TAXATION OF OIL PRODUCING PROPERTY IN KANSAS

by

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INTRODUCTION

Purpose of Investigation

The purpose of this study is twofold: First, to expand the limited information on the assessment of oil producing property in Kansas, and second, to consider a severance tax on oil for the state.

The possibility of a severance tax on oil has been discussed frequently in recent years because of the increasing importance of oil and the need for additional revenue to finance new legislation. Since a severance tax on oil has not been adopted, the writer feels that research on this subject might be helpful in determining a course of action.

A study of the taxation of oil producing property appears somewhat removed from the field of farm taxation. Actually there is a close connection between the taxation of oil producing property and farm land because the goal in any taxing system is an equitable distribution of the tax burden on all forms of property on the basis of ability to pay. If existing taxes are exacting too great a tribute from agriculture one solution is the introduction of other

sources of revenue.

Sources of Data

Two sources of basic data were used in the study. One was the "Oil and Natural Gas Schedule" on file in the offices of county clerks or county assessors. The other was the tax rate and assessed valuation records on file in the office of county superintendents of schools and county clerks. Included in the above data were the total oil production for the tax year, March 1935 through February 1936, the gravity of the oil, and the assessed value of the leasehold and equipment for each oil operator in each school district. The price per barrel of oil was obtained from the offices of the Oil Proration Bureau of the State Corporation Commission located in Wichita.

The oil prices used are shown in Table I. These prices were weighted according to the number of months a certain price was obtained by the producer. For example, for ten months of the period studied, or until January 1, 1936, the price per barrel of oil of 40 gravity and above was $1.08. For the two remaining months the price for oil of this gravity was $1.18. Multiplying the $1.08 by 10, the $1.18 by 2,

and dividing the total by 12 gives the average for the year, or $1.096.

Table I. Average Price Per Barrel of Crude Oil March 1, 1935 - March 1, 1936.

Gravity	Average Price
Below 31	$ .896
31 - 31.9	.916
32 - 32.9	.936
33 - 33.9	.956
34 - 34.9	.976
35 - 35.9	.996
36 - 36.9	1.016
37 - 37.9	1.036
38 - 38.9	1.056
39 - 39.9	1.076
40 and above	1.096

Review of Literature

Literature on the severance tax is meager as revealed by a study of Readers Guide, Experiment Station Record, letters to the Agricultural Economics Department in Oklahoma, Texas and Louisiana, and other sources.

Available literature on the severance tax as applied to crude oil may be divided into two groups: First, general statements concerning the tax; second, statistical studies. The second type is more valuable as a basis for formulating taxation policy but the first is worthwhile because the statements arouse interest and reveal the general thought on the subject. Literature of a general nature will be discussed first.

Moody (17) after discussing the defects of the general property tax in Ohio, suggested a rate of 10 per cent on gas and oil for that state. He stated that a severance tax for Ohio should meet the recognized standard of taxation with special reference to the following four points:

1. It should be a real revenue producer.
2. As far as possible, it should avoid discrimination

against home producers when in competition with producers outside the state.

3. It should tend to conserve natural resources.
4. It should lend itself to economic and efficient administration.

Orr (19, p. 36-47), a tax attorney for Sinclair Companies, describes the general method of taxing oil property in Oklahoma and other states in the Mid-Continent field and concludes that taxing mining properties on their gross production is the fairest way to tax such property because mines have only speculative value until the product is reduced to possession.

Sneed (27, p. 151-152) Assistant Attorney General for the state of Louisiana states, "I say without hesitation that next to the inheritance tax the severance tax is the most just form of taxation I am able to conceive of." Vaughan (30, p. 425-447) comes to essentially the same conclusion as Sneed when he states, "The severance tax and kindred exactions is an unexcelled method for taxing developed oil and gas properties and mines engaged in the extraction of precious stones and ores not readily susceptible of admeasurement in situ, though it is doubtful

whether it should ever be the exclusive tax."

Ise (10, p. 516-19) argues for a severance tax on the basis that it would tend to conserve oil resources. To do this the rate would have to be high. He states that the severance tax, together with the gasoline tax, should be sufficiently high to raise the price of oil products to something approximating the cost of production of satisfactory substitutes. Thus, if the cost of producing a barrel of oil from shale oil was $5 then the severance tax and the gasoline tax together should be high enough to raise the price of oil to nearly $5 a barrel.

Similar statements have been made with regard to Kansas by public officials and students of taxation. The State Tax Commission in 1921, (28, p. 52-53) concluded that the mineral industry of Kansas, particularly the oil and gas industry, was not bearing its share of the public tax burden and recommended that all persons engaged in the production of oil and gas pay an annual license fee for the privileges they enjoy. The Commission included this recommendation in its eighth report to the Legislature two years later. In its Twelfth Biennial Report (29) it again recommended a severance tax on all minerals.

Davis in 1923 (2) said, "I also wish to urge upon you, as a just and proper tax, and a way to lighten the present burden of taxation upon industry, business, farms and homes in Kansas, the enactment of a production tax upon oil, gas, coal, and other mining, mineral, and forestry products. This is a proper source of revenue that has been long neglected in Kansas, but a reasonable tax could justly be levied that would distribute the benefits of these great natural resources of this state in this manner."

Englund (3, p. 53-58) stated, "A tax on the privilege of extracting oil, natural gas, coal and minerals in Kansas would be a proper and fruitful source of revenue." He argued that Kansas was endowed by nature with this unreplaceable wealth, and a portion of it could justly and easily be taken for public purposes. A description of the gross production tax in other states is included in his study.

Randall (20, p. 6) stated in 1930 that "The average annual value of mineral production in Kansas, since 1917, has been approximately $128,000,000 and in recent years in excess of $150,000,000. Less than one-third of this taxable wealth reaches the assessment rolls. A gross production tax on all minerals will cure this evil."

In 1932 a Technical Advisory Committee to the Kansas Chamber of Commerce Tax Committee (22, p. 18-19) stated that there is much to be said in favor of the severance tax and recommended the imposition of a 2 per cent severance tax.

The Research Department of Kansas Legislative Council (23, p. 11-16) in 1937 made a study of potential sources of additional revenue from taxation and included the severance tax in its list. The study includes data on this type of tax in other states and gives the estimated yield of such a tax on the different minerals in Kansas by using present production figures and applying rates now being imposed by other states.

Huxman (9) in proposing the adoption of a $2\frac{1}{2}$ per cent severance tax on oil and gas in his message to the Legislature on February 17, 1937 made the following significant statements: "... The constitution authorizes classification of minerals for taxation purposes. I have not included a severance tax on the minerals, such as salt, coal, lead, and zinc, because the amount of revenue derived by severance tax is negligible. I know there is some opposition to a severance tax and I want to remind you that I come from a territory that is in the heart of the oil producing region

of Kansas. I, personally, think this tax is sound and should be adopted. I do not share the opinion that it will lay an unnecessary burden upon the oil industry or will adversely affect it. We must remember the fact that all the oil producing territories except Kansas have a severance tax. Oklahoma, Texas, Arkansas, Colorado, and California all have adopted this form of taxation and the only thing we need to do is to keep our tax in line with that in other states and the industry will not be hurt. A 2½ per cent severance tax is as low as any of the competing states have and lower than most of them.

"I know the argument is made that the adoption of a severance tax will have a tendency to stop leasing and thereby deprive the farmers of a source of income. I do not share this view. The severance tax does not become effective until oil is produced and certainly no company is going to give up a lease that is deemed valuable simply because in the event they should be successful in finding oil, they would have a severance tax to pay. I think this tax should be, by all means, adopted."

Probably the earliest study of a statistical nature was made for the Kansas Tax Code Commission in 1929 (21, p. 37-54) by Harold Howe of the Department of Agricultural

Economics of the Kansas Agricultural Experiment Station.

The data used were for 1928 and were obtained from Greenwood county which was the leading oil county in Kansas in that year. This study showed that the oil producers paid $272,562.93 in the form of a general property tax in Greenwood county in 1928. This was at the rate of 2.63 cents per barrel of oil produced. If the value of the crude oil was $1.50 per barrel at the well the oil producers paid a tax of approximately 1.75 per cent of the value of the oil produced. Of the total amount of taxes paid by oil producers, 73.3 per cent was paid on equipment that they owned and 26.7 per cent was paid on leasehold. Oil producers contributed 21.7 per cent of the total taxes levied in Greenwood county in 1928. In one school district the amount contributed by oil producers was 79.8 per cent of the taxes levied for schools. A two per cent severance tax would have raised $310,688 in 1928 or $38,126 more than was raised by the general property tax.

After careful consideration, the Kansas Tax Code Commission of 1929 recommended the adoption of a severance tax of two per cent on oil and gas in Kansas. The commission members recommended that this tax be in lieu of the general property tax on the leasehold. It was their opinion that

it probably would be undesirable as well as unconstitutional to exempt the equipment from the general property tax. Since this would result in a lowering of the tax base in some taxing districts, they devised a plan for allocating a share of the tax collected to the local units.

The most recent statistical study of oil taxation in Kansas was made by Sheffer (26) in 1936. The data used in this study included figures from 17 counties and accounted for 69 per cent of the total state production for 1935. In this study it was found that the total taxes levied on Kansas oil producers in 1935 were equal to 1.5 per cent of the value of the oil produced. This was considerably lower than the tax rate paid by oil producers in surrounding states. Sheffer also found that the oil producers paid taxes on an assessment base practically equal to the value of the oil produced while farmers paid taxes on an assessment base approximately four times as large as the value of the farm products produced. The fact that 69 per cent of the total amount of oil included in the study was produced under leases owned by out-of-state residents and that oil production took place in only 15.7 per cent of the school districts in the 17 counties studied were additional points brought out in this study. The adoption of a four per cent

severance tax in lieu of present taxes on the leasehold was recommended, the equipment to be taxed as at present.

The Department of Agricultural Economics of the Kansas Agricultural Experiment Station cooperated with Sheffer in making his study and the basic data in this thesis are the same as were used by him. While it is necessary to repeat some of the essential facts reported in Sheffer's study (26) it is intended that the present study supplement rather than duplicate his work.

THE OIL INDUSTRY IN KANSAS

Rinehart (24, p. 108) states that in 1860 a well was drilled to 275 feet at the Baptist Mission one mile east of Paola in Miami county. This well was estimated to have pumped one barrel daily but it produced so much water it was abandoned. Even with this early start development was slow, and as shown in Figure 1, annual production was only 500 barrels in 1889. In 1916 production in the Butler county area hit its stride and Kansas jumped to third place in rank as an oil producing state the next year. However, discovery of rich fields in Texas in 1919 put Kansas back into fourth place, the position it has held until 1936 when Kansas

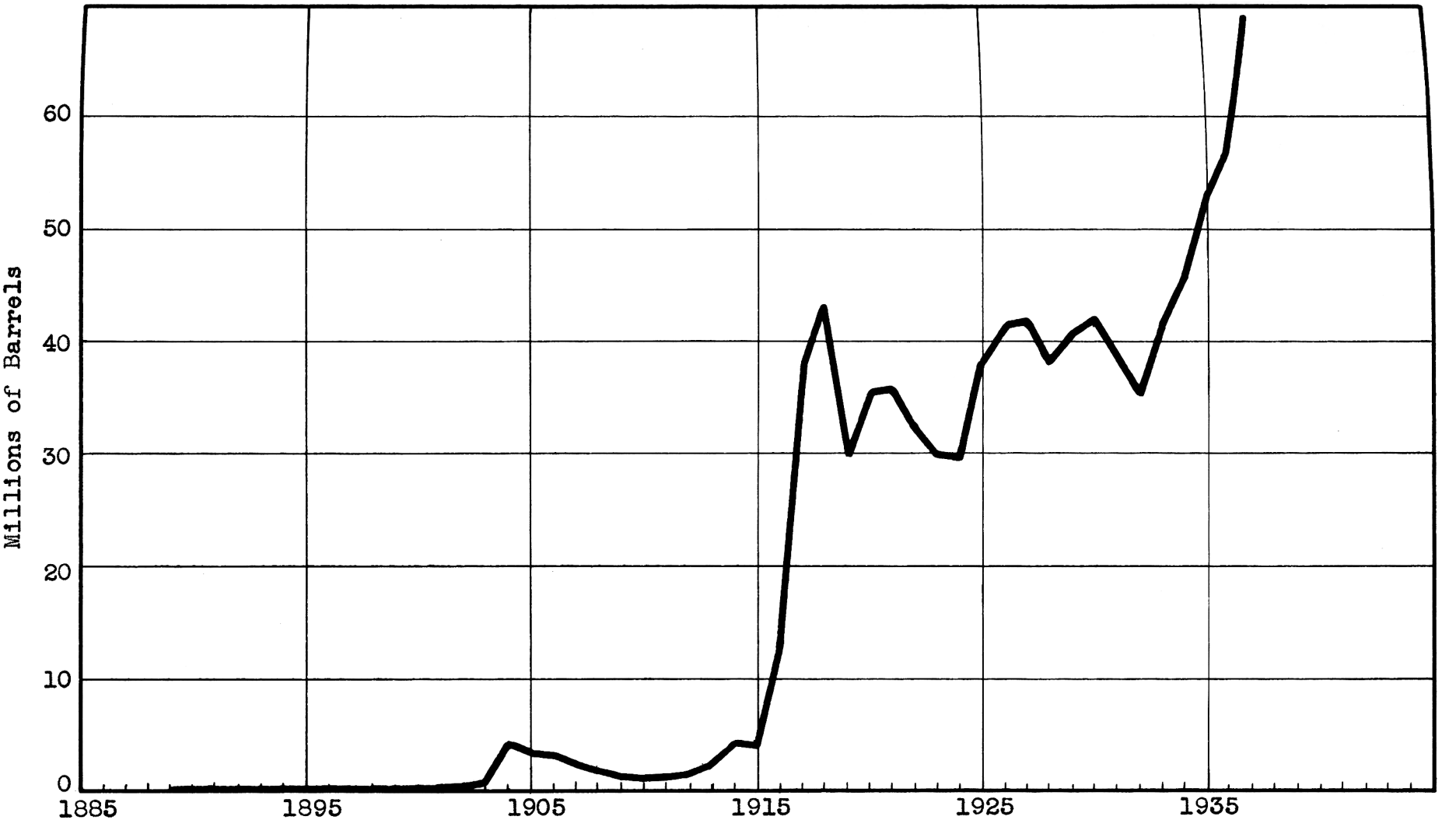

Figure 1. Oil production in Kansas in millions of barrels by years, 1889-1936 (14,16).

dropped to fifth place with Louisiana in fourth place. Texas, Oklahoma, and California rank first, second and third, respectively at present. Production in Kansas has been increasing rapidly since 1932 and reached an all time peak in 1937 of approximately 69 million barrels.

Figure 2 shows that oil production in the state is centered chiefly in a comparatively narrow belt extending south and east of Ellis county. The heaviest production is in the area known to geologists as the Ellsworth arch extending north and west from Hutchinson. The older oil region of the state, part of which still produces heavily, lies to the east and south of Hutchinson.

Kansas is considered primarily an agricultural state. However, Figure 3 shows that only two agricultural commodities — wheat, and cattle and calves — ranked above the value of the oil produced in the state for the five-year period, 1931-1935.

But what of the future? Will oil keep its prominent place among Kansas industries? In 1936 Rinehart (24, p. 1) said: "Kansas is an up-and-coming oil state. It is at its all-time producing ability at this very moment but is headed for a tremendous wildcatting and inside development campaign that will make it far surpass all previous and present

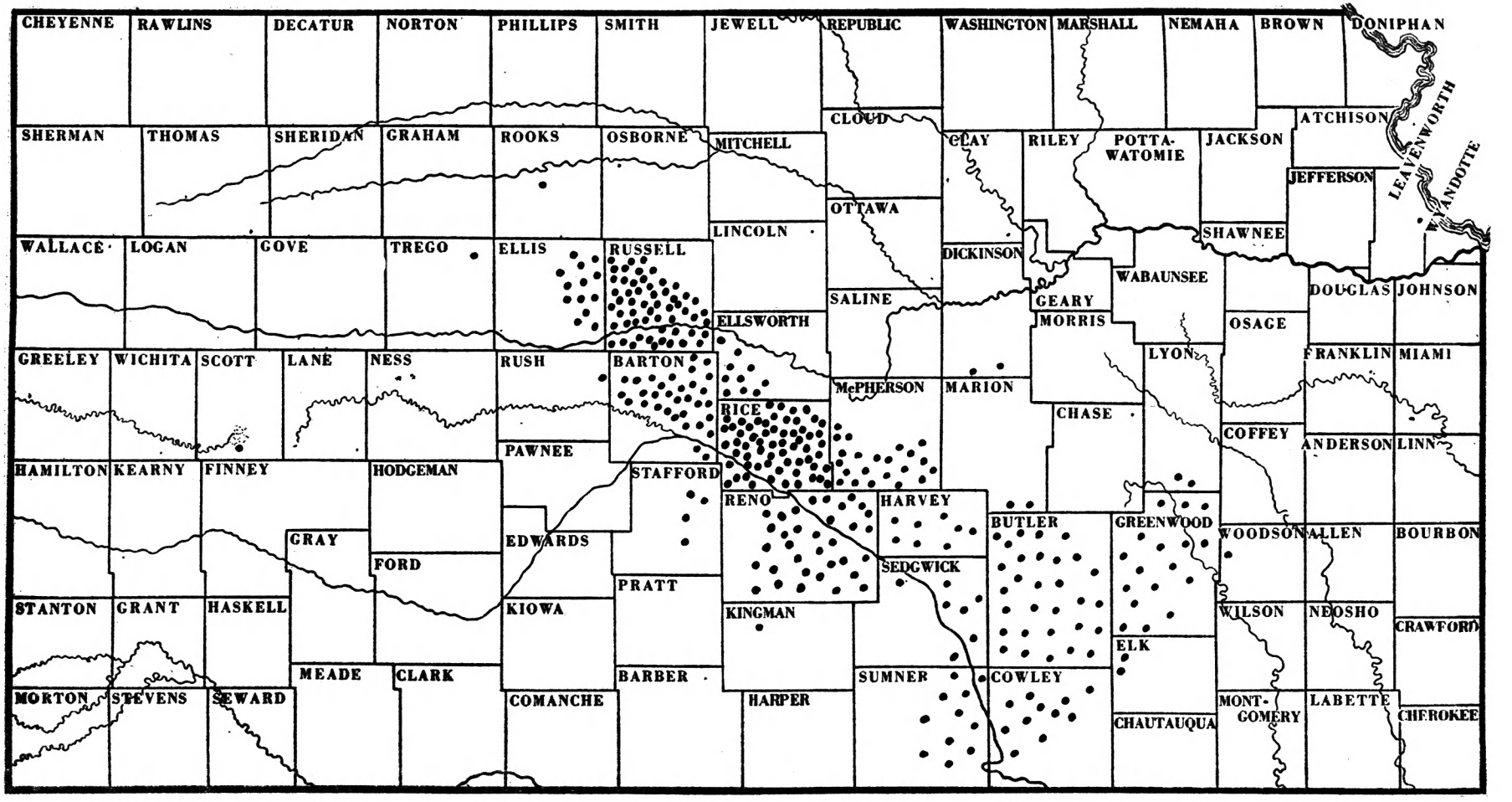

Figure 2. General location of oil production in Kansas in 1937 (1).

(1 dot=200,000 barrels)

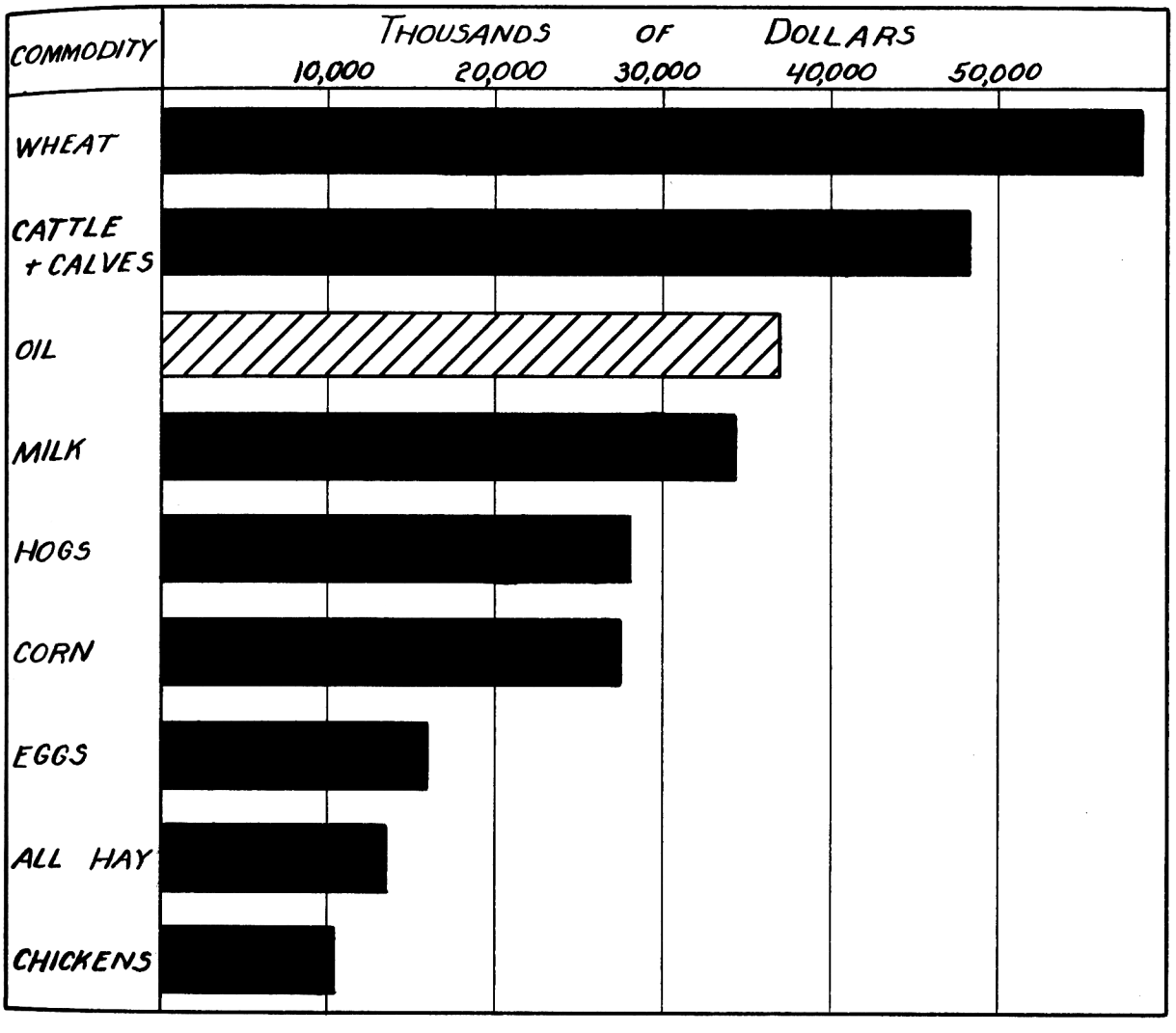

Figure 3. Comparison of the 1931-1935 average annual value of leading agricultural commodities and oil produced in Kansas (5, 6, 24).

production records." The Kansas City Star in 1937 (18) stated that "...Oil is not new in Kansas. But its increasing production, the discovery of new fields and the extension of old ones, gives assurance that for a long time to come Kansas will be cashing in on its mineral wealth." These comments and many more that might be given indicate that it is the general opinion that Kansas is more than momentarily important as an oil state.

PRESENT METHOD OF ASSESSING OIL PRODUCING PROPERTY IN KANSAS

Kansas laws provide the same method of taxation for oil property as for other tangible property. This means that for a given school district the same tax levies are applied to oil property as to land or buildings. A complete description of the present method of taxing oil property in Kansas is not included because it merely follows through the usual steps in the administration of the general property tax; namely, assessment, equalization, establishment of the tax rate, and collection. Instead only certain parts of assessment peculiar to the oil industry will be mentioned.

The general statutes of Kansas (7, sec. 79-331) prescribe in the following words the method to be used in assessing oil and gas properties in Kansas:

"That in determining the value of oil and gas wells or properties the assessor shall take into consideration the age of the wells, the quality of oil or gas being produced therefrom, the nearness of the wells to market, the cost of operation, the character, extent and permanency of the market, the probable life of the wells, the quantity of oil or gas produced from the wells, the number of wells being operated and such other facts as may be known by the assessor to affect the value of the property."

These instructions are too indefinite to be of much practical value to the assessors of oil property. Even so, the Tax Commission does not feel that it could satisfactorily elaborate on these instructions, but upholds the statutory provisions so far as possible. In actual practice, however, this statute has been expanded by the adoption of a "Kansas Price Schedule of Oil and Gas Properties" at an annual, unofficial, meeting of oil assessors and representatives of oil and gas companies. This meeting is not sponsored or even recognized by the Tax Commission. This schedule gives the value of different sizes and kinds of

equipment and gives instructions for figuring the assessed value of the leasehold. A copy of the 1937 schedule with instructions for its use is included on page 20.

The oil operators generally fill out an oil and gas well schedule on which they give what they consider the value of their property including both leasehold and equipment. However, in assessing oil property the assessor may check the oil operator's valuation. He generally checks the equipment by visiting the oil fields. The production may be checked against the production sheets of the Kansas Corporation Commission. However, in a letter from the Kansas Corporation Commission the statement was made that "very few oil assessors and county clerks write in for our production figures."[1]

Although a complete survey of the officials who assess oil property was not made, a study of a few of the counties indicates that the technical difficulties of assessing oil property are generally recognized and consequently the township assessor frequently has but little to do with assessing such property. In the larger oil counties a regular oil assessor is appointed. The statutes (7, sec. 19-402)

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[1]Letter from E. G. Dahlgren, Director of Conservation Division, State Corporation Commission to the author, January 15, 1938.

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Kansas Price Schedule of Oil and Gas Properties for 1937

On the statements inclosed please render as required by law your assessment of oil and gas properties for the year 1937.

All properties must be listed and valued as of March 1st. Casing in the well and pipe under the ground must be listed with the equipment. All automobiles, trucks and buildings on the leaseholds must be listed and valued at actual value as of March 1st.

New stock and yard stock must be listed at not less than 75% of the stock account as shown by the books on March 1st.

For valuation of the property follow as nearly as possible the schedule given below; but it is to be understood adjustments may be made up or down based upon local conditions in the judgment of the Assessor.

Boilers

25 H. P., each	$140.00
30 H. P., each	200.00
40 H. P., each	225.00
75 H. P., each	420.00
100 H. P., each	480.00
125 H. P., each	540.00

Cable

Wire Drg., per ft.	.11
Manila Rope 2 ", per ft.	.14
Manila Rope, 2¼", per ft.	.16
Manila Rope 2½", per ft.	.18
Bull Rope, per ft.	.14

CASING AND TUBING

Lap-Weld Casing

5 3/16", 17 lbs., per ft.	.26
6 1/4 ", 13 lbs., per ft.	.22
6 5/8 ", 17 lbs., per ft.	.27
6 5/8 ", 20 lbs., per ft.	.30
6 5/8 ", 24 lbs., per ft.	.36
8 1/4 ", 20 lbs., per ft.	.33
8 1/4 ", 24 lbs., per ft.	.39
8 1/4 ", 28 lbs., per ft.	.45
8 1/4 ", 32 lbs., per ft.	.51
10 ", 32 lbs., per ft.	.52
10 ", 35 lbs., per ft.	.56
10 ", 40 lbs., per ft.	.65
12 1/2 ", 50 lbs., per ft.	.83
15 1/2 ", 70 lbs., per ft.	1.47
20 ", 90 lbs., per ft.	2.13

Seamless Steel Casing

5 3/16", 20 lbs., per ft.	.36
6 5/8 ", 24 lbs., per ft.	.45
8 1/4 ", 28 lbs., per ft.	.53
8 1/4 ", 32 lbs., per ft.	.59
10 ", 40 lbs., per ft.	.74
10 ", 45 lbs., per ft.	.80
12 1/2 ", 50 lbs., per ft.	1.06
15 1/2 ", 70 lbs., per ft.	1.86

Drilling Pipe

Drilling Pipe 4½", per ft.	.26
Drilling Pipe 5 ", per ft.	.41
Drilling Pipe 6 ", per ft.	.46

Line Pipe

2", per ft.	.04
3", per ft.	.08
4", per ft.	.17
6", per ft.	.37
8", per ft.	.45

Tubing

2", 4 lbs., per ft.	.06
2", 4½ lbs., per ft.	.07
3", 8½ lbs., per ft.	.08
3", 10 lbs., per ft.	.09

ENGINES

Steam Engines

Old Style, all sizes	100.00
New Style, all sizes	200.00

Gas Engines

6 H. P.	70.00
15 H. P.	100.00
20 H. P.	120.00
25 H. P.	170.00
35 H. P.	200.00
40 H. P.	280.00
80 H. P.	630.00

Oil Engines

25 H. P.	335.00
35 H. P.	375.00
40 H. P.	490.00
80 H. P.	670.00

Diesel Power Units 350.00

Motors (Electric)

10 H. P.	90.00
20 H. P.	200.00
30 H. P.	250.00
40 H. P.	285.00
50 H. P.	340.00

Pumps

3 x2 x 3	15.00
4½x2¾x 4	25.00
4½x3 x 4	30.00
5½x3 x 5	35.00
6 x4 x 6	40.00
10 x3 x10	200.00
10 x3½x10	200.00
10 x4½x10	225.00
10 x6 x10	250.00
18 x5 x18 (Hi-Pressure)	680.00
7 x3 x 8 (Hi-Pressure)	400.00
9 x3 x10 (Hi-Pressure)	480.00
12 x3½x12 (Hi-Pressure)	600.00
10 x6 x12 (Mud Hog)	820.00

Water Pumping Outfit

Pump Jack, Water	15.00
4 H. P.	100.00
6 H. P.	170.00
10 H. P.	250.00
15 H. P.	275.00

Derricks

Standard Steel Pumping	240.00
Standard Wood Pumping	210.00
Standard Steel Drilling	800.00
Standard Wood Drilling	610.00
Turnbuckle Drilling	210.00
Steel Rotary Drilling	800.00
Steel Rotary Pumping	750.00

Rods

Sucker, per ft.	.02
Pull, per ft.	.02

Tanks

Wood, per bbl.	.15
Steel, over 5500	.08
Steel, under 5500	.17

Tools

Cable, per string	1700.00
Cleaning, Out	170.00
Rotary, Electric	$_____
Rotary, Steam	$_____
Rotary, Diesel	$_____
Countershaft	720.00
Rig Front, O.C.S. 95F	1200.00
Sand Reel, Large	600.00
Sand Reel, Small	400.00
Pulling Machines	170.00
Powers, Band Wheel	180.00
Belting, according to value	$_____
Fresh Crude Oil, at posted price	$_____
Valves and Shut Offs, according to value	$_____
Oil Pumping Unit (Electric)	800.00

The leasehold assessment for the operating interest will be based on the average daily production at a maximum unit of $400.00 per barrel for 40 gravity oil.

$10.00 reduction will be made for each degree under 40 gravity but it is understood that adjustment may be made up or down based upon local conditions in the judgment of the Assessor.

The leasehold assessment for gas wells should be computed by taking the average daily production, times 365, at the rate per thousand prevailing at the well.

Give all the information the blanks require and any additional information necessary to determine the fair and reasonable cash value of the entire lease.

Give the legal description of the land and the correct names and addresses of the royalty owners thereon.

Make your returns on or before April 10, 1937.

The above schedule adopted at the annual assessors meeting held in Topeka, Kansas, February 10, 1937.

Lester Matthew, Pres. County Clerks Assn.

Ralph Murphy, County Assessor, Barton County, Kansas.

authorize this procedure by providing "That in any county in the state in which there may be 200 or more producing oil wells, and having an assessed valuation of $100,000,000 or more, the county commissioners may, by resolution duly passed and recorded, appoint a county assessor." This official assesses all oil property in the county. In the smaller oil counties the county clerk has, in some cases, assumed all the responsibility for assessing the oil property. If the township assessor does assess oil property his work is generally limited to assessment of equipment. Thus, a large percentage of the oil property in Kansas is assessed by men who cover entire counties. From the data available it was not possible to determine how uniformly these officials assess oil property.

The State Tax Commission is of the opinion that the departure of actual assessment procedure from the method prescribed in the statutes has resulted in less uniformity than would otherwise exist.[1] This is undoubtedly true and should be corrected. The assessment of oil property in Kansas could be improved by providing more definite statutory provisions to be universally followed, and some plan for state supervision of oil assessors.

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[1]Letter from State Tax Commission to the author, January 3, 1938.

In addition to the general property tax, the Kansas Corporation Commission has been imposing a small fee per barrel of crude oil or petroleum marketed or used. This fee is used for the purpose of administering laws, rules and orders relating to the production, sale, and conservation of crude oil. The usual fee has been one-tenth of a cent per barrel but it was increased temporarily to one-fifth of a cent per barrel on October 30, 1937. Also the division of Sanitation of the State Board of Health has been charging a small fee to prevent stream pollution by oil wells. For the year 1934-35 this charge was placed at one twenty-fifth of one cent per barrel.

UNDERTAXATION BY THE PRESENT METHOD OF TAXING OIL PRODUCING PROPERTY IN KANSAS

Undertaxation of Kansas Oil Producing Property in Comparison with Other States

One argument that the oil industry in Kansas is undertaxed is that the tax rate is lower in Kansas than in other oil states. Since oil property in Kansas is taxed by the general property tax it is necessary for comparison to express this tax in terms of a certain per cent of the value

of the oil produced. This conversion is possible from the data in Table II. While the data in this table do not account for all of the oil produced in the state, it is believed that they do account for a sufficiently large percentage (69 per cent) of the total state production for 1935 to represent the oil industry accurately.

By dividing the total taxes levied, $515,655 by the total value of the oil produced, $34,336,657, the general property tax can be converted to its equivalent in terms of a severance tax, or 1.5 per cent. Contrasted with this, Oklahoma which in 1936 produced about three and one-half times as much oil as Kansas, taxed oil at the rate of 5 per cent or three and one-third times higher than Kansas. This 5 per cent tax has even greater significance in view of certain statements in the Oklahoma statute imposing this tax. "... The State Board of Equalization upon its own initiative, may, and upon complaint of any person who claims that he is taxed too great a rate hereunder, shall, take testimony to determine whether the taxes herein imposed are greater or less than the general ad valorem tax for all purposes would be on the property of such producer subject to taxation in the district or districts where the same is situated ..." (8, sec. 12434). In other words, the 5 per

Table II. The Number of Barrels of Oil Produced and the Value of the Oil from March 1, 1935 to March 1, 1936, the Assessed Value of the Oil Property as of March 1, 1936 and the Taxes Levied for 1936 on Oil Property Obtained from Sample Data in Certain Oil Counties in Kansas.[1]

County	Number of barrels produced	Value of oil produced	Assessed valuation	Taxes levied
Barton	$ 443,154	$ 469,303	$ 540,416	$ 6,251
Butler	2,583,182	2,579,974	2,965,311	52,450
Chautauqua	356,462	348,612	458,624	8,563
Cowley	755,036	800,339	1,073,590	16,716
Elk	438,781	453,778	575,646	8,416
Ellis	309,624	292,764	309,604	3,300
Franklin	69,472	75,838	100,911	1,898
Kingman	238,447	261,337	191,632	3,281
Lyon	47,780	49,476	97,015	1,381
Marion	436,153	424,337	472,059	8,692
McPherson	5,013,156	5,234,580	4,991,512	65,092
Reno	5,134,302	5,440,306	4,983,029	10,243
Rice	7,604,040	8,334,027	9,670,599	153,686
Russell	3,823,121	3,904,303	3,637,767	61,918
Sedgwick	1,747,903	1,915,702	2,175,141	35,557
Stafford	418,838	443,527	201,317	2,405
Sumner	3,190,638	3,308,454	3,205,439	75,806
Totals	32,610,089	34,336,657	35,649,612	515,655

[1]The number of barrels of oil produced and the assessed value of the property concerned were obtained from data sheets filled out from the "Oil and Natural Gas Schedules" in the County Clerk's office in the various oil counties. One data sheet was filled out for each operator in each school district. The value of the oil produced was obtained by multiplying the average price per barrel of oil for the year March 1, 1935 to March 1, 1936 for the gravity given by the production indicated. The taxes levied were calculated by multiplying the total 1936 tax rate for the school district where the oil was produced, by the assessed value of the oil property. The above data have been published (26, p. 5).

cent severance tax is intended to be equal to what the oil industry would pay if taxed by the general property tax. That it does not miss its intention far is indicated by the fact that to date no oil operator has availed himself of the above provision.[1]

This is a pertinent point since in 1934 the taxes per $100 of farm real estate in Oklahoma were 92 cents and in Kansas $1.17 (11, p. 8). This means that if the tax rate on Kansas oil property were to be as high as on Kansas farm real estate the rate would have to be as high if not higher than the 5 per cent tax in Oklahoma.

Texas, the leading oil state in the country with a production in 1936 of 424 million barrels, levies a severance tax in addition to the property tax. The rate is 2¾ cents a barrel provided the market value of the oil does not exceed one dollar per barrel. If the oil is worth more than one dollar per barrel the rate becomes 2¾ per cent of the market value. That this tax may be an important source of revenue is shown by the fact the state of Texas collected $14,459,843 from this tax during the year ending August 31, 1937.

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[1]Letter from Oklahoma Tax Commission to the author June 4, 1937.

Arkansas levies a severance tax in addition to the property taxes on real estate and corporeal property of 2.6 per cent. Louisiana levies a severance tax of 4 to 11 cents per barrel, depending on the gravity, in addition to the property tax on the oil operator's personal property. No data on the cost of oil production are available for the states mentioned but since these states are in the same general location as Kansas and levy a tax on oil which greatly exceeds the tax in Kansas, it is difficult to come to any conclusion other than that Kansas oil producers are undertaxed in relation to producers in other states.

Undertaxation of Kansas Oil Producing Property in Comparison with Kansas Agricultural Property

In a discussion of undertaxation it is important to compare the taxation of the oil industry with other industries in the same state. Because agriculture is the most important industry in Kansas, and because comparable data are available, agriculture was singled out for comparison.

The gross income from Kansas farm crops, livestock, home used products, and government payments amounted to $282,625,000 in 1935 (5). The data for 1935 are used because they are most nearly comparable with the data on

the value of the oil produced which is the value from March 1, 1935 to March 1, 1936. The assessed valuation figures are for 1936 because they most nearly represent the assessors' estimate of the value of the property involved in production in 1935. The assessed value of farm land in Kansas in 1936 was $1,040,044,117 (13). The assessed value of farm improvements was given as $131,898,843 which includes the assessed value of the houses of the operators and should be adjusted for that item. In 1930 the dwellings of the farmers of the United States constituted approximately 55 per cent of the total investment in farm buildings. In Kansas, according to the ending inventory of 1935 for 139 owned and partly-owned farms in the Northern and Southern Farm Bureau-Farm Management Associations, the value of the houses was 10 per cent less than the census figure for the United States, or approximately 45 per cent of the value of all buildings. When the assessed value of all improvements is reduced 45 per cent for this item the figure is $72,544,364 which represents the assessed value of all buildings directly concerned with agricultural production. The assessed value of tangible personal property outside cities and exclusive of property owned by public service corporations was $218,653,196 in 1936. If the assessor's

rolls in Riley county may be considered representative of Kansas conditions, approximately 90 per cent, or $196,787,876, of this is directly connected with the agricultural production and should be added to the figure already given for assessed value of farm land and improvements. Consequently the assessed valuation of farm land, improvements exclusive of the house, and tangible personal property directly connected with agricultural production was $1,309,376,357 in 1936 while the value of farm products was approximately $282,625,000.

Table II shows that for 1936 the oil industry on the other hand was assessed at $35,649,612 and the value of the oil produced was $34,336,657. These figures show that the value of the product of the agricultural industry in 1935 was only 21.6 per cent of the assessed valuation of its properties directly connected with production, while the annual product of the oil and gas industry was 96.3 per cent of the assessed value of its properties. Thus, in relation to the value of the product produced the agricultural industry in 1936 was assessed 4.45 times as heavy as the oil industry.

However, the comparison of tax bases omits an item of equal importance, namely, the tax rate. It is logical to

suppose that in those districts which contain oil the tax rates would tend to be lower than in districts without oil. This would be true because the oil would increase the assessed value of the district. With a larger tax base lower tax rates would probably raise the required funds even though the necessary expenditures for local government may increase because of the oil production. This assumption was tested by comparing the average tax rates in the oil producing districts with the average tax rate on farm real estate. The rate on farm real estate was used for comparison because almost all of the oil production in Kansas is produced outside city limits.

The average total tax rate on oil producing property in Kansas in 1936 was 14.47 mills. This figure was calculated from Table II by dividing the total taxes levied, $515,655, by the total assessed valuation of the oil property, $35,649,612. The average tax rate on all farm property in 1936 was 17.44 mills.[1] Thus, on the average the total tax rate in school districts with oil property was 2.97 mills less than the total tax rate on all farm real estate.

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[1]This figure was obtained by dividing the total taxes levied against farm land and improvements in 1936 by the total assessed value of these items for that year.

The data thus far have shown that the oil industry is assessed relatively lower than the agricultural industry, and that the tax rate applied to this underassessed value is also lower on oil property than on agricultural property. Thus, there are two factors tending towards the undertaxation of the oil industry. By expressing the taxes paid per $100 of product produced, the combined effect of both factors are shown.

To arrive at this figure the assessed value of the farm property engaged in production in 1936 ($1,309,376,357) was multiplied by the average tax rate for 1936 (17.44) and the product divided by the gross value of the product for 1935 ($282,625,000). This gives $8.08 as the taxes per $100 of farm product produced. As was stated previously the present tax on the oil property involved in production was 1.5 per cent of the value of the product produced. Therefore, the tax on $100 worth of product produced would be $1.50. In other words, the annual general property taxes per $100 of farm products produced was 5.38 times larger than the taxes on $100 of oil product produced in 1935. Figure 4 shows these facts in graphic form.

There are several weaknesses in this comparison which should be noted. Because of lack of data, it was necessary

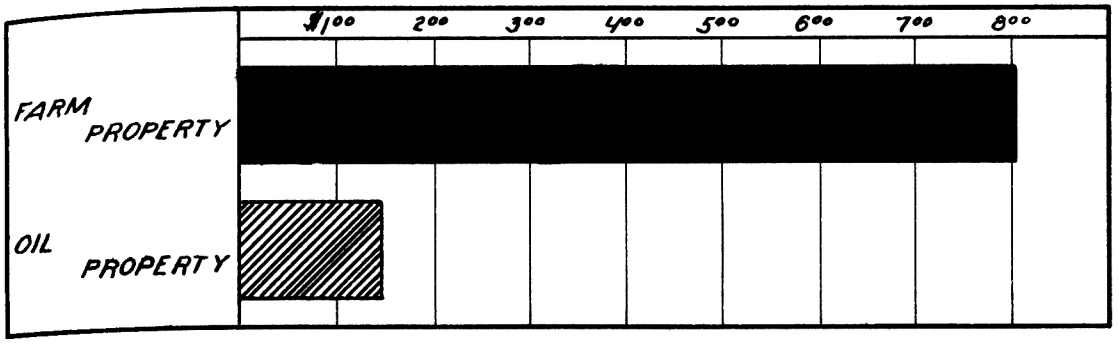

Figure 4. Comparison of taxes on farm property and oil property per $100 gross income.

to use the gross value of the product produced rather than the net profit, which would have been a better basis for estimating the tax burden. Although no data are available it is undoubtedly true that the rate of depreciation is greater in the case of the oil industry but that the expense for labor in relation to the value of the product produced is greater in the case of agriculture. These factors may not cancel each other but in any event it seems reasonable that the profit per $100 worth of product would be as high in the oil industry as in agriculture.

Another weakness is that the data available allow a comparison for only one year. It might be argued that 1935 was a poor year for agriculture in Kansas and therefore the taxes per $100 of product would be higher than

normal. It is true that the income was considerably lower than it was during the best years before the depression. However, the 1935 gross income ($282,625,000) is not far below $325,620,000 which was the average annual gross income for the 10 years, 1926-1935. Or, it might be argued that the price received for oil in 1935 was high, making the gross income from the oil industry high and thereby showing lower taxes per $100 worth of product produced than normal. However, the price per barrel received by Kansas oil producers in 1935 was $1.02, while the ten-year average price, 1926-1935, was $1.21 (24, p. 100). The assessed value and tax rates vary from year to year but they vary in the same direction for both agriculture and oil and therefore the relationship between the two would be essentially the same. When considering all the facts it appears that the study for other years would give approximately the same results.

In conclusion, the present method of taxing oil property in Kansas has resulted in the undertaxation of this industry as shown first, by the undertaxation of Kansas oil property in relation to oil property in other states, and second, by the undertaxation of Kansas oil property in relation to Kansas agriculture as evidenced by the much lower tax per $100 of product produced. With these rather serious

weaknesses in the present method of taxing oil, it is not out of place to consider improvements that could be inaugurated.

THE SEVERANCE TAX AS A MEANS OF IMPROVING THE PRESENT METHODS OF TAXING OIL PRODUCING PROPERTY IN KANSAS

Introduction

The adoption of a severance tax on oil has probably been the most frequently suggested change for improving the taxation of oil in Kansas. As Jensen (12, p. 350) points out, the severance tax is known by other names such as gross production taxes, privilege taxes, and occupation taxes. In harmony with most texts on Public Finance, the writer has used the term severance tax. It is probably more explicit in its meaning than the other terms. It may be defined as a levy upon natural resources at the time they are taken from the land at a fixed percentage of their market value or at a fixed amount per unit produced. This tax may be either in lieu of part or all of the general property tax, or may be in addition to the general property tax. As stated before, Oklahoma levies only a tax on the value of

the oil produced and presents, therefore, an example of a severance tax levied in lieu of the general property tax. In Texas is found an example of a gross production tax levied in addition to the general property tax.

Although the constitutional amendment adopted in 1924 permits the Kansas legislature to classify mineral products for taxation, it is not believed that this could be interpreted to include the equipment used in production; therefore, a severance tax in Kansas in lieu of all of the general property tax now levied would probably not be constitutional. This means that as far as Kansas is concerned the severance tax may be levied either in addition to the present general property tax, or that it may be levied in lieu of the present general property tax on the leasehold. In the latter case the equipment would be taxed as at present.

Summary of Bills Proposing a Severance Tax on Minerals that have been Introduced in the Kansas Legislature, 1915-1937.

Eighteen bills proposing a severance tax on minerals have been introduced in the Kansas Legislature since 1915. The combination of a Governor favorable to a severance tax

and the pressing need for funds resulted in the introduction of four bills into the 1937 session, two more than had been introduced in any previous session. In addition, three bills proposing a privilege tax upon many businesses included mining in their list of businesses to be taxed. The contents of 16 of these bills are summarized in Table III. This summary shows that six bills proposed a severance tax on all minerals, seven on only oil and gas, and three on oil alone. One of the bills did not set a definite tax rate to be used but stated that the rate should be the average rate of taxation in the state in the preceding year. Twelve of the bills stated that the rate should be a certain per cent of the gross value of the product produced, while three stated that the rate was to be so many cents per unit produced. The most frequent as well as lowest percentage rate proposed was two per cent while the highest was four per cent. Four bills proposed a three per cent rate and two proposed a tax of three cents per barrel. In all except the three bills proposing a tax on the basis of the number of units produced, the gross value of product produced was to be taken as the tax base. One point of interest in regard to these bills was that eight failed to state how the proposed tax was to relate to the present taxes. In these

Table III. Summary of Bills Proposing a Severance Tax on Minerals that Have Been Introduced in the Kansas Legislature 1915-1937.[1]

Year	Bill No.	Minerals included	Tax rate	Tax base	Relationship to present taxes	Use of funds obtained
1917	H.B. 857	Oil and gas	Average rate of taxation in state preceding year	Gross value	In addition to[2]	State general fund
1921	H.B. 514	All minerals	2 per cent	Gross value	In addition to[2]	50% to State General Fund, 12.5% to county general fund and 37.5% to common school districts in oil counties.
1923	H.B. 426	All minerals	2 per cent	Gross value	In addition to[2]	50% to State General Fund, 12.5% to county general fund and 37.5% to common school districts in oil counties.
1925	S.B. 6	All minerals	2 per cent	Gross value	In addition to[2]	State general fund
1925	H.B. 47	All minerals	3% on oil and gas, 1% on other minerals	Gross value	In addition to	Two-thirds to state general fund, one-sixth to common school districts and one-sixth to general fund of oil county.
1925	H.B. 93	All minerals	3% on oil and gas, 1% on other minerals	Gross value	In addition to	Two-thirds to state general fund, one-sixth to common school districts and one-sixth to general fund of oil county.
1927	H.B. 527	All minerals	2¢ per barrel 2¢ per ton for other products	Barrels or tons produced	In addition to[2]	Road fund of oil county
1927	H.B. 532	Oil and gas	3 per cent	Gross value	In lieu of	50% to state general fund, 50% to oil counties.

continued--

Table III continued.

Year	Bill No.	Minerals included	Tax rate	Tax base	Relationship to present taxes	Use of funds obtained
1929	S.B. 368	Oil	3¢ per barrel	Barrels produced	In addition to[2]	State general fund
1929	H.B. 360	Oil	3¢ per barrel	Barrels produced	In addition to[2]	State general fund
1931	H.B. 29	Oil and gas	2 per cent	Gross value	In lieu of present tax on leasehold	Two-thirds state aid school fund. Of the remainder $\frac{1}{4}$ to county general fund and $\frac{3}{4}$ to common school districts of oil county.
1935	S.B. 254	Oil	2 per cent	Gross value	In addition to[2]	No provision
1937	H.B. 579	Oil and gas	2 per cent	Gross value	In addition to	State aid school fund
1937	H.B. 228	Oil and gas	4 per cent	Gross value	In lieu of present tax on leasehold	10% to general fund of oil county, 90% to state school aid fund.
1937	S.B. 188	Oil and gas	3 per cent	Gross value	In lieu of present tax on leasehold	Two-thirds to state aid school fund. Of the remainder, one-fourth to county general fund and three-fourths to school districts of oil county.
1937	S.B. 383	Oil and gas	$2\frac{1}{2}$ per cent	Gross value	In addition to	State aid school fund.

[1] Does not include House Bill 554, 1917 or Senate Bill 40, 1923 because copies were not available in State Library. Does not include House Bill 229, 1935, or Senate Bill 92, 1933, or Senate Bill 267, 1935, because they proposed a privilege tax upon many businesses besides mining.

[2] If law did not state how this tax related to existing general property tax it was assumed that it was in addition to present general property taxes.

eight cases it was assumed that the proposed tax was to be in addition to present taxes. In addition to those eight bills, four definitely stated that the proposed tax was to be in addition to present taxes, making a total of 12 bills of this type. Three stated that the proposed tax was to be in lieu of present taxes on the leasehold but that equipment would be taxed as at present. One stated that the proposed tax was to be in lieu of all present taxes.

In only one case did the bill fail to state how the revenue obtained was to be used. One bill proposed that all the revenue go to the county from which it was obtained while six bills proposed that all the revenue go to either the state general fund or the state aid school fund. Eight bills proposed some plan of dividing the revenue obtained between the state and the county from which the revenue was obtained.

Proper Relationship in Kansas of the Severance Taxes to Present Taxes

Theoretical Considerations. The preceding discussion indicates that the proper relationship of the proposed severance tax to the taxes already imposed is a moot question. It is a point of first importance and one that

received careful consideration in this study. The effect of a severance tax on the conservation of oil and the incidence of such a tax are not discussed at this point because they would not be affected by the type of severance tax adopted.

Those who propose a severance tax in addition to the present ad valorem tax believe in one or both of two propositions. First, that the industry is undertaxed at present and that additional taxes should be imposed in the form of a severance tax. Second, that underground resources are the heritage of the state and that all the state should share in the benefits.

Those who propose a severance tax in lieu of part of the present general property tax believe that the proposed tax is a better fitted or adapted tax than the one which it replaces. In reality they also believe in the two propositions mentioned above since most of the proposals that have been made impose a higher tax than the one now in existence and make some provision for all the state to share in the benefits. Thus, the only difference between the two proposals so far as Kansas conditions are concerned is the question of whether or not the general property tax should be used to tax the leasehold.

Regardless of whether the general property tax or the severance tax or both are used to tax the leasehold, the fundamental basis for tax payment is the amount of oil produced. However, in the case of the general property tax the tax tends to be regressive in character. That is, as the leasehold becomes larger the tax rate tends to be lower. This is true because with a larger tax base a lower tax rate would raise the necessary funds. However, a certain degree of regressivity will not work any severe injustice because the general property tax rate is usually low and the heavier severance tax would be proportional in nature.

If the severance tax were in addition to the present tax on the leasehold the crude oil would be taxed by the state through the severance tax and by local government through the general property tax. Such concurrent taxation could be avoided if the severance tax were in lieu of the present tax on the leasehold.

Therefore, it would seem that any theoretical advantage would be in favor of a severance tax levied in lieu of the general property tax on the leasehold because of the regressive tendency of the latter tax and because concurrent taxation could be avoided.

Administrative Considerations. The administrative problems of both forms of taxes also must be considered. If a severance tax were levied in lieu of the present tax on the leasehold, the task of assessing the leasehold would be eliminated, which would mean some saving in time and money. This would, at the same time, eliminate the possibility of any inequality in assessing leaseholds. On the other hand, if a severance tax were levied in addition to present taxes, the local community's tax base would not be disturbed. There would be no administrative problem of allocating part of the tax collected to the taxing districts affected. Instead, what the state did collect could be used as the state sees fit. It might well be used to reduce the burden of the general property tax. Under this type of severance tax it would be necessary to continue to assess the leasehold but this could be done easily and accurately from the data on production which would be collected in administering the severance tax.

If a severance tax were levied instead of the present property tax on the leasehold, the tax base of the oil communities would be decreased and, to avoid financial difficulties in some communities, it would probably be necessary to prorate part of the tax collected back to the

taxing districts concerned. While certain local communities may be wasteful in the use of their tax funds it is doubtful if this extravagance is so widespread as to justify a general reduction in their tax base by exempting the leasehold from the general property tax without some compensation.

The above statements regarding the necessity of prorating part of the severance tax collected back to the local districts if the severance tax were in lieu of the general property tax on the leasehold are based on first, the assumption that in some local taxing units the increase in the tax base due to the introduction of oil equipment would not be sufficient to compensate for the necessary increase in the cost of local government services because of the oil production and second, that the per cent of the total assessed value of the oil property due to the value of the leasehold varies widely among local taxing units and therefore some oil communities would suffer a relatively greater loss of tax base than others. No data are available on the increased cost of local government because of oil production to test the validity of the assumption, but data which follow illustrate the second statement.

The data in Table IV were limited to those school districts for which the schedules obtained in the oil counties gave complete data. The same data were used in this table as in Table II except that in this case all the data for one school district had to be complete before the data were included. Table IV shows that considering all the school districts studied the assessed value of the leasehold was on the average 75.4 per cent of the total assessed value of the oil property, and that it was 14.4 per cent of the total assessed value of all property in the district.

The per cent of the total oil valuation in each school district that would be removed by a severance tax levied in lieu of the present tax on the leasehold was calculated by dividing the assessed value of the leasehold by the total assessed value of all oil property. The results of these calculations are shown in Table V.

Table IV. The Assessed Value of All Property and the Assessed Value of Oil Property in 141 School Districts in 1936.

County	Number of school districts	Total assessed value of all property	Total assessed value of oil property		
			Leasehold	Equipment	Total
Barton	6	2,331,652	237,300	46,338	283,638
Butler	10	3,844,571	181,604	90,683	272,287
Chautauqua	25	2,928,300	253,611	114,549	368,160
Cowley	33	17,750,975	613,480	446,584	1,060,064
Elk	12	2,406,399	231,978	96,253	328,231
Ellis	1	345,696	122,160	30,535	152,695
Franklin	5	1,030,905	16,550	42,000	58,500
Kingman	2	874,162	142,432	49,200	191,632
Lyon	3	461,848	43,475	53,540	97,015
Marion	6	2,546,430	177,434	63,554	240,988
McPherson	20	14,187,846	3,708,324	1,260,297	4,968,621
Reno	2	641,107	76,035	12,005	88,040
Rice	5	3,712,019	1,780,083	221,536	2,001,619
Sedgwick	5	3,088,540	651,396	162,293	813,689
Stafford	3	769,613	76,177	15,030	91,207
Sumner	3	985,655	50,555	29,555	80,110
Totals	141	57,905,718	8,362,594	2,733,952	11,096,546

Table V. Per cent that the Assessed Value of the Leasehold was of the Total Assessed Value of the Oil Property in 141 School Districts in Kansas in 1936.

Class interval in per cent	Number of districts	Class interval in per cent	Number of districts
0 - 19.99	2	50 - 59.99	26
20 - 29.99	5	60 - 69.99	22
30 - 39.99	10	70 - 79.99	19
40 - 49.99	22	80 - 89.99	27
		90 - 99.99	8

This table shows that in two of the districts studied the assessed value of the leasehold was less than 20 per cent of the total assessed value of all oil property in the district, while the assessed value of the equipment comprised the remainder of the assessed value of the oil property. On the other extreme, in eight of the districts the assessed value of the leasehold was more than 90 per cent of the total assessed value of all oil property. In the lower one-fourth of the school districts studied, the assessed value of the leasehold was 49.3 per cent or less of the

total oil valuation, while in the upper one-fourth of the districts the assessed value of the leasehold was 79.1 or more of the total oil valuation. In one-half the districts the assessed value of the leasehold was between 49.3 and 79.1 per cent of the total oil valuation. The percentage varied from 16.54 per cent in one school district to 94.2 per cent in another. Thus, the per cent of the total oil valuation that would be removed from each school district by a severance tax levied in lieu of the present tax on the leasehold varies widely. This is a significant point because it means that if the leasehold were removed there would not be the same relative reduction in the assessed value of oil property in each school district. The data in Table V are shown graphically in Figure 5.

The amount of the tax base that would be removed in each school district by this type of severance tax was calculated by dividing the assessed value of the leasehold by the total assessed value of all property in the district. Table VI shows the results of these calculations.

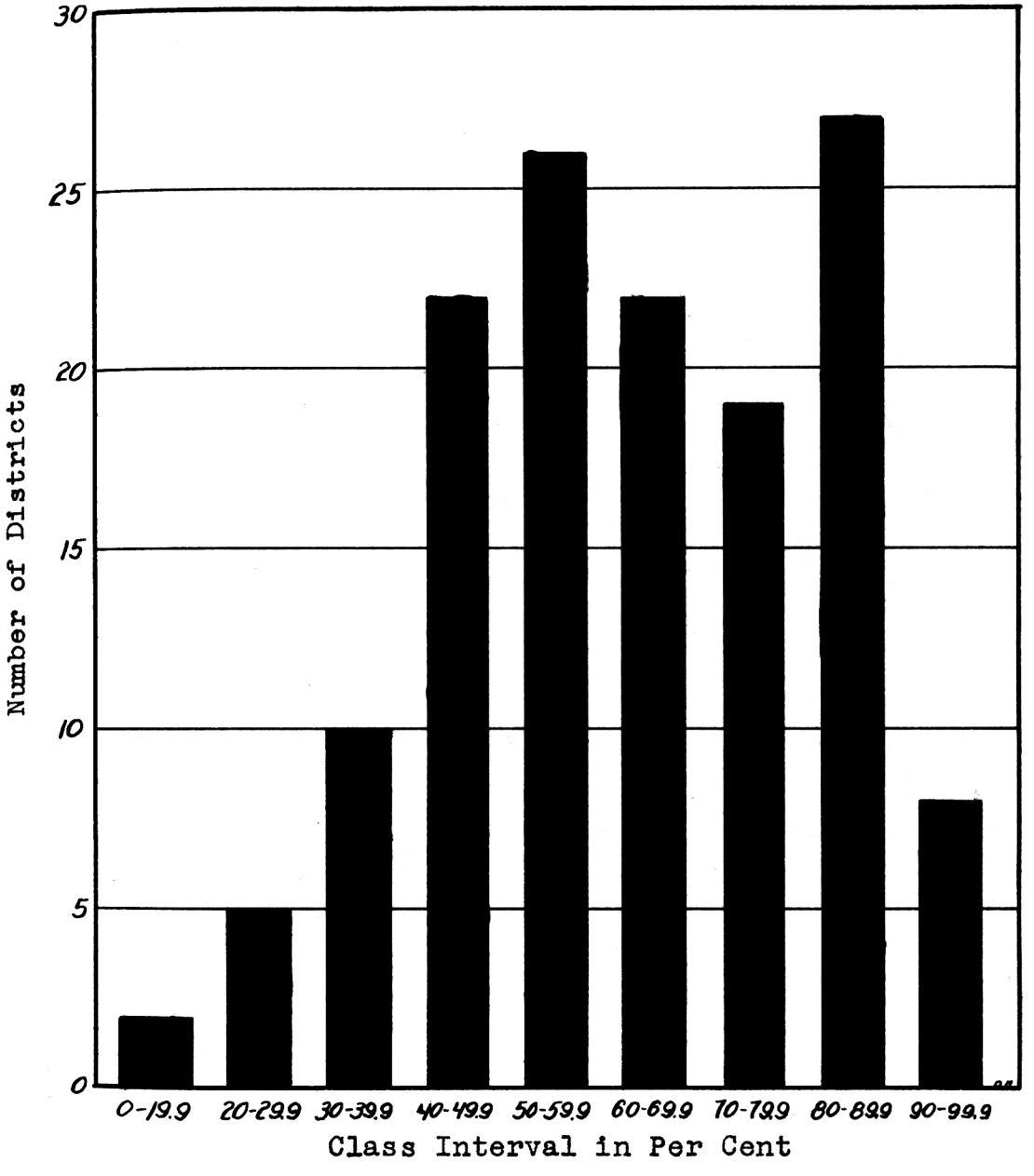

Figure 5. Per cent that the assessed value of the leasehold was of the total assessed value of the oil property in 141 school districts in Kansas in 1936.

Table VI. Per cent that the Assessed Value of the Leasehold is of the Total Assessed Value of All Property in 141 School Districts in Kansas for 1936.

Class Interval in Per Cent	Number of Districts
0 - 1.99	30
2 - 3.99	24
4 - 5.99	19
6 - 11.99	17
12 - 17.99	19
18 - 27.99	18
28 and more	14

This table indicates a wide variation among school districts in the amount of tax base that would be removed by a severance tax levied in lieu of the present tax on the leasehold. While 30 school districts in the study would have less than two per cent of their tax base removed, 14 school districts would have 28 per cent or more of their tax base removed. In the lower one-fourth of the school districts studied the assessed value of the leasehold was 2.32 per

cent or less of the total district valuation while in the upper one-fourth of the districts the assessed value of the leasehold was 17.28 per cent or more of the total district valuation. In one-half of the districts the assessed value of the leasehold was between 2.32 per cent and 17.28 per cent of the total oil valuation. The percentage varied from .03 in one district to 69.68 in another. The data in Table VI are shown graphically in Figure 6.

If it is considered necessary, with a severance tax levied in lieu of the present tax on the leasehold, to return part of the tax collected to the local districts there would be an administrative problem involved. The Tax Code Commission (21,p. 48-49) recommended that two-thirds of the amount collected be retained by the state and that one-third be returned to the county. Of the one-third that was returned, one-fourth was to go to the county general fund and the remaining three-fourths was to be distributed to rural elementary school districts in proportion to the number of pupils of school age enrolled in the district. While this plan would provide some relief it would hardly be satisfactory to those particular taxing units which had lost a considerable portion of their tax base, because they would not receive any special dispensation to compensate them for

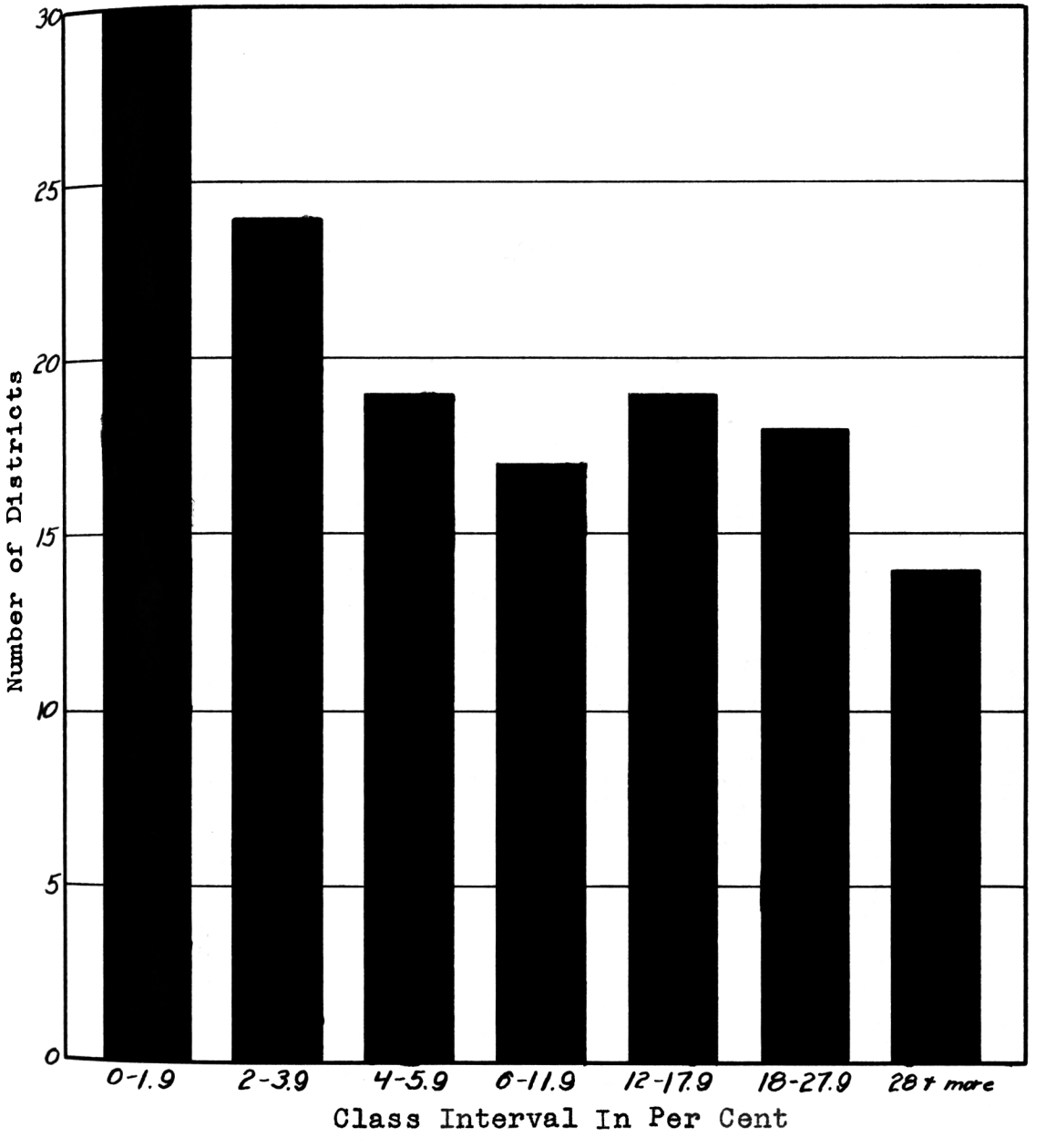

Figure 6. Per cent that the assessed value of the leasehold is of the total assessed value of all property in 141 school districts in Kansas for 1936.

their direct loss.

Some plan for returning a certain percentage of the tax collected to the particular taxing units from which it was collected would be more satisfactory for the taxing units affected than the plan proposed by the Tax Code Commission, but it would probably involve more administrative detail. There would still be the problem of just what percentage should be returned and to what taxing units it should go. Even returning a certain per cent to the taxing units concerned would not result in all taxing units being affected in the same manner. In making this statement the assumption was made that any particular taxing unit would need practically the same amount of money after a severance tax was enacted as before for its support.

On the basis of this assumption the following calculations were made to determine the effect on the tax rate for school purposes in two hypothetical school districts of returning 10 per cent of a three per cent severance tax levied in lieu of the present tax on the leasehold: (a) The total assessed valuation of the school district was multiplied by the tax rate to give the taxes levied for school purposes; (b) The assessed value of the leasehold was subtracted from the total assessed value of the district to

give the total assessed value of the district after the leasehold was exempt from the general property tax. (c) Then the total taxes levied minus the amount of the severance tax returned was divided by the total assessed value obtained in (b) to give the tax rate necessary to raise the same amount of money as was raised before the leasehold was exempt. (d) The original total tax rate was subtracted from the calculated tax rate to give the increase or decrease in tax rates because of the severance tax. (e) The figure obtained in (d) was then expressed as a certain percentage of the original tax rate. This procedure is illustrated in Table VII. In the one school district an increase of 5.5 per cent in the tax rate was necessary to give the district the same amount of money it had before the severance tax was enacted, while in the other district a slightly smaller rate than the original was required, after 10 per cent of the severance tax was returned to the districts from which it was collected. While this difference in the effect on the tax rates in the two school districts is not great it is another factor complicating the problem of properly allocating some of the severance tax to the local districts.

Summary. The main advantage of a severance tax levied in addition to the present tax on the leasehold is its

Table VII. An Example of the Effect on the Tax Rate in Two Hypothetical but Representative School Districts of Returning 10 Per cent of a 3 Per cent Severance Tax Levied in Lieu of the Present Tax on the Leasehold.

School District	(1) Total district valuation	(2) Total value of oil produced	(3) Assessed value of leasehold	(4) District value after leasehold removed (1-3)	(5) Present tax rate for school purposes	(6) Taxes levied at present (5x1)	(7) 10% of 3% severance tax (.10x.03x2)	(8) Amount levied on prop. left (6-7)	(9) Tax rate required on prop. left (8-4)	(10) Change in tax rate (9-5)	(11) Change in tax rate in per cent (10÷5)
A	$100,000	$10,000	$10,000	$ 90,000	6 mills	$600	$30	$570	6.33 mills	.33 mills	5.5%
B	$200,000	$25,000	$15,000	$185,000	4 mills	$800	$75	$725	3.92 mills	-.08 mills	-2.0%

simplicity of administration. The principal disadvantage of this type of tax is that it does not tend to correct the regressive nature of the general property tax and results in concurrent taxation. A severance tax levied in lieu of present taxes on the leasehold would tend to correct the disadvantages of the first type of tax and would eliminate the task of assessment, but it would raise the administrative problem of properly allocating part of the tax collected back to the local taxing districts as compensation for their decreased tax base.

Incidence of the Severance Tax

Little, if any, of a severance tax in Kansas would be shifted to the consumer of the refined products of the crude oil.

The nature of crude oil production is one important factor which would tend to keep the tax from being shifted. The cost of pumping the oil is comparatively low after the well has been drilled. Thus, even after the tax was imposed the oil producers could, in most cases, still afford to pump the oil. In view of this the price of crude oil would not be increased because the supply would not be

materially affected. The argument might be made that while present operators would continue to produce, the tax would retard future development and thus eventually the supply would be reduced. This, however, is hardly in accord with the speculative element of crude oil production. The profits to be realized if a good well were located would be so large that the fact a severance tax would have to be paid would undoubtedly not receive serious consideration in deciding on whether or not a well should be drilled. In other words the desire to gamble is so great that there would probably not be any curtailment of drilling as a result of the tax. Then after the well had been drilled it would, in most instances, be more profitable to pump what oil there was rather than realize nothing on the investment.

The fact that the crude oil production in Kansas is only a small percentage (approximately five per cent in 1936) of the total crude oil production in the United States, is another factor which would make it more difficult to shift a severance tax on oil in Kansas.

In a treatment of the incidence of a severance tax, something of the usual reasoning followed in arguing that the tax would be shifted probably should be included even though there are certain factors which would tend to prevent it from working out in actual practice.

Whether or not a tax can be shifted depends on the ability of those taxed to increase the price of their product. Since there is nothing about the imposition of a severance tax that would increase the demand for crude oil, the only way that the price could be increased would be to reduce the supply. The addition of a severance tax increases the cost of production to all operators so that those producers who were just on the margin before the tax was imposed will be forced out unless they operate at a loss which, of course, they cannot do indefinitely. With some of the producers removed, supply will be reduced and price increased.

While no data are available to prove the contention, it is probably true that within reasonable price limits the amount of the refined products of crude oil that will be purchased does not vary a great deal. This somewhat inelastic demand for such products would tend to assist the producers in their attempt to shift the tax by increasing the price.

If the tax were shifted, the amount of price increase would depend on the law of cost operative in the production of crude oil. The law of decreasing cost, that is, as production is increased the cost per unit decreases, is probably

most applicable to the production of crude oil at the present time because of the proration restrictions. In such case, the increase in price caused by the tax would be somewhat more than the amount of the tax because of the higher per unit cost caused by a decrease in the scale of operation. The effect of monopoly on the possibility of shifting a severance tax was not considered because oil is not produced under monopolistic conditions at present.

In conclusion, while it is conceivable that a severance tax would be shifted, the nature of crude oil production and the fact that Kansas produces only a small share of the total crude oil point to the fact that most of this tax would be paid by the oil producers.

Effect of the Severance Tax on the Conservation of Oil

In Kansas a severance tax on oil would have little, if any, effect on the conservation of oil although whatever effect it did have would be in the direction of conservation. As indicated previously a severance tax would not result in any material reduction in the supply of crude oil and, therefore, would have but little effect on its conservation.

An unusually high severance tax might result in some conservation through reduced production. However, such a high tax could not be justified on any grounds other than conservation and it is doubtful if there is sufficient reason at present to justify such a tax. Some type of government regulation would probably be a more effective weapon for promotion of conservation than would a high severance tax. Under any condition the problem of oil conservation is much wider than the boundaries of Kansas and any tax with conservation as its objective must take this fact into consideration.

Financial Results of the Severance Tax

The importance of production, price, and tax rate on the yield of a severance tax are shown in Table VIII. For example, this table shows that a tax of one per cent with a production of 60 million barrels and a price of $1.00 per barrel would yield $600,000 while a tax of five per cent with a production of 80 million barrels and a price of $1.50 per barrel would yield $6,000,000 or ten times as much revenue. The revenue from a three per cent severance tax in Kansas would be $2,625,000 in 1938 if we assume a total

Table VIII. The Annual Yield of a Gross Production Tax in Kansas at Different Levels of Production, at Different Prices, and at Different Tax Rates.

Rate of gross produce tax	$1 per barrel	$1.25 per barrel	$1.50 per barrel
60 Million Barrels			
1 per cent	600,000	750,000	900,000
2 per cent	1,200,000	1,500,000	1,800,000
3 per cent	1,800,000	2,250,000	2,700,000
4 per cent	2,400,000	3,000,000	3,600,000
5 per cent	3,000,000	3,750,000	4,500,000
70 Million Barrels			
1 per cent	700,000	875,000	1,050,000
2 per cent	1,400,000	1,750,000	2,100,000
3 per cent	2,100,000	2,025,000	3,150,000
4 per cent	2,800,000	3,500,000	4,200,000
5 per cent	3,500,000	4,375,000	5,250,000
80 Million Barrels			
1 per cent	800,000	1,000,000	1,200,000
2 per cent	1,600,000	2,000,000	2,400,000
3 per cent	2,400,000	3,000,000	3,600,000
4 per cent	3,200,000	4,000,000	4,800,000
5 per cent	4,000,000	5,000,000	6,000,000

production of 70 million barrels and an average price for crude oil of $1.25 per barrel. This is approximately one-half of the amount levied on property in Kansas for the state general fund and soldiers compensation fund in 1936. If this $2,625,000 were used to reduce the general property tax it would lower the average total tax rate slightly more than one mill providing the total assessed value of all property in 1938 is approximately the same as in 1937.

SUMMARY AND CONCLUSIONS

A review of the literature on the severance tax revealed that in the majority of cases little, if any, statistical work had preceded the statements made. The literature showed that the idea of a severance tax is not new in Kansas. Since 1917 there have been repeated efforts to get such a bill passed. The most recent attempts were made in the 1937 session of the legislature.

The oil industry in Kansas dates back to 1860 but it did not become important until 1916, when the Butler county field came into production. Production reached an all-time peak in 1937 of 69 million barrels and the indications are that production will continue to increase. Only two

agricultural commodities — wheat, and cattle and calves — ranked above the value of the oil produced in Kansas for the five-year period, 1931-1935.

The procedure of taxing oil property follows through the usual steps in the administration of the general property tax, namely, assessment, equalization, establishment of the tax rate, and collection. The statutes do not outline any specific procedure for determining the assessed value of oil property and the State Tax Commission attempts to uphold the statutory provisions as far as possible. However, because of the inadequacy of these statutes, some county clerks and assessors have adopted an extra-legal method of assessing oil property. At unofficial meetings of oil assessors and representatives of oil and gas companies, a Kansas Price Schedule is adopted which gives the value of different sizes and kinds of equipment and gives instructions for figuring the assessed value of the leasehold. In the larger oil counties a regular oil assessor assesses all oil property in the county. In the smaller oil counties the county clerk may assume all responsibility for assessing oil property. If the regular township assessor does assess oil property, his work is generally limited to the equipment. The assessment of oil property in Kansas

could be improved by providing more definite statutory provisions to be universally followed as to the method to be employed and some plan for state supervision of oil assessors. The State Tax Commission is of the opinion that the departure of actual assessment procedure from the statutes has resulted in less uniformity than would otherwise exist. This is undoubtedly true and should be corrected.

Oil property in Kansas is undertaxed as is shown by a lower tax rate in Kansas as compared with other oil states. When the present general property tax on oil producing property is expressed in terms of a severance tax the rate in 1935 was 1.5 per cent which is definitely lower than in surrounding oil states. Oil producing property in Kansas is also undertaxed in relation to Kansas agriculture. The taxes per $100 of gross income from oil producing property in 1936 was $1.50 while on $100 of gross income from farm property the tax was $8.08.

There have been a total of 18 bills proposing a severance tax on minerals introduced in the Kansas Legislature since 1915. These bills have been summarized in tabular form according to the minerals included, the tax rate, the tax base, the relationship of the proposed tax to the present taxes, and the use of the funds obtained.

An important point in considering a severance tax is its relationship to the present taxes on oil producing property. It is generally assumed from the constitutional amendment adopted in 1924 that the leasehold could be exempt from the present general property tax if a severance tax were adopted but that equipment could not be so exempt. The desirability of exempting the leasehold from the present general property tax if a severance tax were adopted was carefully studied. While the exemption of the leasehold would eliminate the task of assessing the leasehold, avoid concurrent taxation, and tend to correct the regressive nature of the general property tax, it would create the administrative problem of properly allocating part of the severance tax collected to the local government districts whose tax base would be depleted if the leasehold were exempt.

Little, if any, of a severance tax in Kansas would be shifted to the consumer of the refined products of the crude oil. This would tend to be true because the speculative nature of crude oil production would prevent any reduction in the supply and, therefore, any increase in price. With no appreciable reduction in the supply a severance tax would have little effect on the conservation of oil.

The volume of production, the price of crude oil, and the tax rate all affect the yield of a severance tax. The revenue from a three per cent severance tax in Kansas would be $2,625,000 in 1938 if the total production was 70 million barrels and the average price for crude oil was $1.25 per barrel.

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