.466 <sup>a</sup>	3.416	.528 <sup>a</sup>	4.028		
	Profits b.t.	.287	1.941	.305	2.076	.354 <sup>a</sup>	2.453		
	Profits a.t.	.209	1.386	.208	1.378	.248	1.665		
	Market value	.158	1.034	.183	1.205	.318	2.171		
1945 to 1955	Assets	.071	0.496	.063	0.436	.036	0.253	50	2.406
	Sales	.084	0.583	.068	0.471	-.138	0.966		
	Profits b.t.	.143	0.998	.138	0.969	-.017	0.120		
	Profits a.t.	.180	1.265	.170	1.193	.092	0.640		
	Market value	.178	1.255	.178	1.255	.145	1.017		

1945	Assets	.248	1.701	.231	1.576	.376 <sup>a</sup>	2.688
to	Sales	.280	1.932	.270	1.857	.322	2.258
1963	Profits b.t.	.159	1.066	.163	1.098	.235	1.607
	Profits a.t.	.139	0.933	.139	0.930	.283	1.958
	Market value	.189	1.277	.186	1.258	.343 <sup>a</sup>	2.422
	Assets	.249	1.689	.183	1.223	.179	1.195
1945	Sales	.285	1.952	.224	1.504	.213	1.429
to	Profits b.t.	.253	1.712	.164	1.090	.155	1.028
1960/63	Profits a.t.	.261	1.774	.141	0.933	.174	1.162
	Market value	.276	1.883	.230	1.552	.213	1.433

<sup>a</sup> Denotes significance at the .01 level.

TABLE 32

Top Executive Compensation vs. Employer Company Size:  
Rank Correlation Results

Year or Period	Company Character- istic	Correlation with Salary and Bonus		Correlation with Total Compensation		Sample Size (n)	Critical t at .01 Level
		<i>r</i>	<i>t</i>	<i>r</i>	<i>t</i>		
1940	Assets	.529	4.278	.602	5.165	49	2.408
	Sales	.626	5.502	.642	5.746		
	Profits b.t.	.600	5.135	.664	6.091		
	Profits a.t.	.619	5.406	.670	6.638		
	Market value	.536	4.348	.622	5.448		
1945	Assets	.415	3.164	.281	2.026	50	2.406
	Sales	.417	3.182	.111	0.773		
	Profits b.t.	.467	3.662	.241	1.723		
	Profits a.t.	.449	3.479	.228	1.618		
	Market value	.438	3.376	.301	2.183		
1950	Assets	.577	4.889	.484	3.828	50	2.406
	Sales	.535	4.389	.478	3.769		
	Profits b.t.	.629	5.600	.563	4.724		
	Profits a.t.	.595	5.133	.525	4.273		
	Market value	.531	4.343	.462	3.606		
1955	Assets	.495	3.948	.432	3.223	50	2.406
	Sales	.483	3.825	.317	2.316		
	Profits b.t.	.702	6.835	.506	4.063		
	Profits a.t.	.636	5.715	.529	4.322		
	Market value	.563	4.714	.457	3.560		
1960	Assets	.598	5.166	.300	2.175	50	2.406
	Sales	.486	3.851	.349	2.581		
	Profits b.t.	.687	6.547	.484	3.832		
	Profits a.t.	.666	6.187	.455	3.543		
	Market value	.674	6.324	.529	4.321		
1963	Assets	.544	4.301	.465	3.480	46	2.414
	Sales	.407	2.951	.530	4.143		
	Profits b.t.	.710	6.679	.570	4.605		
	Profits a.t.	.625	5.313	.560	4.483		
	Market value	.674	6.048	.591	4.855		

(continued)

TABLE 32 (concluded)

Year or Period	Company Character- istic	Correlation with Salary and Bonus		Correlation with Total Compensation		Sample Size ( <i>n</i> )	Critical t at .01 Level
		<i>r</i>	t	<i>r</i>	t		
1940-49 Average	Assets	.559	4.622	.609	5.268	49	2.408
	Sales	.571	4.767	.453	3.480		
	Profits b.t.	.702	6.749	.638	5.686		
	Profits a.t.	.633	5.602	.638	5.673		
	Market value	.560	4.634	.567	4.721		
1951-55 Average	Assets	.563	4.721	.417	3.182	50	2.406
	Sales	.498	3.979	.322	2.357		
	Profits b.t.	.703	6.840	.503	4.029		
	Profits a.t.	.594	5.115	.538	4.425		
	Market value	.577	4.894	.473	3.717		
1956-60 Average	Assets	.514	4.153	.375	2.802	50	2.406
	Sales	.485	3.842	.366	2.721		
	Profits b.t.	.743	7.698	.497	3.965		
	Profits a.t.	.691	6.617	.506	4.060		
	Market value	.639	5.754	.569	4.789		
1960-63 Average	Assets	.578	4.641	.363	2.553	45	2.416
	Sales	.428	3.105	.423	3.058		
	Profits b.t.	.738	7.165	.563	4.465		
	Profits a.t.	.686	6.176	.512	3.904		
	Market value	.702	6.456	.586	4.736		
1955-63 Average	Assets	.574	4.594	.378	2.676	45	2.416
	Sales	.463	3.423	.298	2.046		
	Profits b.t.	.798	8.700	.478	3.572		
	Profits a.t.	.753	7.509	.469	3.483		
	Market value	.715	6.709	.493	3.717		

but four of the coefficients being significant at the .001 level.<sup>16</sup> It is, of course, inevitable that if the compensation rankings are in reasonable agreement with a schedule compiled on the basis of any one of the characteristics of the corporations in the sample, they will be found to agree with the schedules derived from each of the other four char-

<sup>16</sup> Which requires a value for t in excess of about 3.30 for samples of the size being considered here.

acteristics as well, since the latter are themselves highly correlated. It is therefore inappropriate in this context to attempt to single out a particular item as *the* explanatory variable for compensation policy. On the other hand, we do have available a substantial body of data from which it is possible to observe certain patterns. Without stretching the point too far, it should also be possible to suggest some conclusions from those patterns which provide at least a start in the direction of determining which of the attributes of the corporation seems the "best" predictor of the remuneration of its senior officer.

One feature of the calculations, for example, is the fact that, except in the year 1940, the degree of correspondence between the top executive salary and bonus rankings and those for each of the five indexes of company size is greater than between the latter and the same individuals' total compensation.<sup>17</sup> To the extent that there may be a causal relationship present, therefore, it seems to manifest itself more in terms of the current remuneration profile than as a determinant of over-all compensation levels.

A second, and complementary, phenomenon is the trend over time in the salary and bonus rankings toward somewhat greater agreement with the several company size schedules—reinforced by a similar shift in the opposite direction by the total compensation figures. In 1963, four of the five salary and bonus coefficients were higher than they were in 1940, but during the same interval, all five total compensation coefficients declined. While there are departures from both patterns in the intervening years, both appear valid in the long run.

Also of particular interest are the consistently better results obtained from a comparison of the two compensation measures with corporate profit rankings than with sales figures. For salary and bonus in ten of the eleven situations considered, both the before-tax and after-tax profit coefficients are greater than the sales coefficient, frequently by a wide margin. The exception again is in 1940, but the sales coefficients decline steadily thereafter. In the case of total compensation, *all* eleven pairs of profit coefficients exceed their sales counterparts. It is noteworthy that during the most recent years studied, however, the best set

<sup>17</sup> It does not make much difference either to this or succeeding conclusions whether we consider single years or averages over periods of years in the comparisons.

of figures in connection with total compensation is provided by a comparison of those data with the ranking of firms according to the aggregate market value of their common stock. Clearly, this trend is a consequence of the shift in emphasis within the pay package toward heavier reliance on rewards whose value to the executive depends on the market price behavior of his firm's shares.

Finally, the relationship between executive rewards and company size seems to have been weakest in 1945, with 1955 not far behind. Both outcomes can be explained by historical circumstances. In 1945 the effects of wartime restrictions on compensation increases were still being felt, even though the relative positions of the corporations in the sample in terms of sales, profits, assets, etc., had changed considerably because of wartime production. The problem in 1955, as we have seen, was the major change in corporate compensation policy which was then in the process of being consolidated. Despite these temporary discrepancies, however, it is clear that there *is* in general a strong connection between the size of a firm and its top executive's remuneration. The data further suggest, although more equivocally, that company profits are a somewhat better predictor of such payments, especially of salary and bonus levels, than are sales.

### *Evaluation*

Such an analysis, of course, is only a very limited first step in this area, and no more is claimed for it here than that. A truly comprehensive appraisal of the sources of differences among firms would have to include in a unified multivariate regression format the influence of a host of factors which were ignored in the paired ordinal comparisons employed above. Among the more important of these are likely to be:

1. Differences in the degree of risk associated with different lines of business.
2. Differences in the degree of governmental regulation of the firm's activities.
3. Differences in the profit cycle in various industries.<sup>18</sup>

<sup>18</sup> That is, if an executive's decisions at any point in time set in motion forces whose impact on the corporation's success are not felt until five or ten years

4. Differences among firms in the extent to which top management has an ownership interest in the company.

5. Differences in the nature of the job responsibilities of the men at the top of the organization.

6. Differences in the collective bargaining environment—and, hence, in the degree of concern with the *appearance* of senior executive pay levels.

Taken together, these factors may very likely be as influential as employer company size and profitability in determining the patterns of remuneration we observe. They must either be recognized or controlled for in whatever model of the compensation process is constructed, if the net effect of company size is to be properly appraised. Because such an effort would require the collection and interpretation of a substantial body of evidence which is not central to the focus of the current study, it will not be undertaken here. The correlation results tabulated on the preceding pages suggest some rough qualitative conclusions, but are hardly adequate to the objective indicated.<sup>19</sup>

### *Composition of the Pay Package*

Given information about the value of supplements to executive salaries and bonuses, it is also possible to seek an answer to a question which heretofore has been treated in only the most superficial manner: Is there a relationship between the size of a firm and the extent to which it

in the future, there is less reason for his remuneration to be linked to his firm's current performance than in situations where the payoff is more rapid.

<sup>19</sup>Among the attempts thus far made to "explain" executive compensation levels on the basis of company size and profitability are those of Roberts (*Executive Compensation*, Glenview, Ill., 1959) and McGuire, Chiu, and Elbing ("Executive Incomes, Sales, and Profits," *American Economic Review*, September, 1962, pp. 753-761). In both cases, the phenomenon of a high degree of correlation among the possible independent variables in the regression equations caused difficulties in deciding upon the "best" predictor of compensation. A more fundamental problem in connection with the usefulness of their analysis, however, is that neither effort dealt with any measures of the remuneration provided by deferred and contingent rewards. Only executive salaries and bonuses were considered—and, as has been made clear here, the latter constitute less than half the value of the relevant earnings.

utilizes deferred and contingent compensation arrangements to reward its executives? A mere census of the relative popularity of such devices among small and large firms is of little use, since not just their existence but their benefit structures are of concern. As it turns out, the data suggest that the larger and more profitable the firm, the more heavily it does in fact rely on supplemental compensation. The evidence is not overwhelming, however, and its interpretation is subject to certain qualifications.

The raw data themselves are worth calling attention to. Table 33 records the percentages which salary and bonus provided of the aggregate after-tax remuneration enjoyed, during the periods 1940 through 1949 and 1955 through 1963, by the men who were the highest-paid executives in each of the fifty companies in the sample. The two distributions are summarized in Chart 27. As can be seen, the percentages in the earlier period vary from 40.9 to 100, with a mean of 75.6 and a standard deviation of 16.9. The distribution is mildly bimodal, observations clustering both in the area of 55 to 65 and 90 to 100 per cent. In recent years the figures run from as low as 13.7 up to 82.5 per cent. The mean of the latter distribution, which has a pronounced mode in the region of 35 to 45 per cent, is 44.4, and its standard deviation 16.4 per cent.

The policy differences among the firms depicted are therefore quite substantial within both intervals, the dispersion being slightly less in absolute terms in the later period but considerably larger in relation to the then-lower mean. In each case, the range of values tabulated is sufficient to make a comparison with company size meaningful, and the fact that the data represent aggregate figures over two decade-long intervals, at opposite ends of the time during which most firms' compensation policies seemed to be in transition, should permit some confidence that the long-run objectives of those policies are accurately characterized.

When the corporations listed are ranked according to the percentage of total after-tax compensation which supplements to salary and bonus provided for their executives during the two time periods, and these rankings are compared with those derived from each firm's average assets, annual sales, etc., over the same periods, the following results are obtained:

## EXECUTIVE COMPENSATION

Interval	Index of Company Size	Correlation with Relative Importance of Supplements to Salary and Bonus		Critical t at .01 Level
		$\rho$	t	
1940-49	Assets	.395	2.950	2.408 ( <i>n</i> = 49)
	Sales	.222	1.561	
	Profits, b.t.	.323	2.340	
	Profits, a.t.	.356	2.612	
	Market value	.275	1.962	
1955-63	Assets	.263	1.788	2.416 ( <i>n</i> = 45)
	Sales	.133	0.880	
	Profits, b.t.	.326	2.263	
	Profits, a.t.	.314	2.171	
	Market value	.351	2.460	

While only three of the coefficients are significant at the level indicated, all are comfortably positive, and it does appear likely that there is a direct, if not very strong, relationship present.

One feature of the comparisons which duplicates the pattern observed in connection with absolute levels of remuneration is the evidence that both measures of employer-company profits are better guides to the composition of the pay package than are company sales. The differences in the coefficients are quite sizeable in each of the two time periods considered. A second, and not unexpected, phenomenon is the improvement over time in the performance of the market value of a firm's common stock as a predictor of the extent to which it makes use of deferred and contingent rewards. This trend, of course, is simply a reflection of the fact that nowadays the value of many of those rewards depends directly on stock price movements.

Our interpretation of these results, however, must be hedged. Even if we believe that the degree of correspondence shown between the several sets of rankings implies causation somewhere along the line, it could well be that the underlying stimulus is not company size or profitability per se, but another attribute of the firm which happens to be related to both. An example might be the possibility that the larger the corporation, the less likely is an individual executive to be among its major shareholders. In order to counter that situation and encourage

TABLE 33

Salary and Bonus as a Per Cent of Total After-Tax Compensation.  
by Company

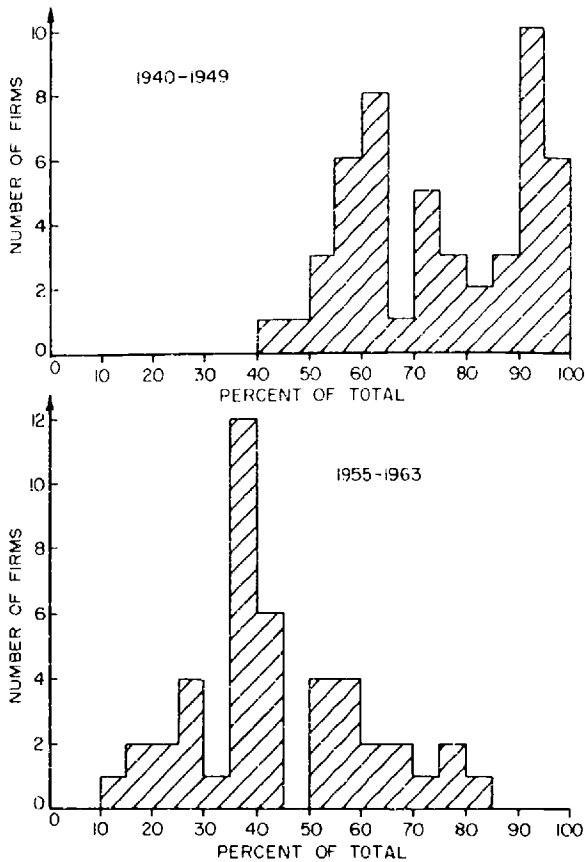
Company Number	Salary and Bonus		Company Number	Salary and Bonus	
	1940-49	1955-63		1940-49	1955-63
1	52.8	69.9	28	74.9	29.2
2	93.6	43.0	29	60.6	—
3	80.3	39.4	30	63.2	24.8
4	86.4	28.1	31	57.4	39.4
5	56.8	25.9	32	91.1	50.7
6	53.9	55.7	33	85.9	35.8
7	88.6	—	34	100.0	35.0
8	64.1	—	35	51.7	—
9	91.5	45.5	36	79.0	82.5
10	62.5	74.2	37	94.8	57.2
11	60.7	41.6	38	100.0	19.2
12	74.1	50.5	39	64.9	27.2
13	100.0	66.7	40	97.6	40.5
14	100.0	—	41	94.0	43.2
15	100.0	16.4	42	65.7	39.1
16	79.4	37.4	43	58.3	77.8
17	55.5	24.2	44	58.7	52.3
18	61.2	57.9	45	47.5	36.4
19	76.8	38.0	46	91.1	56.1
20	90.7	39.5	47	—	33.1
21	93.1	13.7	48	81.3	62.4
22	93.8	44.2	49	71.4	52.6
23	64.6	35.4	50	71.6	44.5
24	94.6	62.2			
25	40.9	37.2	$\mu$	75.6	44.4
26	58.4	37.2	$\sigma$	16.9	16.4
27	70.1	77.0	$\sigma/\mu$	.223	.370

a closer identification by him with shareholder interests, the large firm may feel more impelled to include in its compensation package such instruments as stock options and profit-sharing plans through which a substantial ownership position can be attained by the executive.

Perhaps another possibility is that the larger firm may simply be

CHART 27

*Distribution of Salary and Bonus as a Percentage of Total After-Tax Compensation, 1940-49 and 1955-63*



more sophisticated in its compensation planning and more alert to the desirability of the various supplements which our tax laws have come to sanction.<sup>20</sup> Whether this argument is as credible in the context of a sample consisting entirely of very large corporations as it would be if we were dealing with a broader range of company sizes is, of course, questionable.

The mechanics of certain aspects of the compensation process suggest

<sup>20</sup> See Appendix M for a related discussion.

still a third explanation. If, as is usually the case, the formula for establishing the benefits due an executive under, say, his firm's pension plan is expressed in terms of his before-tax salary, the after-tax value of those benefits will be more important to him in relation to after-tax salary at successively higher salary levels. The same will be true of any supplemental compensation items that are awarded in proportion to current remuneration but taxed at lower rates.<sup>21</sup> If, then, it turns out that top executive salaries and bonuses are directly related to company size, the proportion of total after-tax compensation supplied by deferred and contingent rewards can be expected to follow suit, even though every firm in the sample might adopt similar benefit *formulas* for those devices. Clearly, every firm does not do so, and we find a much greater degree of agreement between the salary and bonus and company size rankings than between the latter and salary and bonus percentages.<sup>22</sup> To the extent that pensions and other supplemental pay plans do tend to become standardized among firms, however, the pattern indicated will develop, and it may explain at least part of the relationship we observe.<sup>23</sup>

The real issues in this connection may therefore involve a variety of factors, only some of which are manifestations of intentional policy decisions by the firm. Whatever the cause, it does appear that the relative importance of deferred and contingent rewards increases with company size and profitability, but that tendency also appears to be rather mild.

### *The "Best" Predictor of Compensation Levels*

In examining the data for these rankings it became evident that there is one attribute of the firm which provides an extremely good basis for

<sup>21</sup> The number of shares granted under a stock option, for example, is often a function of the optionee's salary.

<sup>22</sup> Differences in such factors as the ages of the executives involved and the manner in which they exercise their stock options also give rise to variations in the value of noncurrent rewards which are not present in connection with salaries.

<sup>23</sup> Another possibility which should not be neglected is that cause-and-effect may run in just the opposite direction from that implied here. It might be argued that those firms with high sales, profits, and equity market values enjoy that status *because* they make extensive use of deferred and contingent rewards of the type whose value to the executive depends on favorable stock market reaction to management's decisions. Officials in such firms are therefore given a particular incentive to perform their duties effectively, and they react accordingly.

predicting its standing in the sample in terms of the aggregate remuneration enjoyed by its top executive. Unfortunately, however, this discovery does not really help much in understanding *why* things are as they are, and for that reason the relationship observed is more a curiosity than a useful analytical tool. The item referred to is simply the percentage of the total value of the firm's top executive compensation package which is accounted for by supplements to salary and bonus. A ranking of the corporations in the sample according to that percentage for any given period—especially recent ones—corresponds almost exactly to the schedule obtained by ranking them in order of the absolute magnitude of their senior officers' aggregate remuneration. Consider the following correlation results:

RANK BY SUPPLEMENTS TO SALARY AND BONUS AS A  
PER CENT OF ALL COMPENSATION VS. RANK BY SIZE  
OF TOTAL PAY PACKAGE

Interval	<i>n</i>	$\rho$	Computed <i>t</i>	Critical <i>t</i>	
				.01 Level	.00001 Level
1940-49	49	.756	7.929	2.408	4.744
1951-55	50	.893	13.726	2.406	4.733
1956-60	50	.889	13.422	2.406	4.733
1960-63	45	.963	23.557	2.416	4.793
1955-63	45	.932	16.809	2.416	4.793

The importance of deferred and contingent arrangements is well illustrated by these comparisons. The firms that have the highest over-all pay scales are precisely those which emphasize supplements to salary and bonus most heavily. In fact, if one were going to ignore certain payments in a study of intercorporate patterns of managerial remuneration he would be better advised to forget about salary and bonus and concentrate on the rest of the pay package rather than the reverse. While intriguing, this conclusion of course leaves us somewhat short of being able to explain or even predict why the firm chooses, or feels compelled, to employ deferred and contingent rewards to the extent it does. We can, in effect, now state with great confidence that corporations which have provided their top officials with high levels of earnings have done so almost entirely by means other than salary and bonus, but we still are not in a position to rationalize that result.

*Extrapolating the Results*

As was indicated at the beginning of the chapter, the cross-sectional comparisons we have been considering are based on compensation data which describe the experience of only the highest-paid executive in each of the corporations studied. The focus was so limited out of a desire to include in those comparisons as many of the fifty companies in the original sample as possible. Given the necessity of operating under that constraint, the question arises as to whether the various patterns we observe would have been duplicated had it been possible to extend the analysis to the full five-man senior executive group from which the historical profile recorded in previous chapters was drawn.

Some evidence to support an affirmative answer was cited above. We saw that the correlation coefficients obtained by comparing the ranking of the firms in the sample according to the total after-tax compensation of their highest-paid official and according to that for their five highest-paid together were on the order of .95 and significant at the .0001 level. A similar comparison of the other pertinent dimensions of the pay package yields correspondingly high coefficients, as Table 34 records. In the great majority of cases it does seem that the experience of a firm's top executive vis-à-vis that of his peers in other companies is also a reliable indicator of the relative standing of his four closest subordinates. It therefore seems likely that the conclusions suggested here would have been changed very little if the analysis could have been broadened to encompass the latter's rewards as well.

*Summary*

An examination of the differences in top executive compensation policy among the firms in the sample reveals that there exist within the composite historical experience depicted earlier significant variations in the size and structure of the relevant pay packages. The magnitude of these variations is, however, proportionately less than the range of size and profitability exhibited by the firms themselves—a phenomenon which appears to be growing stronger over time. As might be expected, there is a greater dispersion in the distribution of executives' total compensation than in that of their salaries and bonuses.

TABLE 34

Compensation of Highest-Paid Executive vs. Compensation of Five Highest-Paid Together: Rank Correlations Across Firms

	Year or Period	n	$\rho$	Com-puted t	Critical t	
					.01 Level	.0001 Level
Rank by salary and bonus levels	1940	39	.878	11.168	2.432	4.129
	1945	42	.924	15.236	2.423	4.094
	1950	44	.938	17.534	2.418	4.076
	1955	34	.942	15.984	2.449	4.201
	1960	19	.933	10.719	2.518	4.493
Rank by rate of growth of before-tax salary and bonus	1940-60	16	.894	7.470	2.552	4.648
	1945-55	29	.904	10.983	2.473	4.299
Rank by rate of growth of after-tax salary and bonus	1940-60	16	.768	4.482	2.552	4.648
	1945-55	29	.894	10.344	2.473	4.299
Rank by rate of growth of total after-tax compensation	1940-60	16	.871	6.621	2.552	4.648
	1945-55	30	.948	15.825	2.467	4.275

Note: Rankings not carried through 1963 because of small sample size which results.

A comparison on a company-by-company basis of the rate of growth of executive rewards and the rate of growth of corporate assets, sales, profits, and common stock market values reinforces the conclusion drawn from the aggregate data that top executive remuneration has not kept pace with increases in employer-company size. We are able to find only scattered instances in which the compensation associated with the highest-paid position in a firm grew as rapidly as even the most sluggish index of its own expansion.

A second contention offered previously is also strengthened. Much was made of the point that an executive's salary and bonus were not likely to be very useful in predicting the amount of his total compensation. The low correlation coefficients obtained by comparing the aggregate and current remuneration rankings for the sample provide clear support for that hypothesis. The difference between the two criteria is especially marked in connection with rates of growth over the time period studied. Those corporations in which executive salaries and

bonuses are at a high level are very frequently not among the more generous in terms of total compensation.

There is, on the other hand, considerable evidence that top executive rewards and employer-company size are directly related. We find that the firm's profits are a somewhat better guide to its pay scale than are its sales—an advantage which has become more marked in recent years. Because of the possibly significant influence of a series of external factors which could not feasibly be included in the analysis, however, this conclusion must be regarded as suggestive rather than definitive. While the extent to which a firm makes use of deferred and contingent remuneration for its senior executives also appears to increase with company size, that increase is fairly mild and can, in part at least, be explained by certain "technical" aspects of the compensation process.