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RESULTS OF THE STUDY

There are a number of alternative measures of the use of the various depreciation methods authorized in the Internal Revenue Code of 1954. One such is the amount of property to which each of the methods is applied. Another is the amount of depreciation generated under each method and the effect of the adoption of acceleration on the total amount of depreciation allowances. A third is the number of taxpayers with business income electing to use each method. In the following discussion, we have attempted to apply these measures with respect to industry groupings, types of assets, size of company, and/or service life of property.

Very briefly, we found that close to half of the total depreciable facilities acquired by corporations since 1953 were in accelerated method accounts in the taxable year 1959. A larger proportion of the property of big corporations than of small ones was being depreciated under the accelerated methods in 1959, more of the facilities in manufacturing than in other industry divisions were being so depreciated, and a somewhat larger proportion of production equipment and of structures than of other types of property was in rapid depreciation accounts (Tables 25, 27, 28). Large manufacturing corporations (those with total assets of $25 million or more) had 66.5 per cent of their post-1953 facilities in accelerated depreciation accounts (Table 30).

Close to 40 per cent of total corporate depreciation allowances in 1960 were accounted for by the accelerated methods (Table 15), a substantial increase over the 7 per cent accounted for by these methods in 1954. On facilities acquired since 1953, a little more than one-half of corporation depreciation allowances was computed by use of the accelerated methods in 1959 (Table 36). Among sole proprietorships in the same year, a much smaller proportion of total allowances was computed by methods other than straight-line. Partnerships, however,

were more in line with corporations in this respect (Table 17). It may be assumed that some gain in this proportion had occurred among unincorporated businesses. Taking all businesses together, about 29 per cent of total depreciation charges in 1959 were computed under accelerated methods (Tables 17 and D-6).

In the taxable years 1959 and 1960, a large number of business concerns were using the accelerated depreciation methods, although these companies represented small proportions of their respective populations (Tables 4 and 11). The proportion of corporation income taxpayers using an accelerated method increased markedly between 1954 and 1960 (Table 4), and it is fair to surmise that use of accelerated methods by unincorporated business income taxpayers had also increased during these years. Nevertheless, at least two-thirds of the business income taxpayers in 1959 and 1960 were using only straight-line depreciation for tax purposes (Tables 4 and 11). The proportion of companies using only the straight-line method has very likely continued to shrink since 1959–60. The accelerated methods were used by a larger proportion of corporations than of unincorporated businesses, of big companies than of little companies (no matter the form of organization), and of corporations and partnerships in manufacturing than in other industry groups (Tables 6, 10, 12, 13, A-2, and A-3). About 58 per cent of manufacturing corporations with total assets of $100 million or more were using the declining-balance method, and use of SYD was reported on the returns of about an equal percentage of such companies. Even greater proportions of the returns of the largest companies in other industrial divisions indicated use of the declining-balance method (Table A-1).

Our rough calculations indicate that use of the accelerated depreciation methods—declining-balance and SYD—resulted in total corporate depreciation allowances in the taxable year 1959 about $2.4 billion greater than would have been claimed had these methods not been available. About 66 per cent of this excess is attributable to companies with total assets of $25 million or more. About 55 per cent of the excess is in the manufacturing industry division and about 19 per cent is in public utilities (Table 40).

The additional corporation depreciation allowances generated by the use of accelerated methods resulted in estimated tax savings of $1.3 billion in 1959. We estimate that as a result of these tax savings, cor-

porate investment in depreciable facilities in that year was $1.3 billion to $5.7 billion greater than it would otherwise have been.

In the following discussion, we detail each of these findings. Our initial concern is with the number of business enterprises using either of the accelerated depreciation methods.

Number of Companies Using Accelerated Depreciation Methods

A good deal of information is available concerning the number of corporations using the accelerated depreciation methods in each of the years since these allowances were first authorized. In the case of unincorporated businesses, however, the information is limited to the single taxable year 1959.[1]

CORPORATIONS

Between 1954 and 1960, a substantial increase occurred in the proportion of the incorporated business population using the declining-balance depreciation method. This increase appears among companies of all sizes in all major industrial divisions. As shown in Table 4, this proportion more than tripled between 1954 and 1960, reaching almost 24 per cent in the latter year. In contrast, the proportion of companies using SYD increased only slightly between 1954 and 1955, when close to 7 per cent of corporate returns showed this method, and fell very slightly thereafter. Little change occurred in the proportion of returns on which straight-line depreciation appears; in 1954, over 97 per cent and in 1960 about 94 per cent of corporations used this method.

A comparison of Table 4 data, which were drawn from large samples of the corporate income tax returns for the respective years, with Table 5, based on small samples of returns of the largest corporations, shows that a much larger proportion of the big corporations used declining-balance and SYD. Moreover, the increase in the proportion using declining-balance was less pronounced, and that in the proportion using SYD sharper, among the largest companies than among corporations in general.

This suggests that most of the increase in the proportion of returns

[1] See pp. 6–8 above for a description of the data sources.

TABLE 4

Per Cent of Corporation Income Tax Returns Reporting Various Depreciation Methods, Taxable Years 1954, 1955, 1957, 1960

Depreciation Method	Per Cent of Returns on Which Method Appears			
	1954	1955	1957	1960
Straight-line	97.4	97.3	96.9	94.3
Declining-balance	7.6	11.3	14.6	23.9
Sum-of-the-years-digits	4.8	6.8	6.6	5.9
Units-of-production	0.2	0.2	n.a.	n.a.
Other methods	1.0	1.8	0.6	0.5
Straight-line only[a]	86.4	79.9	78.2	69.7

Source: Taxable years 1954 and 1955, U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959, Supplementary Depreciation Data from Corporation Income Tax Returns*, pp. 103 and 118; taxable years 1957 and 1960, U.S. Treasury Department, Internal Revenue Service, special tabulations.

Note: Details in any year will not add to 100.0 per cent, since more than one method of depreciation may appear on a return.

[a]Since the taxpayer is not limited to the use of only one method, the per cent of returns on which only the straight-line method was used is a minimum estimate, computed by subtracting the sum of the percentage frequencies for the various methods other than straight-line from 100 per cent. In effect, this procedure assumes that on any return in which, say, the declining-balance method appeared, no other method was used. Since this assumption is unrealistic, the resulting estimate understates the percentage of returns on which only straight-line was used.

using the declining-balance method is attributable to the increasing proportion of smaller companies adopting this method.

Additional evidence on this point is afforded by Table 6, showing the percentage change between the taxable years 1954 and 1960 in the proportion of returns, by size of total assets, reporting use of straight-line, declining-balance, and/or SYD. The percentage increase between these years in the proportion of returns showing declining-balance was greatest among corporations with total assets less than $100,000. For companies with total assets of $50 million or more, the increase was much less substantial than in all other size classes. Much more modest

TABLE 5

Per Cent of Returns of Large Corporations Reporting Various Depreciation Methods, Taxable Years 1956, 1958, 1959

Depreciation Method	1956		1958		1959	
	No. of Returns	Per Cent	No. of Returns	Per Cent	No. of Returns	Per Cent
Total	1,017	–	912	–	912	–
Straight-line	987	97.1	892	97.8	892	97.8
Declining-balance	450	44.2	463	50.8	491	53.8
Sum-of-the-years-digits	359	35.3	356	39.0	366	40.1
Units-of-production	83	8.2	92	10.1	96	10.5
Other methods	131	12.9	181	19.8	225	24.7

Source: Taxable year 1956, Joint Economic Committee, *The Federal Revenue System: Facts and Problems 1959*, Joint Committee Print, 86th Congress, 1st session, p. 205; taxable years 1958 and 1959, U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns*, p. 116.

Note: Details will not add to totals because a business may use more than one method in depreciating its assets.

increases in the proportion of returns showing use of SYD appear in each size class; differences in the magnitude of increases among size classes are also much less than in the case of declining-balance.

From one industrial division to another, relatively little difference is seen (see Table 7), in the percentage increase in the proportion of returns using the declining-balance method, compared with the differences among asset size classes. On the other hand, the percentage increase in returns showing SYD varied somewhat more among industry divisions than among size classes. The greatest percentage increases in returns using these methods appears in the agriculture and the finance divisions.

The relative frequency of returns showing use of straight-line depreciation decreased only very moderately between 1954 and 1960, as the proportion of companies using declining-balance increased. There are two principal reasons why this decrease was not more substantial. In the first place, as noted earlier, the Internal Revenue Code of 1954 authorized use of the declining-balance, SYD, or equivalent methods

TABLE 6

Percentage Change, 1954 to 1960, in Proportion of Corporation Income Tax Returns Reporting Selected Methods of Depreciation, by Size of Total Assets

Size of Total Assets (thousand dollars)	Straight-Line			Declining-Balance			Sum-of-the-Years-Digits		
	1954	1960	Per Cent Change	1954	1960	Per Cent Change	1954	1960	Per Cent Change
Under 100	97.4	94.6	–2.9	4.6	16.6	260.9	2.2	2.8	27.3
100-500	97.8	93.6	–4.3	10.0	30.9	209.0	6.4	7.8	21.9
500-1,000	97.7	94.0	–3.4	14.6	38.6	164.4	10.2	12.3	20.6
1,000-5,000	96.7	94.3	–2.5	16.5	40.7	146.7	12.5	16.2	29.6
5,000-10,000	98.2	96.9	–1.3	14.0	37.8	170.0	14.6	19.3	32.2
10,000-50,000	98.5	97.5	–1.0	16.4	37.5	128.6	17.8	21.0	18.0
50,000-100,000	98.0	98.0	0.0	21.9	40.9	86.8	19.3	28.9	49.7
100,000 and over	97.8	97.2	–0.6	24.0	46.7	94.6	28.4	34.8	22.5
Total	97.5	94.3	–3.3	7.8	23.9	206.4	4.9	5.9	20.4

Source: Table A-1.

Note: Frequencies for 1954 differ from those in Table 4, which includes data from all returns including those without balance sheets.

TABLE 7

Percentage Change, 1954 to 1960, in Proportion of Corporation Income Tax Returns Reporting Selected Methods of Depreciation, by Industry Division

Industry Division	Straight-Line			Declining-Balance			Sum-of-the-Years-Digits		
	1954	1960	Per Cent Change	1954	1960	Per Cent Change	1954	1960	Per Cent Change
Agriculture, forestry, and fisheries	97.9	94.7	–3.3	8.3	27.1	226.5	3.6	5.3	47.2
Mining	95.2	94.7	–0.5	11.2	29.5	163.4	5.5	7.1	29.1
Construction	98.3	95.5	–2.8	8.7	26.7	206.9	5.9	6.0	1.7
Manufacturing	98.4	96.6	–1.8	10.0	29.9	199.0	8.6	10.5	22.1
Transportation, communication, electric, gas, and sanitary services	97.2	94.3	–3.0	7.8	23.4	200.0	4.4	5.5	25.0
Trade	97.9	95.6	–2.3	6.8	21.4	214.7	4.3	4.8	11.6
Finance, insurance, and real estate	96.3	91.1	–5.4	7.0	22.3	218.6	2.9	4.4	51.7
Services	97.3	93.4	–4.0	8.1	23.6	191.4	4.4	5.5	25.0
All industries	97.5	94.3	–3.3	7.8	23.9	206.4	4.9	5.9	20.4

Source: Table A-1.

only with respect to new properties newly acquired by the taxpayer after 1953. Companies formed and acquiring depreciable facilities prior to 1954, therefore, were substantially limited to the use of straight-line depreciation. In the taxable year 1959, about 53 per cent of the active corporations filing tax returns had been incorporated prior to 1954. It may be assumed that most of these companies in the taxable year 1960 had some facilities for which the accelerated methods were not available. Moreover, among the companies organized and acquiring assets after 1953, some will have acquired some secondhand assets and will have had them on hand in depreciable asset accounts as late as 1960. Secondly, the use by a taxpayer of one depreciation method for one group of facilities in no wise precludes his simultaneously using another method for another group of assets. It is evident that a very large proportion of the companies incorporated after 1953 did indeed use straight-line for some of their facilities.

For each of the years in question and in both of the samples, between 94 and 98 per cent of the returns show the use of straight-line depreciation. In the sample of large companies there is a slight increase between 1956 and 1958 and no change between 1958 and 1959 in the percentage of returns showing the use of this method.[2] It seems fair to assume that virtually all of these very large companies were in existence prior to 1954 and, in the taxable years 1956, 1958, and 1959, held depreciable facilities acquired before 1954. In this event, of course, they would have to show the use of straight-line depreciation.[3] In the broader samples, on the other hand, the percentage of returns showing the use of straight-line depreciation decreases from 97.4 per cent in 1954 to 94.3 per cent in 1960. These samples almost certainly include a much larger proportion of companies which are new since 1953.[4] Conceivably, each such new company might have chosen to use only the accelerated depreciation methods; indeed, it may appear surprising that

[2] The 1956 sample is not identical with that for the years 1958 and 1959. The differences in the sample population probably account for the increase in this percentage between 1956 and 1958.

[3] Actually, this overstates the constraint since the statute prior to 1954 did not explicitly limit the taxpayer to the use of the straight-line method. The exaggeration is likely to be slight, however.

[4] One indication is the increase in the size of the sample between 1957 and 1960. The increase in sample size between the years 1954 and 1955, and between 1955 and 1957, can be attributed only in much smaller part to the increase in the corporate population; a much larger part of the increase is attributable to changes in the sample.

the decrease in the percentage of returns using the straight-line method was no greater than that shown in Tables 4 and 6. Of course, not all new corporations would choose to use only the accelerated methods.

The proportion of returns showing the straight-line method appears to have decreased at a somewhat faster rate between 1957 and 1960. This suggests that a more rapid decline in this proportion may be developing.

A striking fact revealed in Table 4 is that on a very large proportion of all returns, only straight-line depreciation was used as late as 1960. Since any company may use different depreciation methods for different assets, the data as presented do not permit precise computation of the number of returns on which only one of the various methods was used. By subtracting from the total number of returns the number on which some method other than straight-line is used, however, a minimum estimate of the number using only the straight-line method is obtained. Of course, the actual number using only this method is likely to be larger than indicated by this computation. Making some rough allowance for the use of more than one method on a return, it seems clear that a large proportion, probably between 70 and 75 per cent, of all corporate returns confined the computation of annual depreciation allowances to the straight-line method in the taxable year 1960.

On the other hand, Table 4 also shows that the minimum proportion of returns using only straight-line declined significantly from 86.4 per cent in 1954 to 69.7 per cent in 1960. As Table 8 shows, this decrease occurred in every size class, most sharply among corporations with total assets of $50 million and over. Presumably this trend continued after 1960, suggesting that a considerably smaller proportion of returns would now show the use only of straight-line depreciation.

Table 8 also shows that among big corporations, only a relatively small proportion of companies confined their depreciation computation to the straight-line method. In the case of corporations with total assets of $100 million or more, which accounted for 59.6 per cent of total depreciable facilities of corporations in 1960, the minimum proportion of returns showing only straight-line in that year is 7.6 per cent.

Tables 6 and 8 suggest that use of the accelerated methods is associated with company size. Examination of Table A-1, presenting the relative frequencies of returns for 1954 and 1960 by depreciation method, major industry division, and size of total assets, reveals that

TABLE 8

Percentage Change, 1954 to 1960, in Proportion of Corporation Returns on Which Only Straight-Line Depreciation Was Used, by Size of Total Assets

Size of Total Assets (thousand dollars)	Proportion of Returns Using Only Straight-Line		
	1954	1960	Per Cent Change
Under 100	92.3	80.3	−13.0
100-500	82.4	60.8	−26.2
500-1,000	73.6	48.4	−34.2
1,000-5,000	68.5	41.5	−39.4
5,000-10,000	68.4	40.6	−40.6
10,000-50,000	61.3	38.1	−37.8
50,000-100,000	52.5	23.5	−55.2
100,000 and over	39.0	7.6	−80.5
Total	86.1	69.7	−19.0

Source: Table A-1.

there is, indeed, a substantial positive association between size, as measured by total assets, and relative frequency of returns reporting the use of an accelerated method. Taking all industrial divisions together, the rank correlation with respect to 1960 returns between size class and proportion of returns reporting SYD is perfect; for declining-balance, the Kendall coefficient of rank correlation is .64, with a standard error of .38.

The rank correlation between the estimated minimum percentage of returns on which only the straight-line method was used and size of total assets is also perfect, taking all industries together.

There is evident in Table 9 some variability among industries in the association between size and relative frequency of returns on which declining-balance, SYD, or only straight-line depreciation appear. With respect to both SYD and straight-line only, the rank correlations are quite high in almost every industry. In the case of declining-balance, very low coefficients were found in the mining and in the finance, insurance, and real estate divisions, but very high coefficients are obtained in

TABLE 9

Rank Correlation of Size of Total Assets and Percentage of Returns on Which Declining-Balance, SYD, or Only Straight-Line Method is Shown, Corporations, 1960

Industry Division	Declining-Balance		Sum-of-Years-Digits		Straight-Line Only	
	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error
Agriculture	.73	.39	.87	.29	−.87	.29
Mining	.07	.50	.79	.31	−.79	.31
Construction	.90	.23	.90	.23	−.93	.19
Manufacturing	.93	.19	1.00	0	−1.00	0
Transportation, communication, sanitary services	.93	.19	.71	.35	−1.00	0
Trade	.79	.31	1.00	0	−1.00	0
Finance, insurance, real estate	.21	.49	1.00	0	−.93	.19
Service	.79	.31	.93	.19	−.93	.19
All industries	.64	.38	1.00	0	−1.00	0

Note: Coefficients of rank correlation in the case of declining balance in mining and finance, insurance, and real estate are not significant. Those for declining balance in agriculture and in all industries are significant at the 5 per cent level. All others are significant at the 1 per cent level.

all of the other industrial divisions. With these few exceptions, therefore, use of one or the other of the accelerated methods—as measured by relative frequency of returns—appears to be closely and positively related to company size.

Relatively little variability from one industry division to another in the proportion of returns showing an accelerated method is evident in Table 10. The proportion of returns showing declining-balance ranged from 21.4 per cent in trade to 29.9 per cent in manufacturing. For SYD, the proportion ranged from 4.4 per cent in finance, etc., to 10.5 per cent in manufacturing. The proportion of returns on which only straight-line depreciation was used ranged from 56.4 per cent in mining to 73.4 per cent in trade.

TABLE 10

Per Cent of Corporation Income Tax Returns Reporting Various Depreciation Methods, by Industry Division, 1960

Industry Division	Straight-Line	Declining-Balance	Sum-of-Years-Digits	Other Methods	Straight-Line Only
Agriculture, forestry, and fisheries	94.7	27.1	5.3	0.3	67.4
Mining	94.7	29.5	7.1	7.0	56.4
Construction	95.5	26.7	6.0	0.3	67.0
Manufacturing	96.6	29.9	10.5	0.9	58.7
Transportation, communication, and sanitary services	94.3	23.4	5.5	1.0	70.2
Trade	95.6	21.4	4.8	0.4	73.4
Finance, insurance, and real estate	91.1	22.3	4.4	0.3	72.9
Services	93.4	23.6	5.5	0.5	70.5
Not allocable	92.3	15.2	[a]	—	[a]
All industries	94.3	23.9	5.9	0.6	69.7

Source: U.S. Treasury Department, Internal Revenue Service, special tabulation.

Note: Details do not add to 100.0 per cent because frequently a business uses more than one depreciation method.

[a]Sampling variability too high to show separately.

The proportion of returns on which an accelerated method was used in 1960 does not appear to be associated with industry division. If indeed there were such an association, one would expect to find little variation in the ranking of an industry in each size class with respect to the proportion of returns showing an accelerated method. In fact, however, most industry divisions change ranks from one size class to another; no consistent pattern of variability from one industry to another appears within each size class. This is in contrast with the per cent of companies using an accelerated method, which varies quite regularly with asset size class.

UNINCORPORATED BUSINESSES

A relatively small proportion of unincorporated businesses indicated the use of either the declining-balance or the SYD method for the taxable year 1959, the single year for which such data are available. Among the 6,650,560 sole proprietorships showing depreciation methods, only 365,504 (5.5 per cent) used the declining-balance method, and SYD was indicated in the case of only 61,160 (.9 per cent) of sole proprietorships. A larger proportion of the partnerships used these methods; of the 765,428 firms, 81,785 (10.7 per cent) used declining-balance and 15,613 (2.0 per cent) used SYD (Table 11).

These proportions are markedly below those for corporations in 1960. Just as striking, however, is the much lower proportion of unincorporated than of incorporated businesses showing use of the straight-line method. Only 83.9 per cent of the sole proprietorships and 84.6 per cent of the partnerships indicated use of this method, compared with 94.3 per cent of the corporations in the following year.

In discussing the large proportion of corporations using the straight-line method in 1960, it was pointed out that over half of these companies were in existence prior to 1954 and probably still had on hand in the taxable year 1960 some facilities acquired prior to 1954. Such facilities were not eligible for the declining-balance or SYD methods, and by and large would be depreciated under the straight-line method. The noticeably lower proportion of unincorporated companies showing straight-line depreciation in 1959 might suggest, along the same line of reasoning, that a substantially smaller proportion of these companies were organized prior to 1954. No data bearing on this point are available in the case of sole proprietorships, but roughly 42.5 per cent of

TABLE 11

Per Cent of Sole Proprietorships and Partnerships Reporting Use of Various Depreciation Methods, 1959

Depreciation Method	Sole Proprietorships		Partnerships	
	Number	Per Cent	Number	Per Cent
Straight-line	5,582,253	83.9	647,143	84.6
Declining-balance	365,504	5.5	81,785	10.7
Sum-of-the-years-digits	61,160	0.9	15,613	2.0
Other methods	336,050	5.1	124,632	16.3
Method not described	628,437	9.5	34,679	4.5
Straight-line only	5,259,409	79.1	508,719	66.5
Total	6,650,560		765,428	

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns*, pp. 34, 92-93.

Note: Details do not add to totals because frequently a business uses more than one method in depreciating its assets.

the partnerships were organized before 1954.[5] The difference between the proportion of partnerships and that of corporations reporting use of the straight-line method is nearly the same as the difference between the respective proportions of these companies organized before 1954. This suggests, but of course does not establish, that the difference in the proportion of the respective populations reporting use of straight-line can be explained by the difference in the proportion of companies organized before the accelerated depreciation methods became available.

At least four-fifths of the sole proprietorships and two-thirds of the partnerships were using only the straight-line method in computing depreciation in the taxable year 1959 (Table 11). In the case of the former, this proportion is substantially greater than among corporations, but, surprisingly, a somewhat smaller minimum percentage of partnerships than of corporations used only straight-line. Moreover, in

[5] U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959–60, U.S. Business Tax Returns*, p. 85.

the case of both sole proprietorships and partnerships, the proportion of firms using only straight-line appears to be quite low, in view of the small frequencies of these companies showing use of an accelerated method. The explanation lies in the fact that the estimate is made by subtracting from 100 per cent the proportions for all methods other than straight-line and that relatively large proportions of unincorporated businesses, particularly of partnerships, reported using methods other than straight-line, declining-balance, or SYD (Table 11). No breakdown of these "other methods" is available, but the much larger proportion of sole proprietorships in the mining than in other industry divisions suggests that the principal other method is units-of-production.[6] Among partnerships, similarly, much larger proportions of the companies in mining and in agriculture than in other divisions reported using "other methods," again strongly suggesting that the method used was units-of-production. Even so, however, the proportion of unincorporated companies in each division reporting use of other methods substantially exceeded the corresponding proportions among corporations. Particularly among partnerships, at least 13.6 per cent of the companies in each industry division indicated use of "other methods," and in agriculture and in mining, these proportions were, respectively, 26.2 per cent and 22.6 per cent (Table A-3). In addition, 9.5 per cent of the sole proprietorships and 4.5 per cent of the partnerships indicated depreciation charges without describing the methods used in computing them (Table 11).

Among both sole proprietorships and partnerships, there is a positive association between company size (as measured by amount of business receipts) and proportion of companies using an accelerated method (Tables 12 and 13). Among sole proprietorships, there is perfect rank correlation between size of business receipts and proportions of companies using declining-balance and SYD, taking all industries together. Unfortunately, the data are too thin in several of the industry divisions

[6] In the units-of-production depreciation method, the annual depreciation charge is computed by applying to the depreciable cost of the facility the ratio of the number of units of output in the year to the estimated lifetime capacity of the facility. This method is not related to the facility's service life measured in years. It is more extensively used for facilities in extractive industries where the life of a deposit is frequently more meaningfully measured in terms of total potential output than in years. It is also used relatively frequently in connection with timber cutting operations. Accordingly, we should expect the use of this method to be relatively great in the mining and the agriculture divisions.

TABLE 12

Per Cent of Sole Proprietorships Reporting Use of Various Depreciation Methods, by Size of Business Receipts, 1959

Size of Business Receipts (dollars)	Straight-Line	Declining-Balance	Sum-of-Years-Digits	Other Methods	Method Not Described	Straight-Line Only
Under 10,000	84.4	3.1	0.5	4.7	9.1	82.6
10,000 under 20,000	83.8	6.4	1.0	5.0	9.4	78.2
20,000 under 30,000	84.1	7.7	1.1	5.4	10.0	75.8
30,000 under 50,000	83.4	8.8	1.4	5.1	9.9	74.8
50,000 under 100,000	84.0	11.5	2.1	5.7	10.4	70.3
100,000 and over	81.0	15.5	3.2	8.1	11.6	61.6
Receipts not reported	75.8	2.5	0.7	5.1	10.6	81.1
Total	83.9	5.5	0.9	5.1	9.5	79.1

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns*, p. 34.

Note: Details do not add to 100.0 per cent because frequently a business uses more than one depreciation method.

TABLE 13

Per Cent of Partnerships Reporting Use of Various Depreciation Methods, by Size of Business Receipts, 1959

Size of Business Receipts (thousand dollars)	Straight-Line	Declining-Balance	Sum-of-Years-Digits	Other Methods	Method Not Described	Straight-Line Only
Under 10	84.2	6.7	1.0	14.7	4.0	73.6
10 under 20	83.3	7.6	1.2	15.8	3.9	71.5
20 under 30	83.8	8.5	1.5	15.1	3.8	71.1
30 under 50	84.4	9.5	1.6	15.8	4.1	69.0
50 under 100	86.5	11.8	2.0	15.4	4.2	66.6
100 under 200	84.0	14.3	2.6	16.8	5.5	60.8
200 under 500	82.7	20.0	5.0	22.7	6.3	46.0
500 under 1,000	95.8	32.7	9.1	30.7	9.6	17.9
1,000 under 5,000	85.7	35.8	10.0	27.1	11.7	15.4
5,000 and over	93.3	58.4	19.2	10.3	48.8	[a]
Receipts not reported	88.4	10.1	4.5	12.7	5.3	67.4
Total	84.6	10.7	2.0	16.3	4.5	66.5

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns*, pp. 92-93.

Note: Details do not add to 100.0 per cent because frequently a business uses more than one depreciation method.

[a]Subtracting the sum of the proportions for declining-balance, sum-of-years-digits, other methods, and methods not described from 100 per cent results in a negative proportion.

to permit computation of such coefficients. However, perfect correlations with respect to per cent of companies showing declining-balance and size are found in agriculture, construction, and services, and high coefficients are observable in trade and in transportation, communication, and sanitary services. For SYD, a perfect rank correlation is found in agriculture; coefficients could not be computed or were statistically insignificant in the other industry divisions (Table A-2). Among partnerships, high coefficients are found in every division except transportation, communication, and sanitary services (in the case of declining-balance), and (for SYD) in agriculture and mining (Table 14).

Among the larger partnerships, the relative frequency of firms show-

TABLE 14

Rank Correlation of Size of Business Receipts and Percentage of Returns on Which Declining-Balance or SYD Is Shown, Partnerships, 1959

Industry Division	Declining-Balance		Sum-of-Years-Digits	
	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error
Agriculture	.96	.13	.36[a]	.47
Mining	1.00	0	.20[a]	.62
Construction	.91	.18	.81	.32
Manufacturing	.91	.18	1.00	0
Transportation, communication, and sanitary services	.51[a]	.38	.80[b]	.38
Trade	1.00	0	1.00	0
Finance, insurance, and real estate	.96	.13	.87	.22
Services	.91	.18	.96	.13
All industries	1.00	0	1.00	0

Source: Table A-3.

[a]Not statistically significant.

[b]Significant at the 5 per cent level. All other coefficients are significant at the 1 per cent level.

ing use of the declining-balance method was even greater than among the largest corporations (granted, there is a lack of strict comparability of the size classifications). On the other hand, even among the largest partnerships, a relatively small proportion of companies used SYD, whereas more nearly the same proportion of large corporations used SYD and declining-balance.

Little difference among industry divisions is evident in the proportions of sole proprietorships and partnerships using declining-balance or SYD (Tables A-2 and A-3). Moreover, within any given size-of-business-receipts class, there is, in general, little variation from one industry division to another in the proportion of companies showing the use of declining-balance or SYD.

The high rank correlations found between company size and proportion of companies using an accelerated method, and the limited variability from one industry division to another, suggests that election to use an accelerated method was associated with size of the business and not with the industrial division in which it chiefly operated. This is the same surmise as in the case of corporations, but the data suggest it is even more strongly based for unincorporated businesses.

Amount of Depreciation

CORPORATIONS

Between the taxable years 1954 and 1960, total corporate depreciation allowances grew from an estimated $11.5 billion to about $22.2 billion (Table 15).[7] Declining-balance allowances increased from about $0.5 billion to about $5.4 billion, and SYD allowances grew from an estimated $0.3 billion to roughly $3.3 billion. In other words, the accelerated methods generated about $7.9 billion of the $10.7 billion increase in corporate allowances during this period.

As implied by these estimates, the accelerated depreciation methods accounted for a rapidly growing proportion of total corporation de-

[7] *Statistics of Income* for the taxable year 1954 does not segregate depreciation allowances from amortization allowed on defense and defense-related facilities for which certificates of necessity had been issued. Graphic interpolation on ratio scale between the amount of depreciation reported in *Statistics of Income* for 1953 and that for 1955 yields an estimate of $11.5 billion in depreciation for 1954. See U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1960–61, Corporation Income Tax Returns,* p. 303.

preciation allowances between 1954 and 1960. Table 15 shows that the share of total allowances accounted for by declining-balance was more than five times as great in the latter than in the former year, while SYD allowances, as a fraction of the total, were 6.5 times as great in 1960 as in 1954. Together, these methods accounted for 39.0 per cent of total corporate allowances in 1960, compared with 7 per cent in 1954. Straight-line allowances fell from 89 per cent of the total in 1954 to 58 per cent in 1960.

The substantial increase in the share of total depreciation allowances under SYD contrasts sharply with the very small increase in the proportion of returns on which this method was used. Similarly, the large drop in the proportion of total allowances computed by the straight-line method contrasts sharply with the very slight decrease in the proportion of returns on which the straight-line method appears.

Between the taxable years 1954 and 1960, as indicated in Table A-4, the increase in the ratio of accelerated to total depreciation allowances was quite pronounced, and occurred in virtually every size class in every industry. Taking all industries together, the proportion of declining-balance to total allowances rose in every total asset size class, most notably for corporations with total assets of $50 million or more. The ratio of SYD to total allowances also increased in every size class, and by increasing percentages, the larger the asset size class. Taking all size classes together, the increase in the ratio of accelerated to total allowances was greatest in the manufacturing and in the transportation, communication, electric, gas, and sanitary services divisions. In every industry division, there was a substantial increase in the proportion of total allowances computed under declining-balance, most notably in the public utilities. On the other hand, except for manufacturing, the increase in the share of total allowances accounted for by SYD was much more modest. In manufacturing, however, the increase in the ratio of SYD to total allowances was greater than that of declining-balance to the total.

The proportion of total allowances in 1960 computed under the declining-balance method (Table A-4) shows considerably less of the positive association with company size (as measured by total assets) than was found in the case of the proportion of returns on which this method appears (Table A-1). Indeed, aside from the smallest and largest asset size class, this proportion varies narrowly between 25.6

TABLE 15

Amount of Corporate Depreciation Allowances, by Depreciation Method, Taxable Years 1954, 1955, 1957, and 1960

Depreciation Method	1954	1955	1957	1960
	Amount (million dollars)[a]			
Straight-line	10,260	10,829	11,912	12,897
Declining-balance	540	1,328	2,630	5,363
Sum-of-the-years-digits	265	832	1,883	3,280
Units-of-production	170	174	n.a.	n.a.
Other methods	265	255	543	620[b]
Total	11,500	13,419	16,968	22,160[b]
	Percentage Distribution			
Straight-line	89.2	80.7	70.2	58.2
Declining-balance	4.7	9.9	15.5	24.2
Sum-of-the-years-digits	2.3	6.2	11.1	14.8
Units-of-production	1.5	1.3	n.a.	n.a.
Other methods	2.3	1.9	3.2	2.8
Total	100.0	100.0	100.0	100.0

Source: Taxable years 1954-1955, U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959, Supplementary Depreciation Data for Corporation Income Tax Returns*, pp. 103 and 118; taxable years 1957 and 1960, U.S. Treasury Department, Internal Revenue Service, special tabulations.

Note: Details may not add to totals because of rounding.

[a]Dollar amounts for each method were estimated by applying the proportions shown in the percentage distribution to the *Statistics of Income* totals for the respective years. Since the samples from which the percentage distributions were drawn were not identical with the *Statistics of Income* samples for the respective years, these amounts should be read more as estimates of the orders of magnitude than as precise measures of corporate allowances.

[b]Includes $65 million of so-called "additional first-year depreciation."

per cent and 29.6 per cent of the total. On the other hand, SYD allowances as a share of the total increase consistently with asset size class. The range is substantial, from 2.6 per cent for the smallest companies to 21.0 per cent for the largest. The combined declining-balance and SYD allowances as a fraction of the total also increase with asset size up to the largest class—total assets of $100 million or more—in which a slight decrease in this proportion is seen. For corporations with total assets of $50 million or more, taking all industries together, accelerated allowances were about 44 per cent of the total for such companies.

A more detailed examination of the size distribution within each industry division shows little positive association between company size and proportion of total allowances computed under the accelerated methods. As indicated in Table 16, a statistically significant positive rank correlation between company size and proportion of total allowances under declining-balance is found only in the construction division. The rank correlations are somewhat better in the case of SYD and of declining-balance and SYD combined, but the data hardly support the same sort of assertion about a size-method association as in the case of the relative frequencies of returns on which accelerated methods appear.

Substantially greater variability among industries is found in the taxable year 1960 in the proportion of total allowances computed under the accelerated methods than in the proportion of returns using the accelerated methods (Tables A-1 and A-4). Declining-balance depreciation was as little as 19 per cent of the total in mining and as much as 36 per cent in construction. SYD allowances were only 3.8 per cent and 3.9 per cent of the total in agriculture and mining, respectively, but accounted for 23.3 per cent of total allowances in manufacturing. Straight-line depreciation was about 51 per cent of total allowances in manufacturing and almost 72 per cent in agriculture.

The relatively large proportion of total allowances under SYD in manufacturing, where it exceeded the proportion accounted for by declining-balance, is sharply in contrast with other industries. In every other industry, except trade, SYD allowances were a relatively small fraction of the total allowances even among the largest corporations. In trade, however, companies in the largest asset size classes accounted for a substantial amount of their total allowances by this method—to a greater extent, indeed, than companies of corresponding size in manufacturing.

TABLE 16

Rank Correlation of Size of Total Assets and Proportion of Total Allowances Computed by Declining-Balance, SYD, and Declining-Balance and SYD Combined, Corporations, 1960

Industry Division	Declining-Balance		Sum-of-Years-Digits		Declining-Balance and SYD	
	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error
Agriculture	.20	.57	.60	.46	.33	.54
Mining	−.21	.49	.29	.48	−.36	.47
Construction	.71[b]	.37	.81[a]	.31	.81[a]	.31
Manufacturing	−.14	.49	1.00[a]	0	1.00[a]	0
Transportation, communication, sanitary services	.36	.47	.36	.47	.50	.43
Trade	−.07	.50	1.00[a]	0	1.00[a]	0
Finance	.07	.50	.93[a]	.19	.21	.49
Services	0	.50	.50	.43	.36	.47
All industries	0	.50	1.00[a]	.00	.93[a]	.19

Source: Table A-4.

[a]Significant at the 1 per cent level.

[b]Significant at the 5 per cent level. All other coefficients are not statistically significant.

As we might expect, a relatively substantial amount of depreciation in the mining division was computed by "other" methods, undoubtedly the units-of-production method.

The proportion of total allowances under declining-balance in the construction industry substantially exceeds that in other industries, although the relative frequency of returns in construction showing this method was not out of line with other industries. In all but the first two asset size classes, declining-balance allowances in construction were more than 40 per cent of the total depreciation claimed, and in the $50 million under $100 million class, they were more than 55 per cent of the total. In no size class in any other industry did either of the accelerated allowances account for nearly so large a share of the total.

The explanation for the extraordinarily large proportion of total allowances under declining-balance in the construction industry is not obvious from these data. Reference to the "Life of Depreciable Assets" study (LDA), however, shows that the mean service life (for purposes of computing depreciation allowances) of facilities in construction is below that in any other industry.[8] Assuming some positive correlation between service life for tax purposes and average age of facilities, a larger proportion of the facilities on hand in construction than in other industries in 1960 would have been eligible for the declining-balance method. Table 30, based on LDA data, shows that the proportion of facilities acquired after 1953 by construction corporations and placed in declining-balance accounts was exceptionally large. Both of these factors—the short service lives and the larger proportion of facilities under the declining-balance method—account for the unusually large proportion of total allowances under declining-balance in construction.

The substantial lack of significant rank correlation between company size and share of total depreciation allowances computed under the accelerated methods within each industry is, as noted, in contrast with the relatively strong correlation between size and proportion of returns showing use of these methods. The share of total allowances under an accelerated method depends on a number of factors, including the proportion of the total facilities under the method, the average service life of the property under the method relative to those under other methods, and the average age of these facilities. There is, therefore, no necessarily

[8] See Table C-2.

close correspondence between the proportion of returns in a class showing the use of an accelerated method and the proportion of total allowances in that class computed under that method.

UNINCORPORATED BUSINESSES

Although data with respect to the amount of depreciation by method for unincorporated companies are limited to the taxable year 1959, it may be presumed that the proportion of total allowances computed under the accelerated methods by these companies had increased since 1954. The share of their total allowances computed under declining-balance or SYD was quite small compared with corporations, particularly in the case of sole proprietorships. These companies used the straight-line method to compute almost three-fourths of their total allowances. Partnerships, on the other hand, used the straight-line method for only 59 per cent of their total allowance, very nearly the

TABLE 17

Amount of Depreciation by Method, Sole Proprietorships and Partnerships, 1959

(dollars in millions)

Depreciation Method	Sole Proprietorships		Partnerships	
	Amount	Per Cent of Total	Amount	Per Cent of Total
Straight-line	5,150	74.5	1,240	59.0
Declining-balance	479	6.9	383	18.2
Sum-of-the-years-digits	70	1.0	56	2.7
Other methods	416[a]	6.0	279[b]	13.3
Method not described	744	10.8	111	5.3
Total	6,914	100.0	2,103	100.0

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns,* pp. 34, 92-93.

[a]Excludes $54 million of additional first-year depreciation included in total. Details do not, therefore, add to total.

[b]Excludes $34 million of additional first-year depreciation included in total. Details do not, therefore, add to total.

same proportion as corporations (in 1960). Whereas almost 40 per cent of corporation allowances were computed under declining-balance and SYD, only 7.9 per cent of the total claimed by sole proprietorships and 20.9 per cent of the total for partnerships were computed under these methods. On the other hand, very little of the total allowances of corporations were computed under other methods, while in the case of sole proprietorships, other methods, including those not described by the taxpayer, account for about 17 per cent of the total. For partnerships, almost 19 per cent of the total allowances were computed otherwise than by straight-line, declining-balance, or SYD (Table 17).

As in the case of the relative frequencies, the relative amounts of depreciation computed under the accelerated methods by sole proprietorships was greater the larger the business (as measured by size of business receipts). Table 18 indicates perfect rank correlations of company size and the ratios of declining-balance and of SYD allowances to the total, taking all industries together. The data are too thin, however, to sustain the correlation analysis in several of the industry divisions (Table A-5). They do suggest, nevertheless, a positive asso-

TABLE 18

Percentage Distribution of Depreciation of Sole Proprietorships, by Depreciation Method and Size of Business Receipts, 1959

Size of Business Receipts (thousand dollars)	Straight-Line	Declining-Balance	Sum-of-Years-Digits	Other Methods	Method Not Described
Under 10	81.6	3.1	0.4	4.7	9.6
10-20	78.6	4.6	0.6	4.9	10.4
20-30	76.9	5.2	1.0	5.6	10.6
30-50	73.2	7.7	1.1	5.7	11.2
50-100	69.2	9.9	1.6	6.6	11.8
100 and over	60.2	15.0	2.2	9.7	11.9
No receipts reported	71.4	3.2	0.4	4.7	19.1
Total	74.5	6.9	1.0	6.0	10.8

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns*, p. 34.

Note: Details do not add to 100 per cent because small amounts of additional first-year depreciation are not included. See Table 17.

ciation between company size and the proportion of total allowances computed under accelerated methods.

Among partnerships, the ratio of accelerated to total allowances tended to increase with company size, but this relationship is not nearly so strong as in the case of the proportion of partnerships electing the use of the declining-balance or SYD methods (Table 19).

TABLE 19

Percentage Distribution of Partnerships' Depreciation, by Depreciation Method and Size of Business Receipts, 1959

Size of Business Receipts (thousand dollars)	Straight-Line	Declining-Balance	Sum-of-Years-Digits	Other Methods	Method Not Described
Under 10	74.1	13.1	1.3	7.4	2.9
10-20	69.8	14.3	2.0	9.5	3.1
20-30	66.3	15.6	2.0	10.8	4.2
30-50	67.2	15.0	1.2	10.7	4.6
50-100	65.2	16.2	2.4	11.1	3.4
100-200	60.9	18.3	1.7	13.8	3.4
200-500	51.5	21.0	3.0	16.9	6.2
500-1,000	53.1	23.3	5.4	12.1	3.3
1,000-5,000	44.9	26.4	5.1	16.7	4.8
5,000 and over	18.4	19.1	3.7	27.9	29.4
No receipts reported	56.0	11.6	11.2	6.1	9.1
Total	59.0	18.2	2.7	13.3	5.3

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns,* pp. 92-93.

Note: Details do not add to 100 per cent because small amounts of additional first-year depreciation are not included. See Table 17.

Taking all industries together, the coefficient of rank correlation of the ratio of declining balance to total allowances with size of partnership receipts is .82 (standard error = .25), and in the case of SYD, the coefficient is .60 (standard error = .36). Among industries, considerable variability in the correlation is found, as seen in Table 20.

Accelerated allowances as a share of the total varied considerably from one industry to another in the unincorporated business sector. Sole proprietorships in mining, for example, computed about one-fifth

TABLE 20

Rank Correlation of Size of Partnership Receipts and Proportion of Total Allowances Computed by Declining-Balance and SYD, 1959

Industry Division	Declining-Balance		Sum-of-Years-Digits	
	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error
Agriculture	.82[a]	.25	.36	.47
Mining	1.00[a]	.00	.80[b]	.38
Construction	.60[a]	.36	.14	.53
Manufacturing	.64[a]	.34	1.00[a]	.00
Transportation, communication, and sanitary services	−.02	.45	.80[b]	.38
Trade	.78[a]	.28	.93[a]	.19
Finance, insurance, and real estate	.02	.45	.42	.41
Services	.51[b]	.38	.33	.42
All industries	.82[a]	.25	.60[a]	.36

Source: Table A-4.

[a]Significant at the 1 per cent level.

[b]Significant at the 5 per cent level. All other coefficients are not statistically significant.

of their total depreciation charges by use of the declining-balance and SYD methods, another 11.4 per cent by other methods—probably units-of-production, and 23 per cent of the total by methods which were not described by the taxpayer. Sole proprietorships in agriculture, on the other hand, used the declining-balance method for only 3.5 per cent of total allowances and SYD for less than one-half of 1 per cent (Table A-5).

Among partnerships, similarly, there is a substantial range in the proportion of total allowances accounted for under the accelerated methods from one industry to another. In agriculture, about 7.2 per cent of the total depreciation was declining-balance and SYD, although other methods—probably units-of-production—accounted for a fifth of the

total. In the finance, insurance, and real estate division, on the other hand, 37 per cent of all depreciation was accelerated, one-third under the declining-balance method (Table A-6).

The real estate subdivision of this industry division, for partnerships, accounted for 93.7 per cent of total depreciation allowances and 97.9 per cent of allowances computed by use of the declining-balance method in the division.[9] The very high proportion of total allowances under the declining-balance method in this subdivision probably reflects the operation of the so-called "real estate tax shelter." The phrase refers to investment, usually by a group of individuals, in the construction or acquisition of new, real property, generally subject to a substantial mortgage. Each of the individuals in the syndicate will take into his own income for tax purposes his pro rata share of the net rental of the property. In the computation of net rental, interest on the indebtedness and depreciation are deducted from the gross rentals. The depreciation deduction, the basis for which is the total cost of the property, not merely the equity share thereof, is likely to be computed by use of one or the other of the accelerated methods, usually the declining-balance method. The interest deduction, too, often follows a declining-balance pattern, if the indebtedness is amortizable. Thus, the combined interest and depreciation deductions in the early years after acquisition of the property are likely to be relatively large, and indeed, if taken in conjunction with other expenses, to exceed the gross income from the property and to reduce, therefore, taxable income from other sources. In any event, the depreciation deduction increases the taxpayer's disposable income by an amount equal to his marginal income tax rate times the deduction, since these deductions go against ordinary income. By virtue of the declining-balance pattern of the interest and depreciation deductions, net rentals become larger in each succeeding year; when net rental becomes positive, it may pay the syndicate to sell the property. Any gain realized, i.e., any excess of sales proceeds over the basis of the property reduced by accumulated depreciation, was treated as a capital gain (during the period covered by this survey), subject to a maximum rate of 25 per cent.[10] In effect, the deduction of deprecia-

[9] *Statistics of Income, 1959–60, U.S. Business Tax Returns,* p. 90.

[10] The Revenue Act of 1964 included a provision restricting the extent to which such gains might be treated as capital gains instead of ordinary income (see Sec. 1250, Internal Revenue Code).

tion, to the extent that it exceeds the actual reduction in the value of the property, converts ordinary income into capital gains. While the tax advantage is available for any income taxpayer, it increases with the taxpayer's bracket rate applicable to his ordinary income. It is, accordingly, more advantageous to a top-bracket individual taxpayer than to a corporate taxpayer.

One might very well expect, therefore, to find that a relatively large proportion of total depreciation allowances in the real estate industry group was computed by use of declining-balance depreciation.[11] Moreover, one should expect to find this proportion to be particularly high among those partnerships which showed no net profit. These are, indeed, the results reported on partnership information returns for the taxable year 1959. As already indicated, one-third of total depreciation allowances in the finance, insurance, and real estate division were declining-balance charges. Among partnerships without net profits in this division, declining-balance was 50.5 per cent of the total allowances, while partnerships with net profits in this industry used declining-balance to determine 24.5 per cent of total depreciation deductions. Among all industries, excluding finance, insurance, and real estate, only 14.2 per cent of total depreciation allowances were declining-balance. Excluding this division, partnerships without net profits used this method for 14.3 per cent of total allowances, while those with net profits computed 14.1 per cent of their total depreciation charges by using this method.[12]

The data do not permit certain identification of the partnerships nor of the properties with respect to which these results in the finance, insurance, and real estate division are derived. The sharp contrast between this industry division and all other divisions with respect to the relative amounts of declining-balance charges among firms without and those with net profits, however, very closely matches what one might anticipate regarding the real estate tax shelter syndicates.

[11] Use of the SYD method is less advantageous, since annual deductions under this method must reflect estimated salvage value of the property. As indicated above, SYD was more advantageous than declining-balance for long-lived property, when the property is held for a period equal to its service life. Since the syndicate disposes of the property long before its service life expires, determination of which method should be used is based on the amount of allowances each generates in the first five years or so. With a 10 per cent salvage value and a service life of thirty-three years, for example, declining-balance allowances will exceed SYD charges during the first five years by almost 8 per cent.

[12] *Statistics of Income, 1959–60, U.S. Business Tax Returns,* pp. 96–99.

The SYD method accounts for a very small proportion of partnerships' depreciation allowances. Manufacturing firms led in this respect, but even in this division, only 4.4 per cent of total allowances were computed with this method. Over all, only 2.7 per cent of all partnership depreciation allowances were SYD (Table A-6).

Amount of Assets

In this survey, we are interested not only in the number of companies using the accelerated methods and the amount of depreciation generated thereby, but also in the amount of property to which these methods have been applied. As we have seen, there is no necessary correspondence between the proportion of firms using a given depreciation method and the proportion of total allowances computed under that method. The proportion of total depreciation allowances computed under the accelerated methods, in turn, is not an infallible indicator of the extent of use of these methods. It need not, for example, accurately indicate the relative amounts of property assigned to accelerated and straight-line accounts, since differences in service lives and in the age of facilities may have a relatively large effect on the proportion of straight-line and accelerated allowances in any year.

Detailed information for corporations in 1959, providing distributions of the amount of property by method, company size, industrial division, service life, type of property, and date of acquisition, is contained in the Treasury Department's "Life of Depreciable Assets" study, to which reference was made earlier. For partnerships for the taxable year 1959, distributions of the amount of assets by method, by size of company, and by industrial division are available.

We briefly discuss the distribution of partnership assets by method in the following section, and reserve for the succeeding section a more extended examination of the detailed data with respect to corporations.

PARTNERSHIPS

For partnerships, Table 21 shows that close to two-thirds of the depreciable facilities on hand in 1959 were in straight-line accounts, 18.4 per cent were in accelerated accounts, while the remainder were being depreciated under other methods (including a small amount—3.7 per cent—for which the depreciation method was not described).

These proportions understate the response of partnerships to the availability of the accelerated methods, since they are based on all property on hand in 1959, including assets acquired prior to 1954 and therefore ineligible for declining-balance and SYD. Unfortunately, the data on amount of partnership facilities cannot be classified by year of purchase. It nevertheless seems fair to conclude that the proportion of eligible partnership facilities in accelerated-method accounts in 1959 exceeded—possibly by a substantial margin—the 18.4 per cent shown in Table 21.

The proportion of property in straight-line accounts falls as size of business receipts increases, while the proportion of facilities under the accelerated methods tends to increase with company size, taking all industries together. The rank correlation between size of business receipts and proportion of depreciable facilities under declining-balance, however, is considerably better than in the case of SYD. Moreover, when the amount of assets is cross distributed by size and industry, the rank correlations between size and method of depreciation are highly variable, as shown in Table 22.

A significant positive association between size and proportion of assets under declining-balance appears in each of the industry divisions except the services division and transportation, communication, and sanitary services. On the other hand, the relative amount of property under SYD seems to be significantly correlated with company size only in manufacturing and in trade.

Substantial variability in the relative amounts of facilities under the straight-line and declining-balance methods may be seen from one industry to another in Table 23. In view of the fact that the largest proportion of partnership depreciation allowances under declining-balance was in finance, insurance, and real estate, it is not surprising also to find the largest proportion of facilities under this method in this industrial division. Measured in terms of the amount of depreciable facilities, this is also the largest of the partnership industries, accounting for roughly 37 per cent of the depreciable facilities reported by those partnerships which showed the amount of their facilities by method. Partnerships in this division accounted for about 60 per cent of all partnership facilities under the declining-balance method. Among the other large partnership industrial divisions, however, e.g., trade, services, and agriculture, small amounts of property were in declining-balance accounts.

TABLE 21

Distribution of Partnerships' Depreciable Assets,[a] by Size of Business Receipts and by Depreciation Method, 1959

Size of Business Receipts (thousand dollars)	Total	Straight-Line	Declining-Balance	Sum-of-Years-Digits	Other Methods	Method Not Described
			Amount (million dollars)			
Under 10	3,195	2,359	341	38	398	59
10 under 20	2,380	1,696	270	48	322	43
20 under 30	1,861	1,348	236	36	210	32
30 under 50	2,615	1,821	333	17	383	61
50 under 100	3,751	2,548	516	107	476	104
100 under 200	3,509	2,228	609	49	546	77
200 under 500	3,858	2,132	787	90	633	217
500 under 1,000	2,098	1,199	404	80	335	81
1,000 under 5,000	1,899	783	573	61	307	175
5,000 and over	506	188	101	22	79	116
Receipts not reported	188	129	33	13	13	[b]
Total	25,861	16,431	4,202	561	3,702	965
			Percentage Distribution			
Under 10	100.0	73.8	10.7	1.2	12.5	1.8
10 under 20	100.0	71.3	11.3	2.0	13.5	1.8
20 under 30	100.0	72.4	12.7	1.9	11.3	1.7
30 under 50	100.0	69.6	12.7	0.7	14.6	2.3
50 under 100	100.0	67.9	13.8	2.9	12.7	2.8
100 under 200	100.0	63.5	17.4	1.4	15.6	2.2
200 under 500	100.0	55.3	20.4	2.3	16.4	5.6
500 under 1,000	100.0	57.1	19.3	3.8	16.0	3.9
1,000 under 5,000	100.0	41.2	30.2	3.2	16.2	9.2
5,000 and over	100.0	37.2	20.0	4.4	15.6	22.9
Receipts not reported	100.0	68.2	17.4	6.8	6.9	[b]
Total	100.0	63.5	16.3	2.2	14.3	3.7

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns*, pp. 92-95.

Note: Details will not add to totals because of rounding.

[a]Amounts shown are assets of partnerships reporting the cost of assets under each method.

[b]Sampling variability is too great to show separately but amount is included in the total.

TABLE 22

Rank Correlation of Size of Business Receipts and Proportion of Total Depreciable Facilities Under Straight-Line, Declining-Balance, or SYD Methods, Partnerships, 1959

Industry Division	Straight-Line		Declining-Balance		Sum-of-Years-Digits	
	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error	Coefficient of Rank Correlation	Standard Error
Agriculture, forestry, and fisheries	−.73[a]	.30	.82[a]	.25	.36	.47
Mining	−.69[a]	.32	.90[a]	.23	.40	.58
Construction	−.82[a]	.25	.69[a]	.32	.33	.50
Manufacturing	−.87[a]	.22	.87[a]	.22	1.00[a]	.00
Transportation, communication, and sanitary services	−.38	.41	.16	.44	.20	.62
Trade	−.64[a]	.34	.64[a]	.34	.57[b]	.41
Finance, insurance, and real estate	−.56[b]	.37	.60[a]	.36	.16	.44
Services	−.51[b]	.38	.29	.42	.42	.40
All industries	−.91[a]	.21	.87[a]	.22	.60[a]	.36

Source: Table A-7.

[a]Significant at the 1 per cent level.

[b]Significant at the 5 per cent level.

TABLE 23

Distribution of Partnership Depreciable Assets[a] by Industry Division and by Depreciation Method, 1959

Industry Division	Total	Straight -Line	Declining -Balance	Sum-of-Years-Digits	Other Methods	Method Not Described
			Amount (million dollars)			
Agriculture, forestry, and fisheries	3,196	2,287	134	18	644	114
Mining	793	341	125	12	212	103
Construction	1,431	741	275	42	267	105
Manufacturing	1,794	1,121	197	59	281	135
Transportation, communication, and sanitary services	548	338	77	14	106	13
Trade	4,905	3,574	358	85	708	180
Finance, insurance, and real estate	9,517	5,577	2,527	243	972	197
Services	3,582	2,380	503	87	498	114
Not allocable	96	70	6	[b]	15	5
All industries	25,861	16,431	4,202	561	3,702	965

(continued)

TABLE 23 *(concluded)*

Industry Division	Total	Straight -Line	Declining -Balance	Sum-of-Years-Digits	Other Methods	Method Not Described
			Percentage Distribution			
Agriculture, forestry, and fisheries	100.0	71.6	4.2	0.6	20.1	3.6
Mining	100.0	43.1	15.7	1.6	26.7	12.9
Construction	100.0	51.8	19.2	2.9	18.7	7.3
Manufacturing	100.0	62.5	11.0	3.3	15.7	7.5
Transportation, communication, and sanitary services	100.0	61.8	14.1	2.5	19.3	2.4
Trade	100.0	72.9	7.3	1.7	14.4	3.7
Finance, insurance, and real estate	100.0	58.6	26.6	2.6	10.2	2.1
Services	100.0	66.5	14.0	2.4	13.9	3.2
Not allocable	100.0	72.9	6.3	[b]	15.6	5.2
All industries	100.0	63.5	16.3	2.2	14.3	3.7

Source: U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, U.S. Business Tax Returns,* pp. 92-95.
Note: Details will not add to totals because of rounding.

[a]Amounts shown are assets of partnerships reporting the cost of assets under each method.

[b]Sampling variability is too great to show separately but amount is included in the total.

On the whole, there appears to be a relatively close correspondence between the proportion of total depreciable assets under each method and the proportion of total depreciation allowances computed by each method.[13] The differences, while not large, nevertheless are indicative of the effectiveness of the accelerated depreciation methods in generating additional depreciation allowances. The comparison in Table 24, for example, shows that whereas the straight-line method accounted for 63.5 per cent of partnerships' depreciable facilities, it accounted for only

TABLE 24

Comparison of Proportion of Partnerships' Facilities and Depreciation Allowances, by Depreciation Method, 1959

Depreciation Method	Proportion of Total	
	Depreciable Facilities	Depreciation Allowances
Straight-line	63.5	59.0
Declining-balance	16.3	18.2
Sum-of-the-years-digits	2.2	2.7
Other methods	14.3	13.3
Method not described	3.7	5.3

Source: Tables 19 and 21.

59 per cent of their depreciation allowances; on the other hand, accelerated method accounts included 18.4 per cent of partnerships' facilities, but 20.9 per cent of allowances were computed under these methods. The same kind of comparison suggests that the other methods used by partnerships were not accelerated; they accounted for 14.3 per cent of the facilities but only 13.3 per cent of the allowances. On the other hand, although 3.7 per cent of the facilities were in accounts for which the method was not described, these methods accounted for 5.3 per cent of total allowances, from which it might be inferred that these were, on the whole, accelerated depreciation techniques.

[13] The number of partnerships showing the amount of facilities by method—750,484—is slightly smaller than the number showing the amount of depreciation allowances by method—765,428. This difference, roughly 2 per cent, does not account for differences between the proportion of assets under a given method and the proportion of total allowances computed by that method which may appear in any size class or industry division.

These inferences are, of course, subject to an important qualification, since the proportion of total allowances under any method depends not merely on the depreciation pattern through time and the relative amounts of assets but also on the service lives of the facilities and their average age. In comparing Tables 19 and 21, for example, it is seen that in the $5,000,000 and over business receipts class, straight-line method accounts included 37.2 per cent of total depreciable facilities in the class, but accounted for only 18.4 per cent of total allowances; other methods included 15.6 per cent of the facilities on which 27.9 per cent of allowances were generated. These disproportions might be attributable to differences in the average service life of the facilities in the respective accounts, or to the degree of acceleration provided by these unspecified other methods, or indeed, to both of these factors. It is clear, however, that the disproportion itself is not definitely indicative of the degree of acceleration.

CORPORATIONS

A substantial proportion of corporations' eligible facilities were in accelerated method accounts in the taxable year 1959. Of the total depreciable property in corporation tax accounts in that year, about 24 per cent was being depreciated under the declining-balance and SYD methods. A much larger proportion, about 45 per cent, of the total property acquired since the end of 1953 and on hand in 1959, however, was in accelerated method accounts. Moreover, since only new property newly acquired after 1953 is eligible for the use of the fast write-off methods, and since some of the property acquired after 1953 and on hand in 1959 must have been ineligible on this score, the proportion of eligible facilities in declining-balance and SYD accounts in 1959 must have been somewhat greater than 45 per cent (Table 25).[14]

The share of depreciable facilities acquired after 1953 that was held in accelerated method accounts in 1959 increased with company size, when all industries are taken together. This proportion was 28.5 per cent for companies with total assets less than $1 million, 38.1 per cent for corporations with total assets of $1 million up to $25 million, and

[14] Most of the estimates in this section were made by applying ratios derived from the LDA to adjusted *Statistics of Income* magnitudes (for the details of these computations, see Appendix D). Where noted, however, reference is made to the LDA data.

TABLE 25

Cost of Corporations' Depreciable Assets, by Method of Depreciation and Size of Total Assets in 1959: All Assets and Those Acquired After 1953

A. All Assets on Hand in 1959

Size of Total Assets (million dollars)	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
			Amount (thousand dollars)			
Under 1	48,045,429	10,902,570	2,611,904	44,202	15,909	61,620,014
1-25	43,542,633	11,541,548	3,558,028	104,441	1,601	58,748,251
25 and over	173,823,667	30,351,054	27,190,779	6,306,175	4,756,807	242,428,482
Total	265,411,729	52,795,172	33,360,711	6,454,818	4,774,317	362,796,747
			Percentage Distribution			
Under 1	78.0	17.7	4.2	0.1	[a]	100.0
1-25	74.1	19.6	6.1	0.2	-	100.0
25 and over	71.7	12.5	11.2	2.6	2.0	100.0
Total	73.2	14.6	9.2	1.8	1.3	100.0

(Continued)

TABLE 25 *(concluded)*

B. Facilities Acquired after 1953

Size of Total Assets (million dollars)	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
			Amount (thousand dollars)			
Under 1	32,015,479	10,217,775	2,581,893	43,315	14,835	44,873,297
1-25	22,767,094	10,561,969	3,500,474	67,552	1,576	36,898,665
25 and over	43,887,284	29,322,823	27,048,889	1,681,660	1,420,572	103,361,228
Total	98,669,857	50,102,567	33,131,256	1,792,527	1,436,983	185,133,190
			Percentage Distribution			
Under 1	71.4	22.8	5.8	0.1	[a]	100.0
1-25	61.7	28.6	9.5	0.2	[a]	100.0
25 and over	42.5	28.4	26.2	1.6	1.4	100.0
Total	53.3	27.1	17.9	1.0	0.8	100.0

Source: U.S. Treasury Department, Internal Revenue Service, "Life of Depreciable Assets" source book. Dollar amounts were computed by applying ratios derived from the LDA in each size class in each industrial division to corresponding *Statistics of Income* observations, and then aggregating to totals shown here. See Appendix D.

Note: Included under the declining-balance method in Part A are $2.7 billion of assets acquired before 1954; under sum-of-the-years-digits, there are $0.2 billion of facilities acquired before 1954. Some portion of the pre-1954 declining-balance facilities are those to which the declining-balance method at 150 per cent of the straight-line rate was applied; this method was available under the tax laws prior to the Internal Revenue Code of 1954. The remainder, like the pre-1954 assets under SYD, probably represents an erroneous application by taxpayers of these accelerated methods to ineligible properties.

[a]Less than 0.05 per cent. Detail may not add to totals because of rounding.

54.5 per cent for companies with assets of $25 million or more. In contrast, very little difference among the three size classes is to be noted in the share of all facilities on hand in 1959 under accelerated depreciation methods. While corporations with total assets of $25 million or more applied accelerated methods to a larger proportion of eligible

TABLE 26

Percentage Distribution of Corporations' Depreciable Facilities, by Size of Total Assets: All Facilities, Facilities Acquired Since 1953, and Facilities in Accelerated Method Accounts, 1959

Size of Total Assets (million dollars)	All Facilities	Facilities Acquired Since 1953	Facilities in Accelerated Method Accounts[a]	Facilities Acquired Since 1953 as Per Cent of All Facilities
Under 1	17.0	24.2	15.4	72.8
1-25	16.2	19.9	16.9	62.8
25 and over	66.8	55.8	67.7	42.6
Total	100.0	100.0	100.0	51.0

Source: Table 25.

[a]Includes only facilities acquired after 1953 and in accelerated method accounts in 1959.

property than did smaller companies, a substantially larger share of the large companies' facilities in 1959 had been acquired prior to 1954 and were, therefore, ineligible for the use of the accelerated methods. As Table 26 shows, although corporations with total assets of $25 million or more accounted for 55.8 per cent of all facilities acquired after 1953 (and on hand in 1959), the post-1953 acquisitions of these companies were only 42.6 per cent of their total depreciable facilities. In contrast, companies with total assets less than $1 million had only 24.2 per cent of all post-1953 facilities, but these assets represented 72.8 per cent of their total depreciable facilities on hand in 1959. Thus, while two-thirds of the facilities in accelerated method accounts in 1959 belonged to

companies with total assets of $25 million or more, there was little difference among the three size classes in the proportion of all facilities on hand in 1959 under accelerated methods.

Most of the difference among the three size classes in the proportion of post-1953 facilities in accelerated method accounts in 1959 is attributable to differences in the proportions under the SYD method. In the largest size class, nearly equal amounts of facilities were in declining-balance and SYD accounts; smaller companies, on the other hand, had much less of their post-1953 acquisitions under the SYD than under the declining-balance method (Table 25).

Substantial differences from one industrial division to another are found in the share of post-1953 facilities in accelerated method accounts. In manufacturing, which accounted for 38.4 per cent of all facilities acquired after 1953, declining-balance and SYD taken together include 56.8 per cent of the post-1953 facilities in the industry. In the public utilities, which in 1959 held 29.0 per cent of all post-1953 facilities, the corresponding proportion is 42.1 per cent. On the other hand, corporations in agriculture held only 18.7 per cent of their facilities acquired after 1953 in accelerated method accounts. The spread among industrial divisions was less in the case of declining-balance than SYD; the former accounted for 16.8 per cent of post-1953 facilities in the agriculture and trade divisions and for 32.1 per cent in construction, while SYD facilities were only 1.9 per cent of post-1953 facilities in agriculture and 28.7 per cent of those in manufacturing (Table 27).

Taking the accelerated methods together, little variability is apparent when the facilities are distributed by type of asset and method, according to the LDA survey. Six broad property classes were set up; structures, furniture and fixtures, transportation, production equipment, livestock, and not identifiable. Except for livestock, which accounts for an insignificant fraction of the total, the accelerated methods combined account for between 49 per cent and 53 per cent of the total (Table 28).

A distribution of the data by service life and method in the LDA survey reveals no systematic pattern of variation. It was noted above that with a given salvage value and discount rate, use of the declining-balance method becomes less advantageous compared with SYD as service life increases. The proportionate amounts of property at each service life in declining-balance and SYD accounts, however, do not appear to conform with expectations based on such rate-of-return com-

TABLE 27

Cost of Corporations' Depreciable Assets Acquired After 1953, by Industry Division and Method of Depreciation, 1959

Industry Division	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
	Amount (thousand dollars)					
Agriculture, forestry, and fisheries	1,097,439	226,448	25,804	1,204	-	1,350,895
Mining	3,812,337	1,561,469	245,994	269,724	565,427	6,454,951
Construction	2,657,083	1,376,373	253,086	532	-	4,287,074
Manufacturing	29,498,917	19,966,965	20,437,323	501,827	774,975	71,180,007
Transportation, communication, electric, gas, and sanitary services	30,024,137	14,799,672	7,767,184	947,489	79,339	53,617,821
Trade	11,913,772	2,791,590	1,892,329	51,327	15,198	16,664,216
Finance, insurance, and real estate	13,176,009	6,517,732	1,559,197	17,906	1,980	21,272,824
Services	6,431,412	2,858,180	949,644	2,316	64	10,241,616
Total	98,669,857	50,102,567	33,131,256	1,792,527	1,436,983	185,133,190

(continued)

TABLE 27 *(concluded)*

Industry Division	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
	Percentage Distribution					
Agriculture, forestry, and fisheries	81.2	16.8	1.9	0.1	-	100.0
Mining	59.1	24.2	3.8	4.2	8.8	100.0
Construction	62.0	32.1	5.9	[a]	-	100.0
Manufacturing	41.4	28.1	28.7	0.7	1.1	100.0
Transportation, communication, electric, gas, and sanitary services	56.0	27.6	14.5	1.8	0.2	100.0
Trade	71.5	16.8	11.4	0.3	0.1	100.0
Finance, insurance, and real estate	61.9	30.6	7.3	0.1	[a]	100.0
Services	62.8	27.9	9.3	[a]	[a]	100.0
Total	53.3	27.1	17.9	1.0	0.8	100.0

Source: U.S. Treasury Department, Internal Revenue Service, "Life of Depreciable Assets" source book. Also see source note Table 25.

Note: Detail may not add to totals because of rounding. Totals include small amounts of property not allocable to any industry division.

[a]Less than 0.05 per cent.

TABLE 28

Per Cent of Cost of Corporations' Depreciable Assets, Acquired After 1953, in Accelerated Method Accounts, by Major Asset Type, 1959 (LDA Survey)

Type of Asset	Facilities in Accelerated Method Accounts as Per Cent of Total
Structures and leasehold improvements	53.4
Furniture, fixtures, office and store machinery and equipment	48.5
Transportation vehicles and equipment	50.7
Production machinery and equipment	53.4
Livestock, orchards, and vineyards	9.4
Not identifiable or intangible	53.4
All asset types	52.9

Source: U.S. Treasury Department, Internal Revenue Service, "Life of Depreciable Assets" source book.

Note: Ratios presented here were computed directly from LDA survey data and were not adjusted to a *Statistics of Income* basis. As noted in Appendix B, the LDA survey shows different proportions of property in accelerated method accounts than is derived by applying to *Statistics of Income* magnitudes the ratios of accelerated to total property in each size class in each industrial division based on LDA data.

parisons. As Table 29 shows, the proportions of depreciable assets under the declining-balance and the SYD methods change irregularly from one service life to another. Similar irregularities are seen if the proportions under these methods are combined.

At various points in this discussion there have been suggestions that proportionate use of the accelerated methods increased with company size. Unfortunately, our data are grouped into only three very broad size classes, which precludes rigorous statistical testing of that suggestion. Although we have seen in these data an apparent positive relationship between use of accelerated methods and size, the data may in fact reflect a relationship between method of depreciation and some other characteristic, the incidence of which varies from one size class to

TABLE 29

Per Cent of Cost of Corporations' Depreciable Assets, Acquired After 1953, in Accelerated Method Accounts, by Service Life, 1959 (LDA Survey)[a]

Service Life (years)	Declining -Balance	Sum-of-the-Years-Digits	Total Accelerated Methods
3-9	27.8	21.8	49.6
10	25.5	15.4	40.9
11-14	40.0	31.1	71.1
15	51.5	18.3	69.8
16-19	21.2	10.8	32.0
20	25.8	32.0	57.8
21-24	37.7	14.5	52.2
25	27.8	29.0	56.8
26-30	45.7	22.9	68.6
31-35	27.4	18.4	45.8
36-40	41.8	31.7	73.5
41-50	23.9	20.6	44.5
51 and over	46.6	23.6	70.2
Total	31.8	21.8	53.6

Source: U.S. Treasury Department, Internal Revenue Service, "Life of Depreciable Assets" source book.

Note: Ratios presented here were computed directly from LDA survey data and were not adjusted to a *Statistics of Income* basis. As noted in Appendix B, the LDA survey shows different proportions of property in accelerated method accounts than is derived by applying to *Statistics of Income* magnitude the ratios of accelerated to total property in each size class in each industrial division based on LDA data.

[a]Excludes property in units-of-production method accounts, since no service life in years is assigned to such facilities.

another. More detailed distributions of the data permit examination of some of the other possible variables with which choice of method might be associated, e.g., industry, type of asset, service life. To carry out this examination, the data were cross distributed by (1) method, size, and industry; (2) method, size, and property type; (3) method, size, and service life; (4) method, industry, and asset type; (5) method, industry, and service life; and (6) method, service life, and asset type.

1. *Method, size, and industry.* Although a positive association between company size and proportion of post-1953 facilities under the accelerated methods is seen when all industries are taken together, considerable variability in this connection is found among industries. As shown in Table 30, the proportion of property of manufacturing companies under each of the accelerated methods, more noticeably in SYD, increases with company size. Taking the accelerated methods together, a similar pattern is found in the trade and services divisions. In the transportation, communications, electric, gas, and sanitary services division, the middle-sized companies applied the accelerated methods to a smaller proportion of their post-1953 properties than did the smallest companies, but the largest firms in this industry used the accelerated methods for a much larger proportion of post-1953 facilities than is shown for either of the other size classes. In mining, the largest companies held relatively large amounts of property in "other" life methods and in units-of-production accounts; declining-balance and SYD properties were a smaller share of the total in this size group than in the others. In the other divisions, no association between size and proportion of property in accelerated depreciation accounts is observable.

2. *Method, size, and asset type.* Close to 85 per cent of the total amount of property acquired after 1953 and on hand in 1959 consisted of structures and leasehold improvements and production machinery and equipment, according to the LDA survey. In both of these asset groups, and in all of the others except for the very small amount of livestock, orchards, and vineyards, the larger the total asset size class, the greater the proportion of the property under combined accelerated accounts. There appears, on the whole, to be little difference among asset size classes in the proportion of facilities under declining-balance. Except in the case of livestock, etc., however, the proportion of facilities of each type under the SYD method is much larger in the case of the largest asset size class than among the other size classes (Table 31).

TABLE 30

Per Cent of Cost of Corporations' Depreciable Assets, Acquired After 1953, in Accelerated Method Accounts, by Industry Division and Size of Total Assets, 1959

Size of Total Assets by Industry Division (million dollars)	Declining -Balance	Sum-of-the-Years-Digits	Total Accelerated Methods
All industries	27.1	17.9	45.0
Under 1	22.8	5.8	28.5
1-25	28.6	9.5	38.1
25 and over	28.4	26.2	54.5
Agriculture, forestry, and fisheries	16.8	1.9	18.7
Under 1	16.8	1.9	18.7
1-25	23.9	2.6	26.5
25 and over	-	-	-
Mining	24.2	3.8	28.0
Under 1	27.1	5.7	32.8
1-25	37.1	5.6	42.8
25 and over	13.0	1.6	14.7
Construction	32.1	5.9	38.0
Under 1	21.7	7.0	28.7
1-25	48.5	4.9	53.4
25 and over	47.4	0.7	48.1
Manufacturing	28.1	28.7	56.8
Under 1	22.3	6.9	29.2
1-25	28.2	13.9	42.1
25 and over	29.2	37.3	66.5
Transportation, communication, electric, gas, and sanitary services	27.6	14.5	42.1
Under 1	20.8	6.2	27.0
1-25	12.1	4.6	16.7
25 and over	30.0	16.3	46.4

(continued)

TABLE 30 *(concluded)*

Size of Total Assets by Industry Division (million dollars)	Declining -Balance	Sum-of-the-Years-Digits	Total Accelerated Methods
Trade	16.8	11.4	28.1
Under 1	15.7	3.3	19.0
1-25	21.5	7.9	29.4
25 and over	14.8	35.4	50.2
Finance, insurance, and real estate	30.6	7.3	38.0
Under 1	27.7	6.1	33.8
1-25	38.4	7.5	46.0
25 and over	18.9	12.0	31.0
Services	27.9	9.3	37.2
Under 1	27.6	7.1	34.7
1-25	27.2	11.5	38.7
25 and over	31.2	15.2	46.4

Source: Table D-4. Also see source note, Table 25.

Note: Detail may not add to total because of rounding. Not shown separately but included under "all industries" are small amounts of property not allocable to any industry division.

3. *Method, size, and service life.* Table 32 shows the proportion of facilities of a given service life in each of the size classes under the accelerated methods in the LDA survey. So arranged, a definite positive association between the proportion of property in accelerated method accounts and company size appears. Only in the sixteen-to-nineteen-year service life interval do the proportions decrease as asset size increases; in the eleven-to-fourteen-year interval, the middle-size class proportion is smaller than in the case of companies with less than $1 million in total assets, and in the forty-one-to-fifty-year interval, the proportion in the middle-size class exceeds those in the other two size groupings. In all other intervals, however, the larger the size class, the greater the proportion of property under the accelerated methods.

TABLE 31

Percentage Distribution of the Cost of Corporations' Depreciable Facilities Acquired After 1953, by Major Asset Type, Size of Total Assets, and Method of Depreciation, 1959 (LDA Survey)

Size of Total Assets, by Asset Type (million dollars)	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
All asset types	44.4	31.4	21.5	1.5	1.2	100.0
Under 1	67.2	27.1	5.6	0.1	[a]	100.0
1-25	55.2	36.4	8.2	0.2	[a]	100.0
25 and over	40.2	31.8	24.8	1.8	1.5	100.0
Structures and leasehold improvements	44.4	33.4	20.0	1.6	0.6	100.0
Under 1	65.4	29.3	5.2	0.1	[a]	100.0
1-25	51.6	40.2	8.1	0.1	-	100.0
25 and over	39.7	33.6	23.9	2.0	0.8	100.0
Furniture, fixtures, office and store machinery and equipment	51.4	19.5	29.0	0.1	0.1	100.0
Under 1	75.4	20.3	4.3	[a]	[a]	100.0
1-25	64.7	27.2	8.1	[a]	-	100.0
25 and over	43.8	18.7	37.3	0.1	0.1	100.0
Transportation vehicles and equipment	47.0	35.7	15.0	2.1	0.2	100.0
Under 1	70.9	23.1	5.7	0.3	-	100.0
1-25	69.1	24.9	6.0	0.1	-	100.0
25 and over	38.1	40.3	18.5	2.8	0.3	100.0

(continued)

TABLE 31 *(concluded)*

Size of Total Assets by Asset Type (million dollars)	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
Production machinery and equipment	42.8	29.3	24.1	1.5	2.3	100.0
Under 1	65.8	27.3	6.8	0.1	0.1	100.0
1-25	54.7	35.0	9.9	0.4	[a]	100.0
25 and over	40.5	29.3	26.0	1.7	2.6	100.0
Livestock, orchards, and vineyards	90.6	9.0	0.4	[a]	-	100.0
Under 1	91.5	8.5	[a]	-	-	100.0
1-25	64.3	34.8	0.9	-	-	100.0
25 and over	99.0	0.2	0.8	[a]	-	100.0
Not identifiable or intangible	46.4	42.8	10.6	[a]	0.2	100.0
Under 1	77.4	16.2	6.3	[a]	-	100.0
1-25	66.3	24.3	9.4	-	-	100.0
25 and over	42.3	46.4	11.1	[a]	0.3	100.0

Source: Table A-10.

Note: Detail may not add to totals because of rounding.

[a]Less than 0.05 per cent.

TABLE 32

Per Cent of Cost of Corporations' Depreciable Assets, Acquired After 1953, in Accelerated Method Accounts, by Service Life and Size of Total Assets, 1959 (LDA Survey)

Service Life (years)	Total Assets (million dollars)		
	Under 1	1 Under 25	25 and Over
3-9	31.8	46.2	59.0
10	26.2	36.5	49.1
11-14	35.4	32.4	73.4
15	30.4	42.6	73.6
16-19	49.7	34.9	31.6
20	28.2	39.3	64.0
21-24	30.5	44.8	52.9
25	32.7	44.0	63.7
26-30	45.0	51.9	70.8
31-35	27.6	41.6	48.4
36-40	56.3	59.2	78.4
41-50	34.2	49.4	44.9
51 and over	27.8	48.8	72.4
Total	32.7	44.6	57.4

Source: Table A-11.

4. *Method, industry, and asset type.* As we have seen, there is considerable variability among major industry divisions in the proportion of assets acquired after 1953 and held in accelerated depreciation accounts in 1959; and relatively little variability in this proportion among major asset types in the LDA survey. When the data are cross distributed by industry division and asset type, a much wider range from one asset type to another is found within any industry in the proportion of post-1953 property in accelerated method accounts. This is clearly seen

in Table 33. For example, taking all industries together, the proportion of post-1953 property under accelerated methods ranged only from a low of 48.5 per cent, in the case of furniture and fixtures, to a high of 53.4 per cent in the case of structures and leasehold improvements and production machinery and equipment. A much greater range among asset types is found in each industry division. In agriculture, the range was from a low of 10 per cent for livestock, orchards, and vineyards (not shown in Table 33) to a high of 24 per cent for transportation vehicles and equipment, while in the public utilities division the range was from a low of about 21 per cent, in the case of furniture and fixtures, to a high of 57 per cent in the case of structures and leasehold improvements. It is interesting to find in Table A-12 that in each major industry division except services and agriculture, the proportion of property in accelerated method accounts is greatest in the case of those asset types accounting for the largest proportion of the industry's total post-1953 facilities.

If industry were an important characteristic determining the extent to which accelerated depreciation methods were used, one would expect little dispersion from one asset type to another around the mean proportion of post-1953 facilities held in accelerated method accounts. Moreover, one would also expect industry rankings to vary little if at all from one asset type to another. Inspection of Table 33, however, reveals considerable variation in industry rankings, suggesting (with the substantial dispersions around the means already noted) that industry characteristics per se were not a major factor in determining the relative amounts of property held under the various methods.

By the same token, if type of asset figured prominently in the decision about which method of depreciation to use, one would expect to find the proportions of a given type of property under the accelerated methods in each of the industry divisions closely clustered around the average, taking all industries together. As noted, distributing the data by industry as well as by asset type materially expands the range of the proportion of each type of asset in accelerated method accounts. Too, one would expect to find relatively stable rankings of asset types among industrial divisions. Again by inspection of Table 33, considerable variation in the rankings is seen.

5. *Method, industry, and service life.* The per cent of the cost of post-1953 facilities under accelerated methods at each service life in each

TABLE 33

Per Cent of Cost of Corporations' Depreciable Assets, Acquired After 1953, in Accelerated Method Accounts, by Industry Division and Major Asset Type, 1959 (LDA Survey)

Industry Division	Structures and Leasehold Improvements	Furniture, Fixtures, Office and Store Machinery and Equipment	Transportation Vehicles and Equipment	Production Machinery and Equipment	All Asset Types
Agriculture, forestry, and fisheries[a]	15.3	17.9	23.9	19.4	17.1
Mining	15.2	14.7	28.1	19.7	19.2
Construction	36.4	22.4	29.4	43.5	37.5
Manufacturing	63.4	66.0	54.3	68.3	65.9
Transportation, communication, electric, gas, and sanitary services	57.2	20.5	56.4	28.7	48.2
Trade	31.4	43.6	29.5	39.3	36.8
Finance, insurance, and real estate	40.5	30.2	25.4	38.9	39.3
Services	38.5	30.5	43.0	49.4	41.2
All industries	53.4	48.5	50.7	53.4	52.9

Source: Table A-12.

[a]Not shown but important in this industrial division is the asset type "livestock, orchards, and vineyards." About 10.1 per cent of this type of property acquired after 1953, held by corporations in agriculture, was in accelerated method accounts in 1959. See note to Table A-12.

major industrial division (LDA survey data) is shown in Table 34. Within each industrial division, a high degree of variability from one service life to another is found in the proportion of property in accelerated method accounts. In each service life, too, the proportion of post-1953 facilities under accelerated methods varied considerably from one industrial division to another. Industry rankings based on proportion of property in accelerated method accounts, moreover, varied substantially from one service life to another, except in the case of manufacturing. In addition, in no industry division is there any apparent tendency for the proportion of property in accelerated method accounts to vary with service life. The data so distributed suggest little influence of service life on method choice, and appear to confirm the earlier observation that industry characteristics were not particularly consequential in this respect either.

6. *Method, asset type, and service life.* Table 35 presents the per cent of post-1953 depreciable assets at each service life for each major asset type, according to the LDA survey. This distribution appears to strengthen the impressions reported above that neither service life nor asset type were significant factors in determining the extent of use of the accelerated depreciation methods. The table reveals substantial variability within any asset type in the proportion of property in accelerated method accounts from one service life to another. For any given service life, similarly, there is a broad range among asset types in this proportion. In addition, the asset type rankings on the basis of this proportion are quite variable among service lives, except for production machinery and equipment which displays only limited change in rank. The service life rankings with respect to this proportion also vary substantially from one asset type to another.

In summary, on the basis of the "Life of Depreciable Assets" survey, it appears that the bulk of depreciable facilities acquired by corporations after 1953 were structures and leasehold improvements and production machinery and equipment. These facilities were heavily concentrated in companies with total assets in excess of $25 million in manufacturing and public utilities. Substantial amounts of these properties—well over half—were in accelerated depreciation accounts. The use of the accelerated methods appears to be more closely associated with company size than with industry or property type characteristics. Service life of facilities seems to have had little influence on choice of method.

TABLE 34

Per Cent of Cost of Corporations' Depreciable Assets, Acquired After 1953, in Accelerated Method Accounts, by Service Life and Industry Division, 1959 (LDA Survey)

Service Life (years)	All Industries	Agriculture, Forestry, and Fisheries	Mining	Construction	Manufacturing	Transportation, Communication, Electric, Gas, and Sanitary Services	Trade	Finance, Insurance, and Real Estate	Services
3	40.7	20.9	44.9	32.6	37.8	60.8	23.0	46.7	28.6
4	33.3	33.0	29.0	37.6	37.4	26.7	32.4	29.7	33.9
5	51.3	21.2	29.1	33.7	68.7	41.7	33.1	33.2	42.1
6	55.7	10.9	19.5	54.8	67.5	60.5	32.5	38.2	65.6
7	56.0	25.1	16.0	57.3	75.5	50.0	30.0	31.8	33.3
8	58.7	19.5	33.6	46.7	68.8	67.1	28.0	35.9	40.1
9	40.5	2.9	56.5	14.5	51.4	10.9	35.4	21.3	63.8
10	40.9	12.3	23.0	40.5	47.0	51.1	23.6	31.4	44.7
11-14	71.1	14.7	29.4	61.1	68.2	91.5	72.2	37.6	45.9
15	69.8	40.7	14.8	36.8	77.1	82.2	18.0	32.6	37.9
16-19	32.0	19.6	47.8	65.5	61.1	9.6	61.9	49.6	35.5
20	57.8	16.1	4.2	14.1	72.0	53.5	37.9	34.7	37.1
21-24	52.2	5.7	13.1	28.9	59.4	47.9	21.8	25.5	59.0
25	56.8	7.9	17.0	16.1	76.1	47.8	25.2	35.9	36.9
26-29	64.9	13.7	90.0	96.9	63.6	67.6	41.8	26.8	49.3
30	73.6	0.5	1.3	2.8	68.8	86.1	59.0	53.1	30.5
31-35	45.8	14.8	30.2	29.1	61.8	46.8	28.8	30.8	45.9
36-39	78.6	-	66.8	49.6	88.0	75.8	78.1	62.2	59.9
40	70.9	22.3	93.4	52.5	86.7	66.1	67.1	58.3	34.4
41-49	32.8	-	50.2	-	71.5	25.7	82.5	16.6	4.8
50	53.9	0.3	45.5	33.4	65.9	58.1	16.0	45.9	74.4
51 and over	70.2	-	60.0	-	64.9	75.5	-	38.9	-
Total	53.6	17.1	23.3	37.5	67.1	48.3	36.9	39.3	41.2

Source: U.S. Treasury Department, Internal Revenue Service, "Life of Depreciable Assets" source book.

TABLE 35

Per Cent of Cost of Corporations' Depreciable Assets, Acquired After 1953, in Accelerated Method Accounts, by Service Life and Major Asset Type, 1959

(LDA Survey)

Service Life (years)	Structures and Leasehold Improvements	Furniture, Fixtures, Office and Store Machinery Equipment	Transportation Vehicles and Equipment	Production Machinery and Equipment	All Asset Types
3	73.9	28.6	22.3	40.4	40.7
4	28.2	45.0	33.3	33.9	33.3
5	31.6	68.3	41.5	48.8	51.3
6	58.7	41.7	60.0	56.9	55.7
7	45.0	33.1	48.0	68.8	56.0
8	43.9	49.9	65.9	61.9	58.7
9	32.7	18.9	8.1	62.6	40.5
10	39.3	30.9	66.9	42.5	40.9
11-14	68.9	67.7	83.0	72.2	71.1
15	46.8	32.8	77.7	79.8	69.8
16-19	42.0	70.4	39.1	29.4	32.0
20	44.0	60.5	38.3	75.1	57.8
21-24	46.6	1.7	61.9	64.2	52.2
25	53.0	70.3	56.0	61.7	56.8
26-29	67.6	71.1	63.7	57.7	64.9
30	72.8	55.0	69.0	80.2	73.6
31-35	44.3	30.9	66.2	53.9	45.8
36-39	79.1	86.8	49.2	72.4	78.6
40	71.4	50.0	83.1	83.2	70.9
41-49	32.2	39.4	46.8	38.1	32.8
50	52.3	4.4	86.5	74.4	53.9
51 and over	73.6	1.4	95.7	38.4	70.2
Total	53.8	48.5	50.8	54.7	53.6

Source: U.S. Treasury Department, Internal Revenue Service, "Life of Depreciable Assets" source book.

Developments in depreciation practice since 1959 might require some amendment of these findings. We observed above, when discussing the number of companies using the accelerated methods, that there was an obvious trend toward greater use of the declining-balance method, and certain features of the 1962 Revenue Procedure 62-21 may have induced more extensive use of SYD. Increasing frequencies of companies using the accelerated methods presumably should be associated with increasing amounts of property in accelerated method accounts. The proportion of property in such accounts, therefore, may very well have continued to grow after the taxable year 1959. Moreover, the differences in this proportion among companies of different size may well have diminished.

Effect of Acceleration on Corporations' Depreciation Allowances, Tax Liabilities, and Capital Outlays, 1959

One of our principal concerns in this survey is to determine the effect of the use of accelerated depreciation methods on total depreciation allowances and the distribution of this effect with respect to company size, industry, and asset type. Of course, the data with respect to any one year's depreciation allowances do not afford a definitive basis for such an analysis, since the distribution of allowances in any given year will be materially affected by differences in service lives and in the age distribution of depreciable property, which changes from year to year. The measure of the financial gain to a taxpayer from using acceleration is the increase in the present value of the stream of allowances generated by the accelerated method over that under the straight-line method, with respect to some relevant time period and asset stock. If service life distributions were substantially the same among all taxpayers and if all taxpayers held to substantially the same pattern of asset acquisitions and retirement, any one year's depreciation charges under each method would afford a useful index of the relative efficiency of each method. Since both of these assumptions are manifestly unrealistic, only limited reliance should be placed on inferences which can be drawn from data pertaining to a single year. With this reservation in mind, we provide in the following pages some rough estimates of the effects of the use of accelerated methods on depreciation allowances in 1959.[15]

[15] For a description of our estimating procedures, see Appendix D.

In the taxable year 1959, a substantial proportion of corporations' depreciation allowances were computed under the accelerated depreciation methods. About 52 per cent of the estimated $14.1 billion of allowances on facilities acquired after 1953 were computed by use of the accelerated methods. Of the $20.5 billion of total allowances in 1959, 36.6 per cent were declining-balance and SYD (Table 36).

Comparison of the proportionate amounts of property under each method with the corresponding proportionate amounts of depreciation allowances, as shown in Table 37, affords a very rough indication of the relative effectiveness of the various methods in generating depreciation allowances.[16] Taking all companies together, the ratio of straight-line depreciation allowances to the total is noticeably smaller than the proportion of the total straight-line property to the total amount of property. The ratio of declining-balance allowances to the total is substantially greater—5.9 percentage points—than the corresponding proportion of property in such accounts to the total, although the difference in these ratios is only 1.3 percentage points in the case of SYD. For companies with total assets of $25 million or more, however, the spread between the proportion of properties and the proportion of allowances under SYD is about the same as that under declining-balance.

Among companies with total assets of $25 million or more, accounting for 47.9 per cent of total allowances on post-1953 property, the accelerated methods were used to compute 65.1 per cent of their total depreciation charges, compared with 46.9 per cent for the middle-size firms, and 35.4 per cent for the smallest companies (Table 38).

Among the major industrial divisions, manufacturing companies accounted for 43.0 per cent of total allowances on property acquired after 1953, and 63.1 per cent of these depreciation charges were computed under the accelerated methods. Public utilities' depreciation was one-fifth of the total and 50.2 per cent of this amount was accelerated depreciation. Excluding the small amounts of depreciation of corporations in agriculture and of those not allocable to an industrial division, accelerated depreciation amounted to from 38 to 46 per cent of the total in each of the other industrial divisions, except in trade (Table 39).

Total corporate depreciation allowances, as shown in *Statistics of*

[16] Only a very rough indication, as has been repeatedly suggested in this discussion. Disparities in the respective proportions result not merely from differences in method but also from differences in the average service lives and ages of the properties in the accounts under the various methods.

TABLE 36

Corporations' Depreciation Allowances, by Method of Depreciation, 1959

Depreciation Allowances with Respect to	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
			Amount (thousand dollars)			
All property on hand in 1959	12,469,218	4,776,176	2,721,996	264,404	261,832	20,493,626
Property acquired after 1953	6,531,027	4,658,657	2,711,801	94,347	108,768	14,104,600
Property acquired before 1954	5,938,191	117,519[a]	10,195[a]	170,057	153,064	6,389,026
			Percentage Distribution			
All property on hand in 1959	60.8	23.3	13.3	1.3	1.3	100.0
Property acquired after 1953	46.3	33.0	19.2	0.7	0.8	100.0
Property acquired before 1954	92.9	1.8	0.2	2.7	2.4	100.0

Source: Tables D-6 and D-8.

[a]See note to Table 25.

TABLE 37

Per Cent of Cost of Corporations' Depreciable Assets Acquired After 1953 and of Depreciation Allowances on These Facilities, by Method of Depreciation and Size of Total Assets, 1959

Depreciation Method	Total Asset Size Classes (million dollars) Under 1	1 Under 25	25 and Over	Total
Straight-line:				
Per cent of property	71.4	61.7	42.5	53.3
Per cent of depreciation	64.4	52.9	32.0	46.3
Declining-balance:				
Per cent of property	22.8	28.6	28.4	27.1
Per cent of depreciation	28.9	36.8	33.8	33.0
Sum-of-years-digits:				
Per cent of property	5.8	9.5	26.2	17.9
Per cent of depreciation	6.5	10.1	31.3	19.2
Other-life methods:				
Per cent of property	0.1	0.2	1.6	1.0
Per cent of depreciation	0.1	0.2	1.3	0.7
Units-of-production:				
Per cent of property	[a]	[a]	1.4	0.8
Per cent of depreciation	[a]	[a]	1.6	0.8

Source: Tables D-4 and D-8.

[a]Less than 0.05 per cent.

Income for 1959, were $20.5 billion. By how much did this total exceed that which would have been claimed had the accelerated methods not been available? [17]

The amount of additional depreciation in any year which is generated by use of the accelerated methods depends on (1) the amount of depreciable property in accelerated method accounts, (2) the service lives

[17] Assuming that the availability of the accelerated methods had no effect on the amount or composition of net capital formation since 1953.

TABLE 38

Corporations' Depreciation Allowances on Assets Acquired After 1953, by Size of Total Assets and Method of Depreciation, 1959

Size of Total Assets (million dollars)	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
			Amount (thousand dollars)			
Under 1	2,678,991	1,200,941	271,522	4,338	1,410	4,157,202
1-25	1,686,663	1,172,886	322,652	5,502	1,118	3,188,821
25 and over	2,165,373	2,284,830	2,117,627	84,507	106,240	6,758,577
Total	6,531,027	4,658,657	2,711,801	94,347	108,768	14,104,600
			Percentage Distribution			
Under 1	64.4	28.9	6.5	0.1	[a]	100.0
1-25	52.9	36.8	10.1	0.2	[a]	100.0
25 and over	32.0	33.8	31.3	1.3	1.6	100.0
Total	46.3	33.0	19.2	0.7	0.8	100.0

Source: Table D-8.

[a]Less than 0.05 per cent.

TABLE 39

Corporations' Depreciation Allowances on Assets Acquired after 1953, by Industry Division and Depreciation Method, 1959

Industry Division	Straight -Line	Declining -Balance	Sum-of-the-Years-Digits	Other-Life Methods	Units-of-Production	All Methods
	Amount (thousand dollars)					
Agriculture, forestry, and fisheries	94,646	34,288	3,422	113	-	132,469
Mining	289,189	188,558	19,525	11,786	36,423	545,481
Construction	315,065	229,807	32,575	71	-	577,518
Manufacturing	2,141,468	2,014,318	1,814,208	38,352	63,272	6,071,618
Transportation, communication, electric, gas, and sanitary services	1,359,760	983,783	428,465	35,245	8,002	2,815,255
Trade	1,054,988	380,565	185,841	7,361	850	1,629,605
Finance, insurance, and real estate	670,797	426,290	116,881	1,262	206	1,215,436
Services	599,339	400,229	110,762	150	15	1,110,495
All industries	6,531,027	4,658,657	2,711,801	94,347	108,768	14,104,600
	Percentage Distribution					
Agriculture, forestry, and fisheries	71.5	25.9	2.6	0.1	-	100.0
Mining	53.0	34.6	3.6	2.2	6.7	100.0
Construction	54.6	39.8	5.6	[a]	-	100.0
Manufacturing	35.3	33.2	29.9	0.6	1.0	100.0
Transportation, communication, electric, gas, and sanitary services	48.3	35.0	15.2	1.3	0.3	100.0
Trade	64.7	23.4	11.4	0.5	0.1	100.0
Finance, insurance, and real estate	55.2	35.1	9.6	0.1	[a]	100.0
Services	54.0	36.0	10.0	[a]	-	100.0
All industries	46.3	33.0	19.2	0.7	0.8	100.0

Source: Table D-8.

Note: Column totals include small amounts of depreciation of companies not allocable to an industry division.

[a]Less than 0.05 per cent.

of these properties, and (3) their age distribution. With respect to any given amount of facilities of a given average age in accelerated accounts, the excess of accelerated over straight-line depreciation will be relatively greater the longer the service life; given the service life, the excess will be smaller the older the property.[18] All three of these factors determine the actual amount of total depreciation allowances, while factors (1) and (2) alone are sufficient to determine the amount of depreciation that would be claimed under straight-line.

In order to compute the difference between actual allowances under the accelerated methods and the amount that would have been claimed under straight-line, it is necessary to know the service lives of the facilities in the accelerated accounts. The LDA study provides quite a detailed distribution of this nature for the taxable year 1959, permitting measurement of this additional depreciation in total, and as among various types of assets, size of company, and major industrial division (the details of this computation are presented in Appendix D).

We estimate that the $20.493 billion of corporate depreciation allowances shown in *Statistics of Income* for 1959 were $2.433 billion larger than they would have been on the same properties had only the straight-line method of depreciation been used.[19] This represents an increase of about 13.5 per cent over the amount to which total allowances would have aggregated had only the straight-line method been used. It is a much larger percentage increase—49.3 per cent—over the amount of depreciation which would have been allowed under the straight-line method on the property in the accelerated accounts. On the property in these accounts, in other words, the use of the accelerated methods made a very substantial difference in 1959 in the amount of depreciation allowances.

Of this $2.433 billion of additional depreciation, about $1.622 billion (66.6 per cent) is accounted for by the excess of declining-balance, and about $.812 billion (33.4 per cent) is the excess of SYD over estimated straight-line charges.

[18] As the average age of the property in the accelerated method accounts increases, the excess of accelerated over straight-line depreciation diminishes and after a point becomes negative. See Chapter 1 above.

[19] The use of other methods resulted in depreciation charges only slightly greater than the amount that would have been allowable under the straight-line method on the properties in these accounts. The effect of the use of other methods on aggregate depreciation allowances, accordingly, has been ignored in this discussion.

Accelerated Method	Additional Depreciation: Million dollars	Additional Depreciation: Per cent of total
Declining-balance	1,621.6	66.6
Sum-of-years-digits	811.9	33.4
Total	2,433.5	100.0

A large proportion, 65.5 per cent, of the difference between actual and estimated straight-line allowances is accounted for by companies with total assets of $25 million or more, as one might expect from the fact that depreciable facilities in accelerated method accounts were heavily concentrated in this size class.

Size of Total Assets (million dollars)	Additional Depreciation: Million dollars	Additional Depreciation: Per cent of total
Under 1	396.7	16.3
1 under 25	442.0	18.2
25 and over	1,594.7	65.5
Total	2,433.5	100.0

Again, as one might suppose from the major industrial division distribution of post-1953 facilities in accelerated method accounts, a substantial proportion, 54.8 per cent, of the estimated additional depreciation generated by use of the accelerated methods was accounted for by manufacturing corporations. Public utilities account for an additional 19.1 per cent of the difference between actual allowances and those which would have been claimed under the straight-line method.

Major Industrial Division	Additional Depreciation: Million dollars	Additional Depreciation: Per cent of total
Agriculture, forestry, and fisheries	10.4	0.4
Mining	17.0	0.7
Construction	28.5	1.2
Manufacturing	1,333.7	54.8
Transportation, communication, and sanitary services	465.8	19.1
Trade	144.5	5.9
Finance, insurance, and real estate	241.1	9.9
Services	192.0	7.9
Total	2,433.5 [20]	100.0

[20] Includes $0.4 million not allocable to a major industrial division.

TABLE 40

Additional Depreciation Generated by Use of Accelerated Depreciation Methods on Corporations' Depreciable Facilities Acquired After 1953, by Industry Division and Size of Total Assets, 1959

Industry Division	Total Assets Size Class (million dollars) Under 1	1 Under 25	25 and Over	All Sizes
Agriculture, forestry, and fisheries	5.7	4.7	-	10.4
Mining	2.2	5.4	9.5	17.0
Construction	16.2	12.3	0.1	28.5
Manufacturing	84.6	195.4	1,053.8	1,333.7
Transportation, communication, and sanitary services	23.8	38.8	403.3	465.8
Trade	67.0	30.3	47.2	144.5
Finance, insurance, and real estate	80.8	93.8	66.5	241.1
Services	116.3	61.2	14.5	192.0
All Industries[a]	396.7	442.0	1,594.7	2,433.5
	Percentage Distribution			
Agriculture, forestry, and fisheries	0.2	0.2	-	0.4
Mining	0.1	0.2	0.4	0.7
Construction	0.7	0.5	[b]	1.2
Manufacturing	3.5	8.0	43.3	54.8
Transportation, communication, and sanitary services	1.0	1.6	16.6	19.1
Trade	2.8	1.3	1.9	5.9
Finance, insurance, and real estate	3.3	3.9	2.7	9.9
Services	4.8	2.5	0.6	7.9
All Industries[a]	16.3	18.2	65.5	100.0

Source: Appendix Table D-9

Note: Details may not add to totals due to rounding.

[a]Column totals include small amounts of additional depreciation not allocable to an industrial division.

[b]Less than 0.05 per cent.

A large proportion of the additional corporate depreciation generated in 1959 by use of accelerated methods was accounted for by manufacturing and public utility companies of substantial size, i.e., with total assets of $25 million or more, as Table 40 shows. These major industrial divisions accounted for 73.9 per cent of the additional depreciation, and the corporations in the largest asset size class in these divisions had, respectively, 43.3 per cent and 16.6 per cent of the total additional allowances. In other words, manufacturing and public utility corporations with total assets of $25 million or more accounted for 59.9 per cent of the total additional depreciation arising from use of the accelerated depreciation methods in 1959. These companies held 50.0 per cent of all corporate depreciable facilities acquired after 1953 and 63.2 per cent of corporations' post-1953 facilities in accelerated method accounts in 1959. For these companies, the additional depreciation was about 56.7 per cent of the estimated amount that would have been allowable under the straight-line method on the properties in accelerated method accounts.[21]

The contribution of the accelerated methods to total depreciation allowances varied widely from industry to industry and size class to size class in 1959, as shown in Table 41. The additional depreciation generated by the accelerated methods represented only 0.2 per cent of actual total allowances claimed under all methods and on all properties by construction corporations with total assets of $25 million or more. In contrast, the corresponding proportion for manufacturing companies with total assets of $25 million or more was 16.7 per cent, and for companies with total assets of $1 million but less than $25 million in the finance division, it was 17.8 per cent.

Income tax liabilities of the companies claiming the additional depreciation were roughly $1.265 billion lower than they would otherwise have been.[22] This is about 5.6 per cent of the total corporate income tax

[21] Not all of the corporations in this size class in these industries used the accelerated methods to the same extent or effect, of course. For some companies, use of the accelerated methods generated much larger additions to depreciation allowances in 1959; for others, the additional allowances were much less than indicated here.

[22] A precise calculation cannot be made since the data are not distributed by taxable income classes. This estimate assumes a marginal tax rate of 52 per cent. Use of the 52 per cent rate very likely overstates the reducton in tax liability, since undoubtedly some of the companies claiming accelerated depreciation were not subject to the surtax rate of 22 per cent but only to the 30 per cent normal tax, while some other companies undoubtedly sustained net operating losses which might never be offset against income in excess of the $25,000 surtax exemption.

TABLE 41

Additional Depreciation Generated by Use of Accelerated Depreciation Methods as Per Cent of Actual Total Depreciation Allowances, by Industry Division and Size of Total Assets, 1959

Industry Division	Size of Total Assets (million dollars)			
	Under 1	1 Under 25	25 and Over	All Sizes
Agriculture, forestry, and fisheries	5.4	12.5	-	6.3
Mining	1.4	2.2	3.3	2.5
Construction	4.5	5.7	0.2	4.7
Manufacturing	7.5	11.0	16.7	14.5
Transportation, communication, and sanitary services	5.6	7.5	10.4	9.7
Trade	6.2	6.4	11.3	7.3
Finance, insurance, and real estate	10.0	17.8	15.5	13.7
Services	15.5	16.5	10.5	15.2
All Industries[a]	8.2	10.6	13.9	11.9

Source: Appendix Table D-9, and U.S. Treasury Department, Internal Revenue Service, "Life of Depreciable Assets" source book.

[a]Includes very small amounts not allocable to any industry division.

liability of $22.525 billion for the taxable year 1959, as measured in *Statistics of Income*.[23] It is the equivalent of a 5.3 per cent reduction in liabilities (Table 42). For the companies which realized these tax savings, of course, the equivalent tax reduction is greater.

Use of accelerated depreciation methods in 1959 had a widely varying impact on the tax bills of corporations in the various industries and size classes, as may be seen in Table 42. A very large proportion of the total tax savings were in manufacturing and public utilities and on the account of corporations with total assets of $25 million or more. The industrial divisions and size classes in which the bulk of the tax

[23] *Statistics of Income, 1959–60, Corporation Income Tax Returns,* Table 1, p. 52.

TABLE 42

Tax Savings Resulting from Use of Accelerated Depreciation Methods, by Industry Division and Size of Total Assets, 1959

Industry Division	Size of Total Assets (million dollars) Under 1	1 Under 25	25 and Over	All Sizes
	Amount (million dollars)			
Agriculture, forestry, and fisheries	3.0	2.4	-	5.4
Mining	1.1	2.8	4.9	8.9
Construction	8.4	6.4	[a]	14.8
Manufacturing	44.0	101.6	548.0	693.5
Transportation, communication, and sanitary services	12.4	20.2	209.7	242.2
Trade	34.8	15.8	24.5	75.2
Finance, insurance, and real estate	42.0	48.8	34.6	125.4
Services	60.5	31.8	7.5	99.8
All Industries[b]	206.3	229.9	829.2	1,265.4
	Per Cent Reduction in Tax Liabilities[c]			
Agriculture, forestry, and fisheries	10.4	8.6	-	8.0
Mining	4.1	3.4	1.3	1.8
Construction	5.7	4.1	0.1	4.3
Manufacturing	5.6	3.5	5.8	5.3
Transportation, communication, and sanitary services	9.6	6.6	6.3	6.4
Trade	4.1	1.8	2.5	2.8
Finance, insurance, and real estate	8.2	8.6	2.2	4.7
Services	23.6	15.0	6.1	16.9
All Industries[b]	7.5	4.4	5.2	5.3

Source: Appendix Table D-9 and U.S. Treasury Department, Internal Revenue Service, *Statistics of Income, 1959-60, Corporation Income Tax Returns*, pp. 67-101.

[a]Less than $.05 million.

[b]Includes very small amounts not allocable to any industrial division. Details may not add to totals because of rounding.

[c]Tax reduction divided by the sum of the tax reduction and tax liabilities shown in *Statistics of Income*.

savings accrued, however, were not those in which the largest percentage reductions in tax liabilities were realized, as shown in part B of Table 42. Taxes of service corporations with total assets of less than $1,000,000 were reduced by an estimated 23.6 per cent of what they would have amounted to had the accelerated methods not been used; these tax savings were about 4.8 per cent of the total. Public utility corporations in the same size class realized tax savings of about 9.6 per cent; these tax savings were less than 1.0 per cent of the total. On the other hand, manufacturing corporations with total assets of $25,000,000 or more accounted for roughly 43.3 per cent of the total tax savings, but reduced their taxes by only 5.8 per cent through the use of accelerated depreciation. Public utilities with total assets of $25,000,000 or more accounted for another 16.6 per cent of the total tax savings; their taxes saved in 1959 were an estimated 6.3 per cent.[24]

No information is available to indicate whether in the years after 1959 the effects of accelerated depreciation on corporate tax liabilities were materially different from those indicated here. As we cautioned at the beginning of this section, only limited inferences may be drawn from the data pertaining to a single year's experience. These data do show, for the taxable year 1959, that the availability of accelerated depreciation methods made a substantial difference in the total amount of depreciation allowances generated on the property on hand in that year, and for many companies, a substantial difference in tax liabilities. If the trend toward an increasing proportion of companies adopting the accelerated methods which was noted during the period 1954–59 continued thereafter, and if this trend is associated with depreciation of increasing amounts of property under accelerated methods, as seems likely, then accelerated depreciation may have had an even more substantial impact on corporate tax liabilities in recent years. On the other hand, the impact of acceleration on depreciation deductions and tax liabilities depends not only on the amount of property in accelerated method accounts but also on the age of these accounts.[25] The likely increase since 1959 in the amount of property under acceleration may

[24] There were 1,377 manufacturing and public utility corporations with total assets of $25,000,000 or more in 1959. The tax savings in this size class in these industry divisions were 59.9 per cent of the total. These companies accounted for about 53.2 per cent of 1959 corporation income tax liabilities (*ibid.*).

[25] The diminishing effect of acceleration is illustrated above, in Chapter 1.

have been offset in whole or in part by the aging of the accelerated method accounts.[26]

These findings suggest that accelerated depreciation could have had a significant effect on the volume of investment in depreciable facilities but they do not afford the basis for a precise estimate of this effect. The interview studies undertaken by Challis Hall and Thomas Stanback, dealing, respectively, with the impact of various features of the corporation income tax on business growth policies and on modernization investment, suggest that business response to changes in tax depreciation rules is substantial. These studies deal primarily with management's reaction to the tax law changes effected in 1962, but the nature of both the inquiries and replies suggest that the response to the 1954 depreciation changes was no less significant. Both studies also bring out that many factors other than taxes predominate in the investment decision, and point up the difficulty in identifying the contribution of tax changes to changes in the volume of capital formation. Our estimate of the effect of accelerated depreciation on capital outlays implicitly recognizes this constraint.

The estimate of the change in expenditures for depreciable facilities is confined to corporate businesses for the single year 1959. It is assumed that the amount of such facilities acquired by corporations in that year is larger than it would have been had accelerated depreciation not been used and that this additional amount reflects the influence of acceleration both on corporate demand for facilities and on the supply of investable funds to corporations (the nature of these effects is described in Chapter 1). The magnitude of the estimated additional investment included in estimated corporate outlays for depreciable facilities in 1959, moreover, depends on the elasticities of the demand and supply functions for these facilities, given the shift in the functions as a result of the use of accelerated depreciation. While the data we have developed in the preceding discussion afford a basis for estimating the shift in the demand and supply functions, an empirical basis for estimating the respective elasticities, unfortunately, is not available. We have, therefore, estimated the amount of additional corporate outlays (in billion dollars) for 1959 depreciable facilities, assuming a range of elasticities in each function. The results are shown in the following table.

[26] See George Terborgh, *The Fading Boom in Corporate Tax Depreciation*, Machinery and Allied Products Institute, Washington, D.C., 1965.

Elasticity of Supply of Investable Funds	*Elasticity of Demand for Depreciable Facilities*		
	−.5	*−1.0*	*−2.5*
.5	1.3	1.8	2.2
1.0	1.3	2.0	2.8
2.5	1.3	2.3	4.0
5.0	1.3	2.5	4.9
10.0	1.4	2.6	5.7

Source: Appendix E.

With a relatively low elasticity of demand (e.g., −.5) for depreciable facilities, the amount of additional outlays included in the corporate total is $1.3 billion, slightly less than the estimated corporate tax savings from the use of accelerated methods in that year. Moreover, this estimate is virtually invariant with changes in the estimated elasticity of supply of investable funds. At a higher elasticity of demand, however, the estimated additional outlays are substantially greater than the tax savings and do vary substantially with the elasticity of supply of investable funds.

Evaluation of these estimates depends in part on one's judgment concerning the appropriate range of these elasticities. In our view, the increase in corporate capital outlays in 1959 as a result of the use of accelerated depreciation was at least equal to the tax savings resulting therefrom and may have been equal to several times that amount, e.g., $5.7 billion.[27]

[27] These estimates ignore the secondary effects on corporate capital outlays, which might have been induced by the expansion of economic activity resulting from the primary increase in investment in capital goods. See Appendix E for a more complete discussion of these estimates.