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Inequalities Arising from the Assessment of Farm Real Estate In South Dakota

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Inequalities Arising from the Assessment of Farm Real Estate in South Dakota

By

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Correction

Pages 3 and 4 should read

Foreword

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Foreward

For generations writers on public finance both at home and abroad have investigated, recognized, and heartily condemned the assessment inequalities and resultant unfairness and injustice of the general property tax. Yet, in spite of the fact that experts universally condemn its administration, the property tax probably will continue to exist through future generations and continue to form the backbone of the tax system.

Although the present study merely substantiates that which is universally known about property taxes, those who have carried on the research feel that in such states as South Dakota, where relatively little research has been done on local problems of taxation, and where the burden of the property tax rests so heavily upon agricultural wealth and income, a statistical check is well worthwhile.

Purposely, this bulletin handles its collected data in a conservative manner. If a thoroughgoing check could have been made in every county, the analysis no doubt would have indicated some conditions more inimical to efficient assessment than those shown throughout this bulletin.

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Summary

Results of the Study—Each type of analysis used in this study proves that the owners of low value farms tend to be over-assessed and those possessing high value farms tend to be under-assessed.

A farm in South Dakota may be assessed from 10 per cent of its sales value to 350 per cent above its sales value.

Better and older farming areas in South Dakota are subject to much less variation in assessment than are the more recently organized areas in which agriculture is a somewhat more precarious occupation.

Defects in Present Administration of the Property Tax—There are approximately 1,500 assessors in South Dakota who perform their duties during the months of May and June in from 10 to 15 days, a condition not well calculated to produce good results.

The only legal qualification to hold the office of assessor in this state is to be a voter in the assessment district.

The assessor may be the best informed man in his district, but generally speaking he lacks knowledge of land appraisal principles.

The Division of Taxation does everything possible to instruct assessors, but it cannot exercise the close, personal supervision that is so essential to efficient local assessment.

The local assessor is poorly equipped, he has no soil maps, nothing to indicate the quality of the land, no scientific knowledge of the principles of land valuation.

Suggestions for an Improved Assessment System—The county unit plan of assessment administration would be superior to the decentralized system now followed.

In the proceedings of the National Tax Association for 1933, the following recommendations for assessment administration are made:

“First—Assessment districts should be large enough to justify the employment of one full-time assessor in each district.

Second—Appointment rather than the election of assessors is desirable since it tends to free them somewhat from undue local influence.

Third—All assessors should be subject to removal for willful negligence or malfeasance in office.”

Adoption of these reforms in administration is basic to successful introduction of practices that will assist in correcting maladjustments in assessment procedure.

The preparation of soil maps, comprehensive land classification, land value and tax maps for each district are essential; these would get the property on the rolls and facilitate proper valuations.

The introduction of some system relating to values to be used as a check on assessments throughout the state should be adopted.

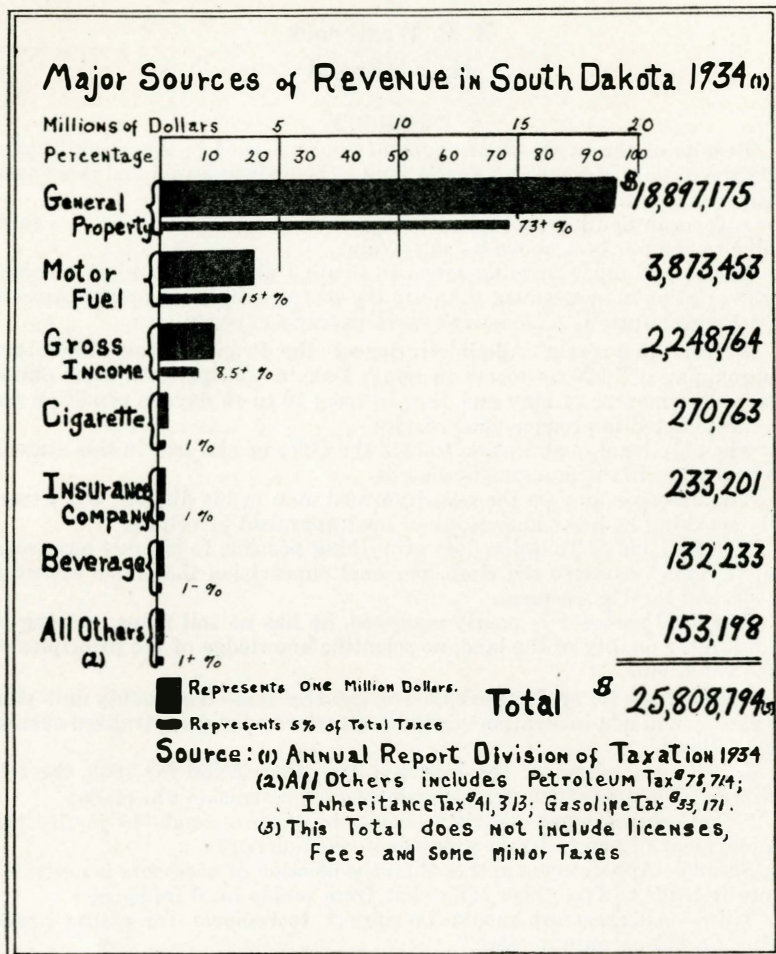


Fig. 1

Part I

Introduction

One of the few beneficial effects of the recent business depression has been the focusing of increased attention on taxes and tax systems. Research agencies, tax commissions, and citizens' tax organizations have given the subject thorough study. As a result of increased knowledge of the severe distress caused by excessive taxation of general property, many states which formerly obtained most of their revenue from general property taxes have resorted to supplementary forms of taxation, such as income taxes, sales taxes and corporation taxes.

In South Dakota several new taxes have been added to supplement those levied on general property, but no recent effort has been made to improve the administration of the general property tax system. In an agricultural state, general property taxes cannot be eliminated, and it is therefore of prime importance that the evils in the system be corrected, and an examination of the assessment, with a view of pointing out some of the injustices perpetuated by it, is fundamental to a reform program. The data in this bulletin show that inequalities in the assessment of property are so widespread that they work heavy and cumulative hardships on certain classes of taxpayers.

The importance of farm real estate in the tax base is made apparent in the Division of Taxation report for 1934. It comprises about 60 per cent of the value of all property in the state and 70 per cent of the value of the total real estate in South Dakota.

The distribution of the tax burden between general property and all other major sources of revenue is shown graphically in Fig. 1 on the opposite page.

TABLE 1.—Major Sources of Revenue in South Dakota, 1934*

General Property Tax	\$18,897,175
Motor Fuel Tax	3,873,453
Gross Income Tax	2,248,764
Beverage Tax	132,235
Gasoline Tax	33,171
Inheritance Tax	41,313
Insurance Company State Tax	233,201
Cigarette Tax	270,768
Petroleum Tax	78,714
Total	\$25,808,794†

* Annual Reports Division of Taxation and State Treasurer, 1934.

† This total does not include licenses, fees and some minor taxes.

Fig. 1 represents general property as paying about 73 per cent of the total tax load. This figure is somewhat high, since fees, licenses, and some minor taxes were not considered when the computation was made. Of the general property tax, farm real estate paid 44.7 per cent, personal property 13.9 per cent, public utility property 12.1 per cent, rural credit land .7 per cent, money and credit 1.1 per cent, and platted real estate 27.4 per cent.

Assessment Laws of South Dakota

Section 5975 of the Compiled Laws of South Dakota, 1929,¹ says:

(1) "The territory of each county not included in any city, incorporated town, or organized civil township shall constitute an assessor's district." The officials in charge of such districts are called county assessors, and hold their jurisdiction over assessments only in lieu of some type of civil organization.

(2) Section 5976 of the Laws² says:

"Each organized civil township shall constitute an assessor's district in which an assessor shall be elected or appointed as provided in the law relating to organized civil townships."

Thus the term county assessor should not mislead one into thinking that South Dakota has a regular county assessment system or even county-wide control over township assessors. Civil townships, incorporated towns and cities have individual assessors, the number in South Dakota totaling somewhat more than 1,500. The Division of Taxation of South Dakota holds an instructional session with the assessors of each county prior to the time of assessment each year. It also publishes each year an assessor's handbook which sets forth the laws regarding assessment together with suggestions based on experience, which might assist the assessor in his listing and valuation. These efforts are praiseworthy, but inadequate. That more training than is possible under the present organization of the state office should be given in order to prepare the assessor to satisfactorily discharge his duties will be shown later.

No qualifications or eligibility rules are stipulated for an assessor except that he be a voter and a resident of the district in which he is chosen. These rules are essentially political and say nothing regarding the assessor's fitness to serve in this capacity.

That the intention of the law is the attainment of equality and uniformity in taxation is evident from Section 6700 of the laws, quoted in part as follows:

"All property shall be assessed at its true and full value in money. In determining the true and full value of real and personal property, assessors shall not adopt a lower or different standard of value because the same is to serve as a basis for taxation, nor shall he adopt as a criterion of value the price for which property would sell at auction or at a forced sale, or in the aggregate with all property in the town or district; but he shall value each article or description of property by itself and at such a sum or price as he believes same to be fairly worth in money."³

The term "true and full value in money" is defined in Section 6666 to mean the "usual cash selling price at the place where the property to which the term is applied shall be at the time of assessment."⁴

The only possible construction to put on the foregoing as it relates to a criterion of value is that the selling price on the open market should serve exclusively as the basis for valuation and that no other consideration should enter into such valuation.

Sections 6671 and 6708 indicate that the property subject to taxation should be valued each year, assessors to perform these duties in the months of May and June and the value to be as of May 1.⁵

1. Article 7, Section 5975, Compiled Laws of South Dakota, 1929.

2. Article 7, Section 5976, Compiled Laws of South Dakota, 1929.

3. Article 2, Section 6700, Compiled Laws of South Dakota, 1929.

4. Article 1, Section 6666, Compiled Laws of South Dakota, 1929.

5. Article 2, Sections 6671 and 6708, Compiled Laws of South Dakota, 1929.

A fair and equitable tax valuation by the assessor is absolutely necessary to a fair distribution of the tax on general property. Boards of equalization can do something toward remedying inequitable assessments as between tax districts, but it is next to impossible for them to correct unfair individual valuations. It should be remembered that under-assessment in some cases does not reduce taxes as a whole; it simply throws more of the burden on those people whose property is assessed at "full and true value" or above, since levies apply equally to all real property within each taxing district.

Source of Data

The data for three of the counties included in this study—Pennington, Lyman and Gregory—were obtained from the material collected in the CWA farm finance project of the United State Department of Agriculture, supervised in South Dakota by the Department of Agricultural Economics of South Dakota State College. Samples for the remaining 17 counties were gathered under the direction of the authors. Use was made of Federal Emergency Relief Administration workers in the various counties in the copying of information from the deeds and original assessment records.

Cards modeled on Farm Finance Form 3 of the United States Department of Agriculture were used to record all transfers of real estate. On each transfer card appeared the names of both parties to the sale, the dates of transfer and recording, the number of acres included in the sale, the sale price, assessed valuation, and type of deed. The information contained on these cards was used as the basis for this study. In all cases, assessment values of the date nearest that of the sale were used.

In all, 1,758 transfers were analyzed. The numbers chosen for each county are as follows:

Brown, 39; Clay, 75; Codington, 40; Corson, 79; Davison, 41; Dewey, 78; Gregory, 144; Grant, 83; Haakon, 79; Hand, 101; Lyman, 136; Meade, 135; Minnehaha, 62; Pennington, 120; Roberts, 117; Sanborn, 84; Union, 111; Walworth, 91; Yankton, 86; Ziebach, 67.

The Sales Data Approach

Although there has been some criticism of the use of sales data in a study of this kind, this approach is generally recognized as the practicable method by which to compare actual assessments and the level at which, theoretically and actually, they should be made. Sale values have court and legislative sanction as is indicated by the laws of the various states, which in nearly all cases specify that sale values shall be the amounts at which assessors shall list property on the tax roll.

Further than this, there is justification for using this approach in that a freely consummated sale implies agreement of both parties as to the worth of the property, and except in cases where one or the other or both of the parties is incompetent to judge the value of the real estate in question, the price agreed on is likely to be near the actual and true value. In any case, it seems logical to assume that the sales price is a reasonable criterion of value and that adoption of another would very likely confuse rather than help.

It is not to be expected of an assessor that he duplicate market valuation in every case. Assessments should be considered well made if they come within 10 per cent of this value on either side; that is, within a range of 20 per cent. This "zone of tolerance" should be sufficient to allow for errors in valuation by both the assessor and parties to the transfer, and it is reasonable to expect that each individual assessment come within this zone.⁶ If assessments do not come within this zone, it is certain that one taxing unit or taxpayer is being benefited at the expense of another.

Procedure in Choosing Sample

As many bona fide transfers as each of our selected counties' records would yield for the period 1925-1934 were taken. Standards were determined in advance as to what constituted a bona fide sale, and unless the information on a deed met all the tests, it was not included in the sample. That is, all family transfers, trades, forced sales, and sales which seemed not to have the full consideration stated in the deed were eliminated. Persons who filled out the form were instructed to run through pages of the deed records and copy those conforming to the standards. This method of selection was used because it was presumed that the transfers chosen this way would be widely scattered throughout the county and, in fact, a careful perusal of the range and township numbers included in the description of the land transfers indicated that this was the case.

No intentional bias was exercised in the choice of low value property in preference to that of high value, but the final result shows that there were more of the cheap farms than of the high value farms included, probably because there were more of them sold during the period. Classification in the statistical analysis was made to show separately the manner in which these cheaper farms were assessed, but their unusually high assessment ratios did influence the average level of assessment for the county as a whole, because it is the low value property which is generally over-valued by the assessor. A large number of these properties would tend to make the percentages of assessed to sale value higher than if the number of transfers analyzed were distributed quite evenly among properties of low, medium, and high value. No sales of land of less than 20 acres were included and no county was eliminated because it seemed to be unrepresentative.

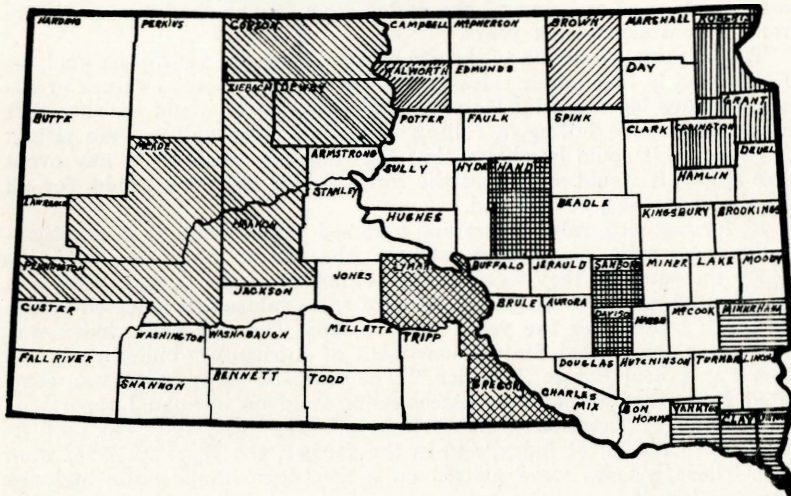
Counties from all sections of the state were chosen so as to show as nearly as possible the assessment conditions as they exist not only in a limited portion of the state where conditions might be unusually good or bad, but to give an approximate picture of the situation in all parts of the state. The shaded and cross-hatched counties on the accompanying outline map of South Dakota (Fig. 2) are the ones included in the study. Other counties could well have been included had the time and funds permitted.

Scarcity of data in some counties probably is due in part to the fact that few farms have been sold during the period considered, and to a greater extent to the fact that many of the deeds recorded do not con-

6. Compare R. W. Nelson and D. W. Mitchell, "Assessments of Real Estate in Iowa and other Midwestern State," pages 10 and 11.

tain the true consideration of the sale, it being optional with the purchaser as to whether he shall say in the deed exactly what price he paid. The authors estimate that out of every twenty deeds examined, there is only one which states the actual sales price on it. Since a sufficient sample could not be obtained for a short period of years, it was found necessary,

SOUTH DAKOTA



Group I
Group II
Group III

Group IV
Group V
Group VI

Fig. 2.—Selected groups of counties in South Dakota from which the data was taken.

in order to make the study possible, to use nine years' sales in about half the counties and seven in the rest. A great majority of the cases occur before 1932, with perhaps 70 coming in the years 1933 and 1934. Consequently, these two last years exercise very little weight in the determination of averages and measures of dispersion calculated. Ordinarily, taking this long a period could not be justified because sales valuations or assessed valuations, or both, will rise or decline in a manner which would cause assessment ratios to be unrepresentative of the actual assessment to sales percentage for any one year, and the measures of dispersion to be larger than the actual assessment situation would warrant them to be. Circum-

stances in South Dakota during the years 1925-1934 made it possible to use this period without seriously distorting the results. The explanation of this will be taken up in the next section.

Assessed Value and Sale Value Trends

As has been mentioned, transfers made over a period of seven to nine years have been utilized in this study. No attempt was made to analyze the data by years since the number of sales in any one year was too small to bear analysis. It was necessary therefore to regard the sales and assessments used as being of one period even though they did cover several different assessment years.

The principal objection to the use of more than one year in an analysis of this kind is that either sales values lag behind assessed values or assessed values lag behind sales values. A rising ratio would indicate that sales values were falling, a falling ratio that sales values were rising. If, however, it could be shown that lags did not occur, or in any event were slight, it would seem that the force of this objection would, for all practical purposes, be nullified.

If, for instance, sales values and assessed values declined in practically the same ratio, assessment ratios at the end of the period would be nearly the same as they were at the beginning of the period. With this idea in mind, an index was constructed of sales values and assessed values for South Dakota for the years 1913 to 1933. The sale value index was taken from the United States Department of Agriculture bulletin entitled "The Farm Real Estate Situation."⁷ The assessed value index was computed from average per acre assessments as given in annual reports of the Division of Taxation of South Dakota.⁸ The year, 1913 was used as the base in the latter index, and in the former, the years 1912-14, were used. These indexes were plotted on a semi-logarithmic scale and are shown in Fig. 3.

From 1925 to 1933 assessed and sales values declined at approximately the same rate. Because of this fact it was concluded that the use of sales and assessments over the period 1925-1933 was justified since these sales and assessed values did stay much in the same ratio.⁹ Of course, this relationship was not perfect and because of this, assessment ratios and deviations are somewhat higher than they would have been had only one year's sales been used; but it is clear that the principal reason for the high assessment ratios is, in most cases, inaccurate actual assessment.

Plan of Analysis

Two separate bases were used for the classification of the data in this investigation. First, the sales and assessed values were considered without reference to county lines, and second, they were reclassified with reference to each county from which they were taken. The first part of the study is divided into three sections. The accuracy of the local assess-

7. Stauber, B. R., The Farm Real Estate Situation, United States Department of Agriculture Circular No. 60, 1932-1933.

8. State of South Dakota, Division of Taxation Reports, 1915-1933.

9. NOTE: South Dakota farm real estate never really participated fully in the prosperous years of the twenties; the down sloping line is truly indicative of this situation. See Fig. 3.

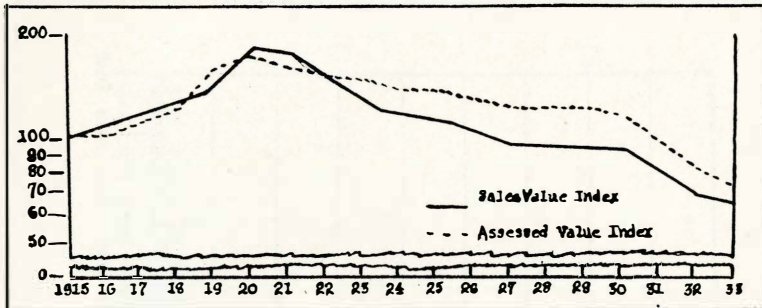


Fig. 3.—Index showing changes in assessed and sales values per acre, South Dakota, 1915-1933

ment is shown graphically (Fig. 4) by a frequency diagram having on its horizontal axis assessment ratios and on its vertical axis the number of farms. The influence of value per farm on the level of assessment is tested by grouping the real estate transactions in a cross classification according to the percentage of the individual average farm unit sales value and assessment ratios. (See Fig. 5, page 18.) The influence of values per acre is tested by a similar grouping, this time having percentages of individual county average per acre values on the vertical axis, and as before, assessment ratios on the horizontal axis. (See Fig. 6, page 20.)

The second part of the statistical analysis uses four classifications. The first step taken was to find the average level of assessment in each county and to calculate how close to this level the individual assessment was likely to come. The influence on assessments of value per farm, of value per acre, and of the number of acres in a farm are studied, and the results are given under appropriate headings.

Results of the study, which includes an exposition of the manner in which the use of an "average" affects the assessment ratio, are given in summary from beginning on page 30. Tax delinquency as influenced by inequitable assessment is touched upon, defects of the present administration are reviewed, and finally some suggestions are made whereby assessments could be improved.

Definition of Terms

The terms, "assessment ratio," "level of assessment," and "percentage of assessed value to sale value," are used interchangeably. Average assessment ratio, average level of assessment and average percentage of assessed value to sales value indicate a mean that has been arrived at by dividing the sum of the assessed values in any classification by the sum of the sales values in the same classification. Individual assessment ratios are the percentages of assessed value to sale value for any one transfer.

The average deviation measures the dispersion about the mean, the mean in this study being the average assessment ratio. An average deviation of 35, for instance, is a larger percentage of a mean of 100 than it is of a mean of 200. This fact makes it necessary to consider the size of

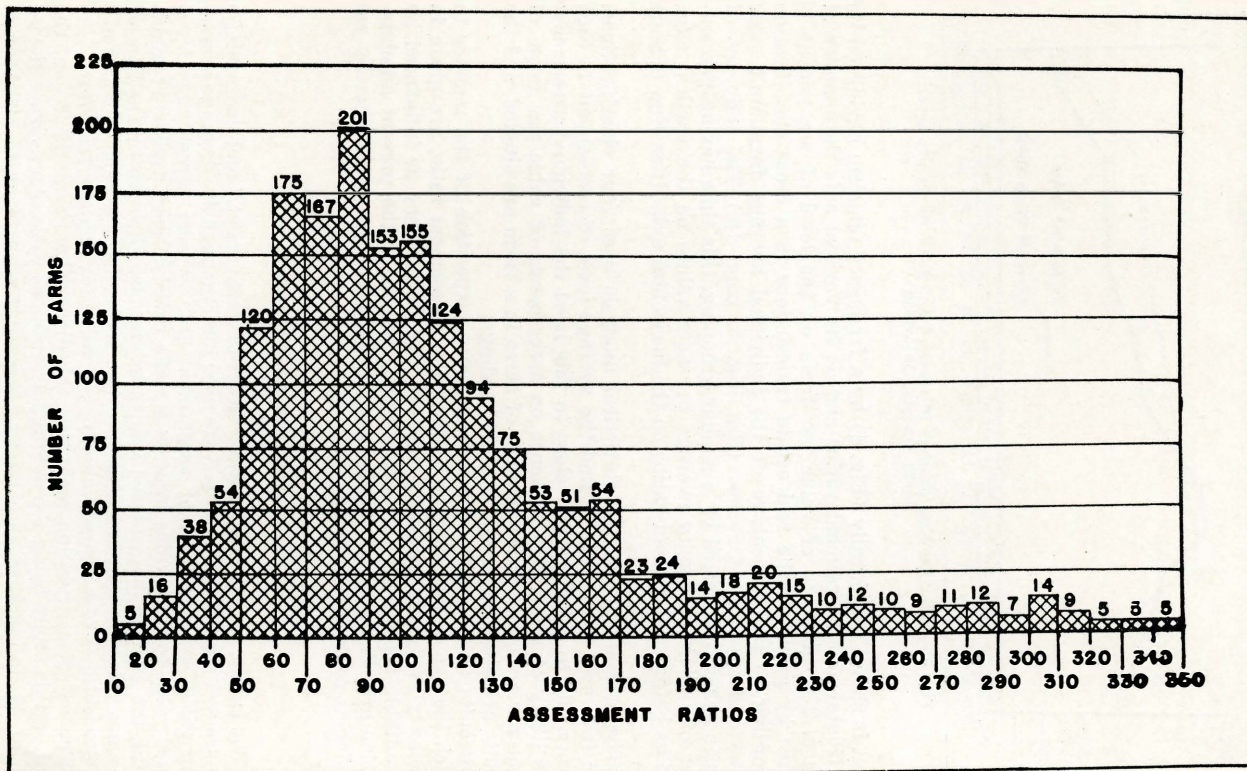


Fig. 4.—Frequency distribution of assessment ratios of Farm Real Estate Transfers, 1925-1934

the means when comparing two average deviations. In order to arrive at figures that may be compared without reference to the mean, coefficients of dispersion were calculated. These are the percentages which the average deviations are of the means and are useful in making comparisons between value classes and counties.¹⁰

Another term used frequently is "regressivity." It relates to rate structure, meaning that as the amount assessed diminishes the rate increases. As a deliberate method of levying taxes, it is almost unknown today, but in actual practice it still exists as a result of the tendency to over-valuation of low value property.

Part II

Analysis of Data on State-Wide Basis

In this portion of the study, all the transfers in the sample were thought of as issuing from one jurisdiction only; that is, county lines were disregarded, and the data were considered as being statewide in character. Before beginning the analysis, it would be well to recall that the law requires that assessed value equal sales value. Do assessments as now performed achieve this end? The following discussion takes up this problem from various angles and in some detail.

Accuracy of Assessment.—The accuracy with which assessors perform their duties is graphically shown by Fig. 4. In all, there were 1,758 transfers considered. Of these, 929 were assessed at below 100, the ideal, and 829 were assessed above 100. In percentages these are .53 and .47, respectively. Of those assessed at below 100, a total of 233 fall in the 10 to 60 group, and 696 fall in the 60 to 100 group. Converting these numbers to percentages, the former constitutes 25 per cent, and the latter 75 per cent of all those properties under 100. Of those properties assessed at more than 100, a total of 667 fall in the 100 to 200 group, and 162 fall in the 200 to 350 group. The 100 to 200 group accounts for 80 per cent of those properties assessed over 100, and the 200 to 350 group accounts for 20 per cent of all those transfers assessed at more than the ideal. Of all the 1,758 farms, 13 per cent were assessed at from 10 to 60, forty per cent were assessed from 60 to 100, 38 per cent at from 100 to 200, and 9 per cent at 200 to 350.

Remembering the "zone of tolerance" previously discussed, (a good assessment would have a ratio somewhere between 90 to 110 per cent of sale value) it is clear that the assessment pattern, as here described, is not even approximately satisfactory. Only 308 of the 1,758 properties considered fell within this zone, and this is only about 18 per cent of the total number of transfers. The extreme scatter about the ideal assessment would make it quite possible for an owner of property, assuming levies the same, to pay taxes on valuations from 10 to 350 per cent of what they should be, depending upon the position that his farm occupied in the pattern. Judging from the diagram, however, it is probable that he would be assessed at somewhere between 50 and 120 per cent of sales value, since it is between these points that the greatest frequencies lie.

¹⁰. See appendix A for illustration of method of computing average deviation and coefficients of dispersion.

Relation of Assessments to Value per Farm.—The purpose of this analysis was to discover if any relationship existed between the value of the farm and the rate at which it is assessed. A scatter diagram was constructed having assessment ratios on the horizontal scale and various percentages of average farm value on the vertical scale. (See Fig. 5, page 18.) Table 2, page 17.

Because the average values of farms in the different counties vary considerably, it was decided not to use absolute figures on the vertical scale of the scatter diagram. In Haakon county, the average sales value per farm is \$1,492, while in Clay county the average is \$9,442. In Haakon county, a farm which sold for, say \$5000, would be a high value farm and hence likely to be under-assessed, while in Clay county a \$5,000 property would be of low value and hence likely to be over-assessed. Middle classes in the table would contain values from both counties, and would show a dispersion not technically correct if absolute figures had been used on the vertical scale of the table. To avoid this difficulty, the scatter diagram was constructed so as to have assessment ratios on the horizontal scale and percentages of the average sale value per farm by counties on the vertical scale. In each county the average of the sales values was taken and percentages of this average were figured, running from 10 to 350 per cent of the mean value.¹¹

In Haakon county, for example, 30 per cent of this mean was \$448. All items up to \$448 were then classified according to their individual assessment ratios, and in the 10 to 30 per cent class on the vertical scale. Fifty per cent of the mean was \$748, and the items between \$448 and \$748 were classified as of their assessment ratios on the horizontal scale, and in the 30 to 50 class on the vertical scale, and so on up to the 350 per cent and over class. This was done for each county, and it remedies any inconsistency that might have existed as a result of classifying the assessment ratios according to absolute farm valuation. Fig. 5 shows that those farms whose values were 30 per cent or less of the average county values were likely to be assessed from less than 20 to 350 per cent of their sale value.

The farms in the 30 to 50 per cent group were subject to almost the same influence, as were those in the 50 to 70 per cent group, but it is noticeable in all groups above 70 per cent that as the farms become more valuable, assessments become less and less scattered. The table pictures clearly the regressive character of the tax on farm land.

In order to summarize the data contained in Fig. 5, page 18, average assessment ratios, average deviation and coefficients of dispersion were calculated for each percentage of average value class. These are presented in Table 2. The steady decline of the average assessment ratio from the lowest to the highest percentage class forcibly brings home the fact that regression of assessment plays a prominent role in our present property tax system.

Table 2 also points out that not only may the low value farms be expected to be placed on the tax rolls at more than they are worth, but that this type of property, as is shown by the coefficient of dispersion, will undoubtedly be valued at figures that vary widely from the average for that class. This is a characteristic not attributable solely to the lower

11. See Appendix B for tables of average values and percentages of average values.

TABLE 2.—Average Assessment Ratios, Average Deviation, and Coefficients of Dispersion When Data Are Classified According to Percentage of Average Value per Farm.

Percentage of Average Farm Value	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient Of Dispersion %
10- 30	261	162	64	70
30- 50	286	127	43	34
50- 70	250	113	38	34
70- 90	210	101	28	28
90-110	151	96	28	29
110-130	127	92	21	23
130-150	122	85	24	28
150-170	88	83	18	21
170-190	74	81	17	21
190-210	49	74	17	23
210-230	36	73	17	23
230-250	21	77	17	23
250-270	10	72	19	26
270-290	12	73	15	21
290-310	7	55	21	38
310-330	15	67	15	22
330-350	7	66	18	27
350-over	32	60	14	23

priced farm groups, although there is a tendency for this type of farm to be scattered more widely throughout the assessment pattern. A high coefficient of dispersion would indicate that assessments were made in a slipshod and haphazard manner. It is indicative of the fact that assessments as made are largely guesses of an individual assessor, rather than scientific appraisals performed by experts.

The curve shown in Fig. 5 was fitted free hand to the average assessment ratios for each percentage of average value class taken from Table 2. It shows clearly the relation between value and assessment.

Relation of Value per Acre to Assessment.—The next step taken was to determine whether or not value per acre causes the assessor to exercise any bias. The method of analysis in this section is similar to that of the last, except, of course, that a weighted average value per acre for each county was used in place of the average value per farm.¹² When the scatter diagram, Fig. 6, was constructed, it was made similar in all respects to Fig. 5, with the one exception that the vertical scale has on it percentages of average per acre sales value rather than average per farm sales value. Fig. 6 shows regression as being even more pronounced than does Fig. 5, probably because, as will be explained later, the assessor is influenced in his valuation more by value per acre than by value per farm. Here again it is apparent that the lowest percentage classes contain those valuations, the assessment ratios of which are most widely scattered, and that also those farms in the middle and higher classes have assessment ratios much less widely scattered and much lower.

Average assessment ratios, average deviations and coefficients of dispersion were figured for each percentage class of the average per acre value. These are presented in Table 3, page 19.

Many of the same tendencies as were discernible in Table 2 are present in Table 3, the major difference being that in the latter, regressivity is shown to be much more pronounced. Class 10 to 30 of the per acre valuation analysis has an average assessment ratio of 199 per cent which

12. See Appendix C for tables of average values and percentages of average per acre sales values.

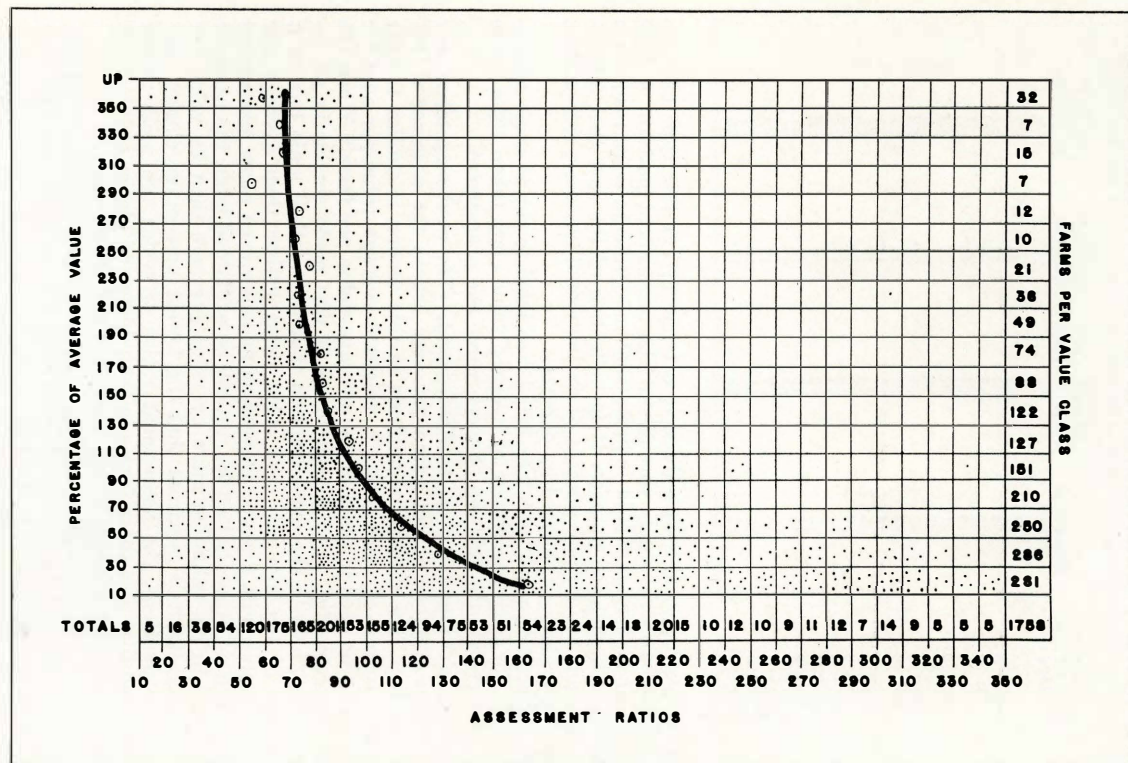


Fig. 5.—A scatter diagram showing the relationship between assessment ratios and the various percentages of average farm values together with average assessment ratios for each percentage class

TABLE 3.—Average Assessment Ratios, Average Deviations and Coefficients of Dispersion When Grouped According to Average Value per Acre

Percentage of Average Acre Value	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient Of Dispersion %
10- 30	129	199	70	35
30- 50	252	150	46	31
50- 70	259	121	36	26
70- 90	272	105	25	24
90-110	218	90	18	20
110-130	181	90	17	19
130-150	145	77	15	20
150-170	93	68	14	20
170-190	80	67	12	18
190-210	38	66	14	21
210-230	39	80	37	46
230-250	18	54	11	20
250-270	13	77	26	34
270-290	6	59	20	34
290-310	4	55	7	12
310-330	1	33	—	—
330-350	2	36	2.5	17
350-over	8	46	18	39

may be compared to 162 of the same class for the value per farm analysis. The assessment ratios for the value per acre analysis are generally higher than those for the value per farm analysis in those classes below 90 per cent of average value. For the classes above 90 per cent average assessment ratios are generally lower in Table 3 than they are in Table 2.

As an additional means of bringing to the readers the fact that acres of low value are assessed at higher rates than high value acres, the average assessment ratios were transferred from Table 3 and plotted on the scatter diagram. (See Fig. 6, page 20.) The curve merely shows pictorially the condition of assessment that has already been indicated numerically by Table 3.

In the section just finished, every attempt has been made to analyze the data in such a manner that the results will show truly representative, actual conditions. However, putting into one classification transfers from all parts of the state is open to various objections. Fiscal needs may vary greatly from county to county. It is therefore quite possible that assessments are deliberately raised in order to meet the financial needs and keep within levy limitations set by law. In the study there are several counties that would seem to show this tendency. It might be possible that these counties would account for nearly all the frequencies with high assessment ratios in the lower percentage classes that have been exhibited in Figs. 5 and 6. If this were true, some counties would be assessing their property equitably and others inequitably. In order to test the accuracy of this suggestion, it was decided to analyze the data having reference to the county as a unit.

Part III

Data Considered by Counties

Analysis of the data by counties was made for the purpose of showing assessments as they are performed within the various counties included in the study. Thus, the unit of observation in this section will be the county considered individually rather than the state. Results obtained perhaps

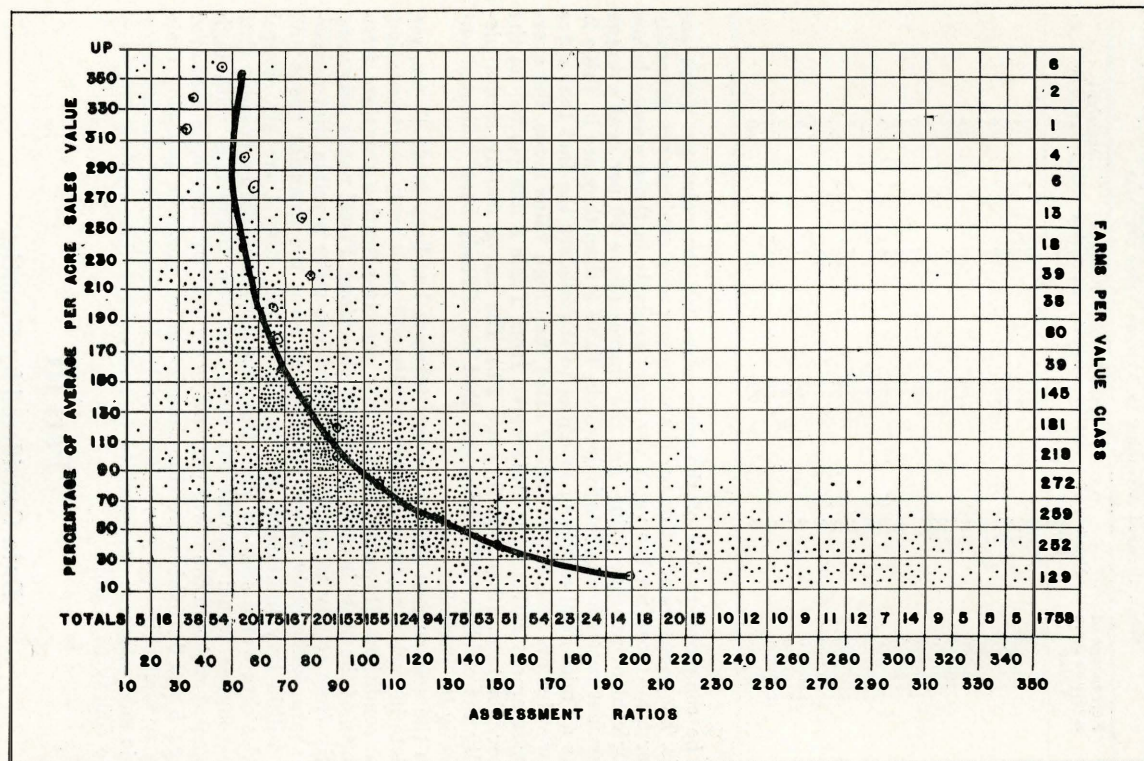


Fig. 6—The relation between assessment ratios and the percentage of average per acre sales value with average assessment ratios

are not as conclusive as they were in the statewide analysis, due to the difference in the number of transfers which support the conclusions reached. It will be found that minor discrepancies exist, but in general outline the same conditions that were noticeable in the last part also obtain within each county.

Four separate classifications were used in this part of the study:

First, regardless of the sales value, the data were grouped by counties; second, the data were grouped according to value per farm; third, according to value per acre; and fourth, according to the number of acres per farm. These analyses are taken up in order.

County Assessments Compared.—In Table 4 the data are sorted by counties and analyzed to measure the average levels of assessment and the dispersion from the means. The counties are grouped so that those close geographically will be near each other in the table because there is a definite tendency for the average levels of assessment, average deviations, and coefficients of dispersion to be somewhat similar for those counties which are located in the same area.

The average levels of assessment are smaller for some groups of counties than for others. Those in the southeast corner of the state seem to be assessed nearer the sales standard than those west of the Missouri River. (Refer to map on page 11 for location of counties studied.) There is a wide difference in assessment ratios. Thus Meade county has one of 70 per cent and Haakon has one of 127 per cent. These are neighboring counties, but it is seen that Haakon very generally over-assesses her farms while Meade under-assesses hers. Sales prices obtained from Haakon county were nearly all low, which might account for the extremely high average percentage of assessed to sale value there. Other counties to the north are under-assessed, which would indicate that the ratio in Haakon was out of line due either to the sample or deliberate over-assessment, it being possible that valuations were raised in order to have a tax base sufficiently large for the fiscal needs and still keep within the levy limitations set by law.

Coefficients of dispersion are lower in the east-river counties which shows that assessments are not only better from the standpoint of the average level attained, but also from the standpoint of dispersion about the average. Union county, with a coefficient of .19 is the best, and Ziebach with .59 is the poorest from this angle. The fact, among other things, that the land market in the Union county area is more settled will account in part for the great disparity shown.

There can be little doubt that the work of assessment is poorly done in South Dakota. A state levy, uniform for all counties, would bear very differently on them since valuations in several counties are above sales values and below in others. The wide scattering of all the accuracy measures used here makes it plain that some central authority is needed to so regulate inter-county assessments that they may become more equitable. The State Division of Taxation has attempted to do this, but lack of adequate appropriations, sufficient personnel, and an assessment system that is not adaptable to central control measures makes it difficult for them to accomplish much in this direction.

The level of assessment would be unimportant if all property were listed at the same percentage of sale value in all tax-levying jurisdictions

TABLE 4.—Number of Farms, Average Levels of Assessments, Average Deviations and Coefficients of Dispersion for Twenty Selected South Dakota Counties.

County	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
GROUP I				
Clay	75	84	23	27
Minnehaha	62	87	29	34
Union	111	84	16	19
Yankton	86	98	24	24
GROUP II				
Davison	41	118	36	31
Hand	101	93	35	38
Sanborn	84	109	27	24
GROUP III				
Codington	40	88	27	31
Grant	83	84	25	30
Roberts	117	105	32	30
GROUP IV				
Brown	39	94	32	34
Walworth	91	80	19	24
GROUP V				
Gregory	144	99	28	27
Lyman	136	100	51	51
GROUP VI				
Corson	79	74	32	43
Dewey	78	69	29	42
Haakon	79	127	60	47
Meade	135	70	24	34
Pennington	120	80	33	41
Ziebach	57	85	50	59

and if the same millage levy were applied to all; but if, for example, the level of assessment in one county were 90 per cent of sales value and 70 per cent in another, a levy of four mills by the state would exact from the first a tax proportionately greater than from the second, because the assessors in the first county more nearly approximated "true and full value." The same reasoning may be applied to a county levy on its townships.

That those are not the greatest defects of our assessment administration will be shown in the next section which points out the manner in which properties of different values are placed on the tax duplicates.

Relation Between Value of Farms and the Level at Which they are Assessed.—To make this analysis it was necessary to group the farms in every county in sales value classes. The class intervals could not be made uniform because of the difference in average values as between different sections of the state. However, when those counties which are near each other geographically are compared, one finds that the intervals chosen here are equal in nearly all cases, due of course, to the similarity of land prices in the same sections of the state.

When Tables 5, 6, and 7 were made, the counties were arranged so that those of the same area would be near each other in the tables. This facilitates comparison of those sections which should exhibit somewhat the same characteristics. A study of Table 5 will show that the counties of each group do bear marked similarity. (Reference to the map on page 11 will enable one to fix the location of the groups of counties included in the study.)

The most striking feature which Table 5 displays is the over-assessment of low value property as compared with that of higher value.

In all counties as the table is read there is a progressive decline in the average level of assessment. In Clay county, for instance, the level of assessment drops from 126 in the lowest class, to 63 in the highest class, which means simply that those who own the farms of higher value pay a smaller proportion of taxes than they rightfully should, while those who probably can less well afford to pay taxes are forced to do so on valuations which are set at more than their farms are worth. In all counties studied, farms of least value are assessed at a high percentage of sales value.

The average deviation portrays the manner in which the various items in each classification cluster about the mean, the mean being, in this study, the weighted average percentage of assessed to sale valuations. It will be noted in the table that these figures are less for high value property than for that of low value property, and they decline fairly regularly, indicating that not only are low-priced farms over-assessed but that they are assessed with much less accuracy.

To secure a comparable measure of variation, the coefficient of dispersion was calculated. This figure being the percentage which the average deviation is of the mean, the necessity of inspecting the sizes of the various means when comparing one value class with another was eliminated. The average deviation is of service only in measuring the dispersion in individual classes. The coefficient shows practically the same characteristic the other two measures do, that is, progressive decline from low value classes to high, again showing greater variation in assessment of low priced farms. The tendency in this case, however, is somewhat weaker.

Although the calculations in any class may be a few points off one way or another due to insufficient samples, it is unquestionably true that the general tendencies of assessments of farm property in South Dakota are accurately portrayed by this analysis.

Further proof that the system as now operating leads to higher taxes on lower values is given in the next section which classifies the same data on the basis of value per acre.

Relation between Value per Acre and the Level at which it is Assessed.

—Having found that assessors definitely are biased in the determination of value when the sales value per farm is considered, the next step taken was to discover whether assessors are influenced by sale value per acre. Examination of Table 6, which is arranged in exactly the same manner as Table 5, will show that the two tables exhibit the same tendencies in nearly every detail. Without any doubt, high value acres escape a portion of their just burden of tax and those acres in the lower value brackets pay more than they should. Aside from variations caused by inadequacies in the sample, the three measures of assessment accuracy, i.e., percentage the assessed value is of sale value, average deviation, and coefficient of dispersion—all decline progressively from low to high value acreage.

Reading down Table 6, one finds the last statement to be true except, as has been mentioned, when the class is distorted by the inclusion of transfers whose characteristics are unrepresentative of the class and large enough to pull the average off. With a practically unbroken regularity, average levels of assessment decline from low value properties to high value properties just as was the case in the analysis on the value

TABLE 5.—Number of Farms, Average Levels of Assessment, Average Deviations, and Coefficient of Dispersion when Grouped According to Value per Farm, 20 Selected South Dakota Counties.

Sale Value \$	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
GROUP I				
Clay				
0- 5,000	20	126	14	11
5,000- 7,500	12	91	25	27
7,500-10,000	14	95	36	38
10,000-12,500	10	81	12	15
12,500-15,000	4	83	21	25
15,000-17,500	8	70	10	14
17,500-over	7	63	9	14
Minnehaha				
0- 2,500	13	144	55	38
2,500- 5,000	11	102	47	46
5,000- 7,500	9	118	31	26
7,500-10,000	5	113	18	16
10,000-12,500	13	98	27	28
12,500-15,000	3	70	10	14
15,000-over	8	64	16	25
Union				
0- 2,500	4	163	37	23
2,500- 5,000	14	107	21	20
5,000- 7,500	22	99	22	22
7,500-10,000	22	93	20	22
10,000-12,500	15	78	17	22
12,500-15,000	10	73	7	10
15,000-17,500	7	85	7	8
17,500-20,000	8	81	6	7
20,000-over	9	70	8	11
Yankton				
0- 2,500	2	175	37	21
2,500- 5,000	31	123	40	38
5,000- 7,500	14	107	31	29
7,500-10,000	13	105	20	19
10,000-12,500	13	85	22	26
12,500-over	13	85	16	19
GROUP II				
Davison				
0- 2,500	5	146	88	55
2,500- 5,000	5	137	36	26
5,000- 7,500	7	159	35	22
7,500-10,000	10	125	22	18
10,000-12,500	11	95	12	13
12,500-over	3	74	6	8
Hand				
0- 1,000	7	227	81	35
1,000- 2,000	20	168	55	33
2,000- 3,000	16	163	50	31
3,000- 4,000	8	120	14	12
4,000- 5,000	10	110	21	19
5,000- 6,000	8	95	76	80
6,000- 7,000	3	81	17	21
7,000- 8,000	4	93	42	45
8,000- 9,000	11	72	19	26
9,000-10,000	4	91	22	24
10,000-over	10	57	14	25
Sanborn				
0- 2,000	5	182	81	44
2,000- 3,000	5	176	42	24
3,000- 4,000	8	163	56	34
4,000- 5,000	13	149	38	26
5,000- 6,000	8	95	15	16
6,000- 7,000	11	111	13	12
7,000- 8,000	3	101	5	5
8,000- 9,000	10	97	17	18
9,000-10,000	5	100	5	5
10,000-over	16	95	21	22
GROUP III				
Codington				
0- 2,500	13	143	61	43
2,500- 5,000	8	102	22	22
5,000- 7,500	7	121	21	17
7,500-10,000	4	88	17	19
10,000-12,500	3	85	6	7
12,500-over	5	69	20	29
Grant				
0- 2,500	7	204	73	36
2,500- 5,000	17	115	40	34
5,000- 7,500	13	86	22	19
7,500-10,000	16	100	20	20
10,000-12,500	8	76	18	28

TABLE 5.—(Continued)—Number of Farms, Average Levels of Assessment, Average Deviations, and Coefficient of Dispersion when Grouped According to Value Per Farm, Twenty Selected South Dakota Counties

Sale Value \$	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
12,500-15,000	7	82	12	14
15,000-17,500	10	71	10	15
17,500-over	5	63	15	24
Roberts				
0- 2,500	54	155	56	36
2,500- 5,000	24	112	28	25
5,000- 7,500	20	106	30	28
7,500-10,000	9	86	11	12
10,000-over	10	79	10	13
GROUP IV				
Brown				
0- 2,500	10	145	51	35
2,500- 5,000	11	91	21	23
5,000- 7,500	9	100	44	44
7,500-10,000	6	82	22	27
10,000-over	3	72	36	50
Walworth				
0- 1,000	8	134	57	43
1,000- 2,000	12	152	69	45
2,000- 3,000	14	100	27	27
3,000- 4,000	8	108	35	32
4,000- 5,000	11	83	20	24
5,000- 6,000	10	79	18	23
6,000- 7,000	2	70	14	20
7,000- 8,000	3	65	3	5
8,000- 9,000	6	59	15	25
9,000-10,000	5	74	12	16
10,000-over	12	70	11	16
GROUP V				
Gregory				
0- 1,000	9	181	70	39
1,000- 2,000	16	161	61	38
2,000- 3,000	16	131	42	32
3,000- 4,000	19	113	49	43
4,000- 5,000	11	96	36	38
5,000- 6,000	6	130	64	49
6,000- 7,000	16	101	27	27
7,000- 8,000	13	82	23	28
8,000- 9,000	10	98	15	15
9,000-10,000	4	88	18	20
10,000-11,000	9	84	12	14
11,000-12,000	4	75	14	19
12,000-over	11	85	15	18
Lyman				
0- 1,000	29	353	169	48
1,000- 2,000	41	133	43	32
2,000- 3,000	26	105	28	27
3,000- 4,000	6	106	32	30
4,000- 5,000	15	106	37	35
5,000-over	19	74	39	53
GROUP VI				
Corson				
0- 1,000	25	153	53	35
1,000- 2,000	22	91	34	37
2,000- 3,000	14	70	19	27
3,000- 4,000	10	73	31	42
4,000- 5,000	3	30	46	153
5,000-over	5	52	11	21
Dewey				
0- 1,000	21	155	44	28
1,000- 2,000	24	96	26	27
2,000- 3,000	12	63	20	32
3,000- 4,000	9	65	12	18
4,000- 5,000	5	50	12	24
5,000- over	7	44	22	50
Haakon				
0- 500	8	241	44	18
500- 1,000	24	218	58	26
1,000- 1,500	14	173	51	29
1,500- 2,000	12	115	24	21
2,000- 2,500	6	93	19	20
2,500- over	15	90	22	24
Meade				
0- 1,000	44	126	31	24
1,000- 2,000	47	83	26	31
2,000- 3,000	15	69	17	25
3,000- 4,000	9	70	14	20
4,000- 5,000	8	48	16	32
5,000- over	12	56	16	29

TABLE 5.—(Continued)—Number of Farms, Average Levels of Assessment, Average Deviations, and Coefficient of Dispersion when Grouped According to Value Per Farm, Twenty Selected South Dakota Counties

Sale Value \$	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
Pennington				
0- 500	10	130	59	33
500- 1,000	35	137	52	40
1,000- 1,500	19	99	32	32
1,500- 2,000	16	80	14	17
2,000- 2,500	8	56	13	23
2,500- 3,000	9	74	11	14
3,000- 3,500	7	76	36	47
3,500- 4,000	2	43	6	2
4,000- 4,500	12	57	3	6
4,500- over	12	75	33	22
Ziebach				
0- 1,000	14	129	49	38
1,000- 1,500	21	91	18	20
1,500- 2,000	5	92	11	12
2,000- 2,500	10	70	6	9
2,500- over	7	75	18	13

per farm basis. In the first value class of each county the coefficient of dispersion is also high, exhibiting a condition that obtains in all but three of the first classes of all counties studied, and showing that assessments are both high and extremely varied about the mean assessment in the case both of farms and acres of low value.

It is impossible to state exactly just at what valuation per acre over-assessment sets in since average values per acre are very different in various sections of the state. However, it may be stated as a general thing that those properties whose value is less than the average for the county may be expected to be over-assessed and that those properties whose value is more than the average for the county may be expected to be under-assessed, under-assessment becoming more pronounced as the valuation per acre increases.

The implication that would naturally be drawn from this is that one should not own property that is much under the average value for the county if he does not want his property to be over-assessed.

Relation Between Number of Acres and Assessment Level

It is evident from Table 7 that an assessor is not influenced particularly by the apparent size or number of acres in a farm. This analysis of five counties on number of acres in farm base shows no significant bias in assessment; rather the average deviation, the coefficients of dispersion, and the average assessment ratios are characterized by great irregularity. Table 5, which classifies the transfers on the basis of value per farm, and Table 6, which classifies the same data on the basis of value per acre, do, however, exhibit regularly declining ratios as value per farm and value per acre increase. It is believed that value per farm as well as number of acres in farm are not in any great degree effective in the determination of average assessment ratios but that value per acre is the motivating factor.

The number of acres in a farm apparently has no influence on the percentage of assessed value to sales value and it follows that value per farm also could have little influence. Total sales consideration are resultants of numbers of acres in a farm times per acre values. In order to attain a high total farm valuation within any specified county, (that

TABLE 6.—Number of Farms, Average Levels of Assessment, Average Deviations, and Coefficients of Dispersion when Grouped According to Value per Acre, Twenty Selected South Dakota Counties

Sale Value \$	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
GROUP I				
Clay				
0- 50	8	123	51	41
50- 60	4	134	22	16
60- 70	9	119	21	18
70- 80	6	92	12	13
80- 90	7	111	33	30
90-100	8	68	4	5
100-110	12	93	26	28
110-120	5	74	12	16
120-over	16	62	9	14
Minnehaha				
0- 40	8	201	46	23
40- 60	6	138	23	17
60- 80	18	107	23	21
80-100	3	73	18	25
100-120	11	88	6	7
120-140	8	85	25	29
140-over	8	56	11	20
Union				
0- 50	8	145	47	32
50- 60	12	124	18	15
60- 70	7	85	20	24
70- 80	9	90	9	10
80- 90	10	87	9	10
90-100	9	96	13	14
100-110	16	82	4	5
110-120	8	80	5	6
120-130	15	77	4	5
130-over	17	64	5	6
Yankton				
0- 50	10	157	36	23
50- 60	7	121	25	21
60- 70	12	114	23	20
70- 80	12	93	26	28
80- 90	7	115	24	21
90-100	7	93	9	10
100-110	8	108	19	18
110-120	6	85	4	5
120-130	9	79	14	18
130-over	8	66	11	17
GROUP II				
Davison				
0- 30	3	184	70	38
30- 40	6	204	58	28
40- 50	5	134	31	23
50- 60	7	98	25	26
60- 70	8	104	12	12
70- 80	8	103	21	20
80- over	4	78	2	3
Hand				
0- 10	14	212	73	34
10- 20	28	163	57	35
20- 30	21	117	19	16
30- 40	13	84	14	17
40- 50	5	75	11	15
50- 60	14	69	18	26
60- over	6	44	18	41
Sanborn				
0- 20	7	178	75	42
20- 30	14	160	38	24
30- 40	18	121	17	14
40- 50	8	99	18	18
50- 60	20	108	13	12
60- 70	9	88	10	11
70- over	8	79	16	20
GROUP III				
Codington				
0- 20	6	131	14	11
20- 30	2	129	18	14
30- 40	6	124	20	16
40- 50	4	107	9	8
50- 60	7	98	8	8
60- 70	5	64	9	14
70- over	10	61	12	20
Grant				
0- 20	6	212	48	23
20- 30	9	131	39	29

TABLE 6.—(Continued)—Number of Farms, Average Levels of Assessment, Average Deviation, and Coefficients of Dispersion when Grouped According to Value per Acre, Twenty Selected South Dakota Counties

Sale Value \$	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
30- 40	5	123	32	26
40- 50	11	110	13	12
50- 60	18	88	17	20
60- 70	6	87	7	8
70- 80	6	69	19	28
80- 90	8	78	10	12
90- over	14	61	8	13
Roberts				
0- 10	8	280	30	11
10- 20	25	171	37	22
20- 30	29	120	30	25
30- 40	17	110	24	22
40- 50	13	103	15	14
50- 60	10	86	10	12
60- 70	12	78	10	13
70- over	3	64	12	18
GROUP IV				
Brown				
0- 10	3	144	57	40
10- 20	4	158	33	21
20- 30	13	108	37	34
30- 40	7	94	25	27
40- 50	6	78	20	26
50- over	6	74	25	34
Walworth				
0- 10	11	177	57	32
10- 20	24	104	23	22
20- 30	24	89	12	13
30- 40	19	69	7	1
40- 50	7	59	4	6
50- over	6	46	11	23
GROUP V				
Gregory				
0- 10	10	217	113	52
10- 20	31	149	52	35
20- 30	22	95	42	44
30- 40	20	102	26	25
40- 50	21	101	17	17
50- 60	17	91	10	11
60- 70	16	74	12	16
70- over	7	84	13	15
Lyman				
0- 5	14	174	95	55
5- 10	46	140	40	29
10- 15	28	100	48	48
15- 20	20	102	16	16
20- 25	9	93	62	63
25- 30	8	72	11	15
30- 35	6	41	16	39
35- over	5	52	5	9
GROUP VI				
Corson				
0- 5	17	165	63	38
5- 10	26	110	28	25
10- 15	15	65	20	31
15- 20	11	59	12	20
20- over	10	40	10	25
Dewey				
0- 10	21	155	44	28
10- 20	24	96	26	27
20- 30	12	63	20	32
30- 40	9	65	12	18
40- 50	5	50	12	24
50- over	7	44	22	50
Haakon				
0- 5	24	259	48	19
5- 10	25	165	39	24
10- 15	16	103	26	25
15- over	14	82	15	18
Meade				
0- 5	37	117	26	22
5- 10	55	82	18	22
10- 15	14	66	13	19
15- 20	14	54	16	30
20- over	15	52	14	27

TABLE 6.—(Continued)—Number of Farms, Average Levels of Assessment, Average Deviation, and Coefficients of Dispersion when Grouped According to Value per Acre, Twenty Selected South Dakota Counties

Sale Value \$	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
Pennington				
0- 5	28	146	55	38
5- 10	34	114	37	32
10- 15	23	63	19	30
15- 20	15	63	10	2
20- 25	11	59	17	29
25- 30	4	111	42	38
30- over	5	69	38	55
Ziebach				
0- 5	10	138	60	43
5- 10	25	92	17	18
10- 15	16	79	16	20
15- over	6	66	14	21

is, high in comparison with other values in the county) on relatively homogenous rural land it seems apparent that it is necessary to have both a reasonably large number of acres and high values per acre.

It is thus the usual thing for farms of high value to have low assessment ratios because of the tendency for the assessor to under-assess acres of high value. It is not always the case, however, for farms of comparatively high value may be such because the farm is exceptionally large while at the same time the value per acre may be low. Fuller discussion of this will follow.

It seems logical to believe that value per acre should be the deciding factor since farm valuations always take the form of a certain specified amount for each acre. Assessors think in terms of the value per acre and arrive at total valuations by a process of multiplying the per acre appraisement by the number of acres. Low assessment ratios would result from this process whether the number of acres was large or small if the value per acre was high. For example, an 80-acre farm is sold for \$100 an acre, and a 160-acre farm is sold for the same amount per acre. The sale price of the first would be \$8,000 and that of the second would be \$16,000. It is assumed, of course, that as is indicated by the same acre valuation, the land is alike. When the assessor came to value each piece of land, his major consideration would be to determine how much each acre was worth. According to our analysis, mere size would mean little to him, if in his estimation, the smaller farm was worth equally as much as the larger farm per acre, and he would value both at a figure that results in the same assessment ratio. That is to say, he would be likely to record his figures in a manner somewhat similar to this example: \$5,000 for the first and \$10,000 for the second, which give assessment ratios of 62.5 for each.

It should be added that in the case of a farm, the total value of which is large as a result of a large number of acres and a small per acre valuation, the ordinary assessed value would be high, perhaps even higher than the sales value. On the other hand, if a farm had a small total value which resulted from a small number of acres, a number so small that even although the acre value was high, the total value would be low in comparison to the remainder of the farms in the sample, the assessed value would probably be less than the low total value. The fact that the

summary figures, Table 5, on the value per farm base do show that farms of high value have low assessment ratios, does not in any way invalidate the above statement because it would only be necessary for the majority of the high priced farms to be under-assessed in order to have low assessment ratios, leaving it possible for many farms of high total value to have high assessments, and farms of low total value to have low assessments.

Value per farm being the result of value per acre in connection with the number of acres, and the size of the farm not varying greatly in these counties, there seems no question but that the highly varied sales prices and the assessed values result mainly from variations in per acre valuation and prices. Thus, even though it is true that average assessment ratios decline with increased total farm values, it is seen that values per acre has the effect on the assessment ratio rather than farm value.

Results of Study

Each type of analysis employed in this study has been consistent in showing that the owners of low value farms are likely to be over-assessed. Besides this, it has been shown that properties are assessed at anywhere from 10 to 350 per cent of their sale value. Great unfairness is the inevitable result of such assessment. Neighbors may have farms that are identical in sale value, yet pay taxes on valuations that are widely different. Worse than this, the owner of a poor farm may have to pay a part of the taxes that the owners of better farms really should pay. Levels of assessment vary appreciably between counties, which, while not affecting intra-county levies, would give rise to inequality if a state tax were levied. Better and older farming areas are subject to less variation in assessment than are those areas in which agriculture is a somewhat more precarious occupation. Lower coefficients of dispersion in the southeastern counties, which contain the best farms, form the basis for the above conclusion. The land market in western South Dakota, being not so well established as that in the southeastern part of the state, is conducive to greater variation since value is more of an estimate or guess.

A possible explanation of the tendency to over-assess poor farms and under-assess those more valuable is that assessors under our system find it impracticable to actually view and value individually every piece of property in their district; consequently, they employ an average value per acre for the whole taxing unit. This method can have no other result than to bring about a type of taxation that penalizes the man whose farm is rocky, soil poor, and improvements few. On the other hand, it will directly benefit the man whose farm is worth more than the average value used. The property owner whose real estate is increased in value by such improvements as fences, ditches, and good barns, generally does not have these improvements assessed at a sum that approximates their true value. The tendency noticed in this study of the effect of value per acre on assessments, (that low-priced acres were over-assessed, and high value acres under-assessed) "points to a tendency of the general property tax to become a tax on bare land values."¹³ In South Dakota this statement would be something of an exaggeration. It is true, however, that the tax

13. G. B. Clark and O. B. Jesness, "A Study of Taxation in Minnesota with Particular Reference to the Assessment of Farm Land," page 21.

TABLE 7.—Number of Farms, Average Levels of Assessment, Average Deviations, and Coefficients of Dispersion when Grouped According to the Number of Acres in Farm, Five Selected South Dakota Counties

Acres in Farm	Number of Farms	Average Level Of Assessment %	Average Deviation %	Coefficient of Dispersion %
Clay				
0- 40	5	90	32	36
40- 80	16	87	30	35
80-120	25	84	22	26
120-160	9	105	30	28
160-200	20	77	20	25
Codington				
0- 40	7	61	19	31
40- 80	8	106	13	12
80-120	5	105	25	23
120-160	2	119	65	55
160-200	11	104	25	24
200-over	7	73	20	28
Corson				
0-160	13	75	35	47
160-320	49	73	34	46
320-480	10	68	37	54
480-640	3	105	15	15
640-over	4	73	20	27
Lyman				
0- 80	12	59	26	44
80-160	24	99	35	36
160-240	68	99	41	41
240-320	8	89	28	32
320-400	15	103	53	51
400-over	9	109	63	58
Pennington				
0- 80	8	49	23	47
80-160	21	81	31	38
160-240	72	81	34	42
240-320	4	65	14	21
320-400	8	95	41	44
400-480	1	67	—	—
480-560	4	84	35	42
560-over	2	72	53	74

on real estate is unquestionably regressive in its operation. In addition to the tendency to use averages and to under-value improvements, three other things may be mentioned that may help to explain why the tax is regressive:

First, the assessment period is so short that the assessor is likely to be unduly hurried; second, carelessness may enter in, and third, either deliberate or unconscious discrimination seems to be an inevitable concomitant of the system and as a result true valuations are not put on the tax rolls.

It is somewhat beyond the scope of this study to examine the effects of regressivity on the taxpayer assessed, but a mere indication of some of them will serve to emphasize the importance this shortcoming has in influencing various phases of a taxpayer's affairs.

If a prospective purchaser of a small plot of ground had any idea that he would be over-taxed, it is probable he would not buy, if he saw the matter in its true light, since the disproportionately heavy tax he would have to pay would render it impossible for him to profit on his investment. The general belief that it is almost always the small property owner who is least able to pay taxes seems sufficient to warrant making a change that will give him an equal advantage, in-so-far as taxation goes, with his richer neighbor. Should taxes be too large, it is likely that,

especially in a period of depression, the small farmer would become delinquent in his tax payments, and thus liable to dispossession after the lapse of the period of time prescribed by law. Conditions such as these make one realize that something should be done to alter the situation.

Defects of the Present Assessment System¹⁴

Under the widely decentralized assessment system now employed in South Dakota, we have over 1,500 assessors. According to the law, assessments should be made during the months of May and June, but the Division of Taxation estimates that the work is usually done in from 10 to fifteen days. This is not a condition well calculated to produce the best results.

Under the law it is only necessary to be a voter in the district in order to be eligible for the office of assessor. Nevertheless, knowledge of taxation principles, land valuation, and the law as it relates to assessment is a prime requisite to the efficient performance of the office of assessor. However, the salary and tenure of the position is scarcely such as to attract men of good qualifications.

Many assessors are able men in their own occupations, but lack the special qualifications of a good assessor. They may do the assessing as a sideline, or out of a sense of duty, or to get some extra cash. There are undoubtedly many competent assessors, but they are present in spite of the system rather than because of it. However, good assessments in one district do not remedy poor assessments in another, and it is the essence of the uniformity rule that all property be assessed according to true and full value in all districts.

While the Division of Taxation does everything in its power to adequately instruct the local assessors, it cannot exercise the personal supervision over individual assessments that is so necessary to equitable valuation as between individuals and taxing units. These local officials are not directly responsible to anyone except the voters in the home district. Although the law distinctly states that no criterion of value shall be used except the full and true cash value, it is difficult to make assessors use this one standard universally. According to state tax authorities, some of them seem to think the term "uniformity" applies to the valuation of the property rather than the manner in which the levy is laid and proceed to value all the property in their district "on the average." That is, regardless of the selling prices of the land they place high value property on the rolls at the same rate they do the low value property, and thus grossly violate the principle on which the system is built. Summarizing the tendency of the assessors to adopt varying criteria of value, the Division of Taxation says:

"The combination of inability, lack of desire and absolute refusal on the part of local assessors to apply a standard of value fixed by law to all classes of property brings about a condition of affairs in the assessment rolls that of itself ought to convince anyone of the need of a change in the system of listing and valuation of property for the purpose of taxation."¹⁵

14. Compare Third Annual Report, South Dakota Department of Finance, pp 151-159.

15. Third Annual Report, South Dakota Department of Finance, page 156.

A further indictment of the system resides in the fact that the average assessor is too likely to be subject to local influence. After all, the assessor under the present system in a great majority of cases, is a neighbor of the man whose property he assesses, and if he did not yield to influence in a case of this kind, he would be a paragon of virtue. If he is sincere in his purpose, and many of the men are, he is likely to be met by tactics designed to cover up real values on the part of the owners and can be sure that he will not be elected to the office again, which condition, of course, would be accepted gladly by a man of this type. The next assessment then would have to be taken over by a man without experience or by one whose scruples would not prevent his listing property on the rolls at a rate satisfactory to his constituents.

Even if one conceded the highly disputable point that all assessors were equally intelligent and willing to follow the letter of the law, there would still be overwhelming handicaps. Our local assessors are equipped only with listing blanks and last year's assessment books. The assessment book gives the name of the owner, the description of the property and the amounts at which the property was valued last year. The assessor has no soil maps, nothing to indicate the quality of the land, no scientific knowledge of the principles of land valuation, no statistics as to sales values during the period of time immediately preceding. In short, he has nothing to work with except ideas he has picked up in practical observation and which may or may not be good. There is great likelihood that they will not coincide with those of the assessor in the next district. Under such conditions, it is a practical impossibility for the review boards to properly allocate the taxes among all the taxing units.

The township review board meets late in June and is allowed a week for its work. It has a right to review the assessment of any property owner. Its members hear complaints and grant relief in some cases. The Division of Taxation makes this observation about the manner in which this board performs its duties:

"A very common custom among this class of officers is to meet on the day prescribed by law and wait for complaints to be made. They take action on the matters complained of, then wait for the next complaint. If no complaint is made, they 'sign up' the books and adjourn. Nothing is done towards checking over the assessments of individuals all over the township, . . . in fact, the work of the assessor is taken for granted."

The county equalization board may not adjust individual assessments except on appeal, and in any case would not have the time or personnel necessary to go over all assessments. This board can raise or lower the valuation of any class of property, but this rather aggravates than corrects improper initial assessment. The state board has the power to change assessments, but again finds it physically impossible to review all individual assessments. The board does run down this kind of valuation on complaint, but cannot be expected to do so otherwise. Percentage changes may be made in property classes, but here as in the county, it cannot correct initial assessments.

In view of circumstances like those just related, it seems strange that some attempt has not been made by the legislature to remedy the conditions of assessment. The State Tax Commission in its first biennial report recommended adoption of the county assessor plan, and at various times since then attempts have been made to improve assessment admin-

istration. It has been the opinion of tax commissioners that the legislature did not appreciate fully the seriousness of the situation, and if the analysis presented in this bulletin has done anything to emphasize the regressive effects of the general property system as administered at present, the time and labor involved in the compilation of these figures will have been rewarded many times over.

Suggestions for an Improved Assessment System

It is the consensus of opinion of tax associations and tax experts that the county unit plan of assessment administration would be superior to the decentralized system now followed.

In the proceedings of the National Tax Association for 1933, the following recommendations for assessment administration are made:

First, that assessment districts should be large enough to justify the employment of one full-time assessor in each district and that he should receive a salary large enough to permit him to devote full time to his work. The county is the unit suggested as being preferable although smaller districts may be erected if the population is sufficiently large to justify it.

Second, the association "favors strongly" the appointment rather than election of assessors since they believe that, other things being equal, the appointive official has a greater opportunity to do his work efficiently. However, this is a controversial point so the association makes no specific recommendation, but it does insist that the term of office be at least four years in order that the official may have time enough to justify his policies by their results.

Third, that all assessors be subject to removal for wilful negligence or malfeasance in office. The power of removal should rest in the office of the state commission which should be authorized either on its own motion or on complaint to discharge the assessor. In states which now employ this device, it has been found that although the power is seldom exercised, its existence has a healthful effect on the administration of the office.

The erection of some such type of administration is a necessary antecedent to improvement in individual assessments. The very nature of the present system precludes adoption of reforms because the term of office is too short, the tenure is too uncertain, the pay is too small, and concentration of control and responsibility is negligible. Contingent on adoption of the county unit plan, many improvements may be made. It then will be possible to more nearly effect valuations that conform to instructions laid down by law and by so doing to vastly improve present conditions.

After having introduced this reform in administration many practical expedients may be adopted by which individual, and as a consequence, total assessment may be improved. A comprehensive system of land classification, the basis of which would be the uses of land, would greatly facilitate the assessor in his task of valuation. Soil maps, land value maps and tax maps for each district would help in getting all the property on the rolls, and increase the likelihood that the property valuation would be within ten per cent, at least, of the sale value.

Another means of improving the typical procedure now followed in South Dakota would be to introduce collection of data relating to value. Information as to the value per acre of lands in any classification would

be ascertained through the use of the same type of data used in the analysis of this study, supplemented by practical observations of the assessor and close attention on his part to bulletins relating to land values published by the United States Department of Agriculture, the Experiment Station of the State College, and the State Department of Agriculture.

Consistent assessment of land by a competent staff of assessors who would check their results constantly with studies made of the character and qualities of land in the district, the changes in the uses to which land is put, the changes in sales considerations, the change in rentals and all other factors that bear upon the value, would without question bring a large measure of order and fairness into the now haphazard, slipshod and discriminatory methods by which valuations are placed on the tax duplicates.

Appendix A

An example of the procedure followed in calculating the average and measures of dispersion follows:¹⁶

Proprietor	Sale Value	Assessed Value	Assessment Ratio	Deviation from Average Assessed Value 103.5*	Deviation Times Sale Value
A	\$ 1,500	\$ 2,759	183.9	80.4	1,206.00
B	10,000	8,940	89.4	-14.1	1,410.00
C	1,566	752	48.0	-55.5	869.13
D	400	860	215.0	111.5	446.00
E	700	2,700	385.7	282.2	1,975.40
F	4,200	1,405	33.4	-70.1	2,944.20
G	3,600	4,143	115.0	11.5	414.00
H	3,000	4,300	143.3	39.8	1,194.00
	\$24,966	\$28,859			\$10,458.73

* $28,859 \div 24,966 = 103.5$ per cent, the assessment ratio

$10,459 \div 24,966 = 42$ per cent, the average deviation

$42\% \div 103.5\% = 41$ per cent, the coefficient of dispersion

To obtain the individual assessment ratios such as 183.9, 89.4, etc., the assessed valuations were divided by the sale valuations for each farm. The operations shown above were used in the computation of all averages and dispersion measures used in the study, the only variation being in the classifications.

Appendix B

TABLE 1.—Total Sale Values, Number of Transfers and Average Farm Values, Twenty Selected South Dakota Counties

Group	Total Sale Value Of Transfers	Number Of Transfers In Sample	Average Sale Value
GROUP I			
Clay	\$ 708,143	75	\$ 9,442
Minnehaha	557,446	62	8,991
Union	1,155,222	111	10,407
Yankton	659,968	86	7,674
GROUP II			
Davison	324,583	39	8,323
Hand	497,486	101	4,926
Sanborn	571,766	84	6,727
GROUP III			
Codington	238,987	40	5,974
Grant	729,640	83	8,682
Roberts	462,931	105	3,957
GROUP IV			
Brown	185,266	39	4,750
Walworth	494,007	91	5,429
GROUP V			
Greory	806,847	144	5,603
Lyman	372,491	136	2,739
GROUP VI			
Corson	170,679	79	2,160
Dewey	177,973	78	2,282
Haakon	117,850	79	1,492
Meade	282,968	135	2,096
Pennington	240,176	120	2,001
Ziebach	85,731	57	1,504

16. Compare W. H. Dreesen, A Study in the Ratios of Assessed Values to Sale Values of Real Property in Oregon, page 37.

TABLE 2.—Percentage of Average Per Farm Sale Values, Twenty Selected South Dakota Counties

Class	GROUP I				GROUP II			GROUP III			GROUP IV	
	Clay	Minnehaha	Union	Yankton	Davison	Hand	Sanborn	Codington	Grant	Roberts	Brown	Walworth
%	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
30	2,833	2,697	3,122	2,302	2,497	1,478	2,018	1,792	2,605	1,187	1,425	1,627
50	4,721	4,496	5,204	3,837	4,161	2,463	3,363	2,987	4,341	1,978	2,375	2,714
70	6,609	6,294	7,285	5,372	5,826	3,448	4,709	4,182	6,078	2,770	3,325	3,800
90	8,498	8,092	9,367	6,907	7,490	4,433	6,054	5,377	7,814	3,561	4,275	4,886
110	10,386	9,890	11,448	8,441	9,155	5,418	7,399	6,572	9,551	4,352	5,225	5,972
130	12,274	11,688	13,530	9,976	10,819	6,403	8,745	7,767	11,287	5,144	6,176	7,057
150	14,163	13,487	15,611	11,511	12,484	7,388	10,090	8,962	13,024	5,935	7,126	8,143
170	16,051	15,285	17,693	13,046	14,148	8,374	11,435	10,157	14,760	6,726	8,076	9,229
190	17,940	17,083	19,774	14,581	15,813	9,359	12,781	11,351	16,497	7,518	9,026	10,314
210	19,828	18,881	21,856	16,116	17,478	10,344	14,126	12,546	18,233	8,309	9,976	11,400
230	21,716	20,679	23,937	17,650	19,142	11,329	15,471	13,741	19,970	9,100	10,926	12,486
250	23,605	22,478	26,019	19,185	20,807	12,314	16,817	14,936	21,706	9,892	11,876	13,572
270	25,493	24,276	28,100	20,720	22,471	13,299	18,162	16,131	23,443	10,683	12,826	14,657
290	27,382	26,074	30,181	22,255	24,136	14,284	19,507	17,326	25,179	11,474	13,776	15,743
310	29,270	27,872	32,263	23,790	25,800	15,269	20,853	18,521	26,915	12,266	14,726	16,829
330	31,159	29,671	34,344	25,324	27,465	16,254	22,198	19,716	28,652	13,057	15,676	17,915
350	33,047	31,469	36,426	26,859	29,129	17,240	23,543	20,916	30,388	13,848	16,626	19,000

TABLE 2.—(Continued)—Percentage of Average Per Farm Sale Values, Twenty Selected South Dakota Counties

Class	GROUP V		GROUP VI					
	Gregory	Lyman	Corson	Dewey	Haakon	Meade	Pennington	Ziebach
%	\$	\$	\$	\$	\$	\$	\$	\$
30	1,681	822	648	685	448	629	600	451
50	2,802	1,369	1,080	1,141	746	1,048	1,001	752
70	3,922	1,917	1,512	1,597	1,044	1,467	1,401	1,053
90	5,043	2,465	1,944	2,054	1,343	1,886	1,801	1,354
110	6,163	3,013	2,377	2,510	1,641	2,306	2,202	1,654
130	7,284	3,561	2,809	2,966	1,939	2,725	2,602	1,955
150	8,405	4,108	3,241	3,423	2,238	3,144	3,002	2,256
170	9,525	4,656	3,673	3,897	2,536	3,563	3,403	2,858
190	10,646	5,204	4,105	4,335	2,834	3,983	3,803	3,159
210	11,767	5,752	4,537	4,792	3,133	4,402	4,203	3,459
230	12,887	6,299	4,969	5,248	3,431	4,821	4,603	3,760
250	14,008	6,847	5,401	5,704	3,729	5,240	5,004	4,061
270	15,128	7,395	5,833	6,161	4,028	5,659	5,404	4,362
290	16,249	7,943	6,265	6,617	4,326	6,079	5,804	4,663
310	17,370	8,491	6,698	7,073	4,624	6,498	6,206	4,963
330	18,490	9,038	7,130	7,530	4,923	6,917	6,605	5,264
350	19,611	9,586	7,562	7,986	5,221	7,336	7,005	5,565

Appendix C

TABLE 1.—Total Sale Values, Number of Transfers and Average Per Acre Value,
Twenty Selected South Dakota Counties

County	Total Per Acre* Sale Value	Number Of Transfers	Average Value Per Acre
GROUP I			
Clay	7,096	75	\$95
Minnehaha	5,953	62	96
Union	10,703	111	96
Yankton	7,449	86	87
GROUP II			
Davison	2,190	39	56
Hand	2,819	101	28
Sanborn	3,767	84	45
GROUP III			
Codington	2,335	40	58
Grant	4,922	83	59
Roberts	3,832	105	33
GROUP IV			
Brown	1,259	39	32
Walworth	2,370	91	26
GROUP V			
Gregory	5,252	144	36
Lyman	1,838	136	14
GROUP VI			
Corson	820	79	10
Dewey	935	78	12
Haakon	700	79	9
Meade	1,271	135	9
Pennington	1,376	120	11
Ziebach	513	57	9

* These figures result from the addition of the per acre sale values of all the transfers in each county.

TABLE 2.—Percentages of Average per Acre Sale Value, 20 Selected South Dakota Counties

Class	GROUP I				GROUP II			GROUP III			GROUP IV	
	Clay	Minnehaha	Union	Yankton	Davison	Hand	Sanborn	Codington	Grant	Roberts	Brown	Walworth
%	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
30	28	29	29	26	17	8	13	18	18	10	10	8
50	47	48	48	43	28	14	22	29	30	16	16	13
70	66	67	67	61	39	19	31	41	42	23	23	18
90	85	86	88	78	51	25	40	53	53	29	29	23
110	104	106	106	95	62	31	49	64	65	36	36	29
130	123	125	125	113	73	36	58	76	77	43	42	34
150	142	144	145	130	84	42	67	88	89	49	48	39
170	161	163	164	147	95	47	76	99	101	56	55	44
190	180	182	183	165	107	53	85	111	113	62	61	49
210	199	202	202	182	118	59	94	123	125	69	68	55
230	218	221	222	199	129	64	103	134	136	75	74	60
250	237	240	241	217	140	70	112	146	148	82	81	65
270	255	259	260	234	152	75	121	158	160	88	87	70
290	274	278	280	251	163	81	130	169	172	95	94	76
310	293	298	299	269	174	87	139	181	184	102	100	81
330	312	317	318	288	185	92	148	193	196	108	107	86
350	331	336	337	303	197	98	157	204	208	115	113	91

TABLE 2.—(Continued)—Percentage of Average per Acre Sale Value, Twenty Selected South Dakota Counties

GROUP V				GROUP VI				
Class	Gregory	Lyman	Corson	Dewey	Haakon	Meade	Pennington	Ziebach
%	\$	\$	\$	\$	\$	\$	\$	\$
30	11	4	3	4	3	3	3	3
50	18	7	5	6	4	5	6	5
70	26	9	7	8	6	7	8	6
90	33	12	9	11	8	8	10	8
110	40	15	11	13	10	10	13	10
130	48	18	13	16	12	12	15	12
150	55	20	16	18	13	14	17	14
170	62	23	18	20	15	16	20	15
190	69	26	20	23	17	18	22	17
210	77	28	22	25	19	20	24	19
230	84	31	24	28	20	22	26	21
250	91	34	26	30	22	24	29	23
270	99	36	28	32	24	25	31	24
290	106	39	30	35	26	27	33	26
310	113	42	32	37	27	29	36	28
330	120	45	34	40	29	31	38	30
350	128	47	36	42	31	33	40	32