VOTER BEHAVIOR ON SELECTED OKLAHOMA REFERENDA IN RELATION TO ECONOMIC INDICATORS

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PREFACE

Referendum voting in Oklahoma is a means for the electorate to express itself directly on social questions. The problems presented to the electorate include topics ranging from the repeal of prohibition to the salaries of legislators.

Little work of a scholarly nature has been done on referenda. Even less consideration has been given to attempting to define possible relationships between voting on referendum questions and selected economic indicators of the state's population. This study attempts to demonstrate certain aspects of the relationship of these two social indices.

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CHAPTER I

THE PROBLEM

Statement of the Problem

The purpose of this study is to ascertain the nature of the relationship of electorate voting on referenda in Oklahoma to selected economic characteristics of the state's population. The study's premise is that the most decisive factors in the population's voting patterns are the economic conditions which determine the electorate's standard of living.

Four economic indices are used in this study to describe the population. These are: (1) the percentage of total population that is urbanized, (2) the median level of education of the population over twenty-five years of age, (3) the median family income, and (4) the percentage of the total population receiving assistance from the Oklahoma State Department of Public Welfare. It is hypothesized that the more significant an economic measurement is in terms of the number of people in a given area who feel directly affected by it, the more likely it is that the people will vote "yes" on questions which, if approved, seem likely to promote their own betterment in relation to the economic interest in question. Conversely, the less significant an economic variable is to the voters, the lower their enthusiasm for a related issue. For example, the greater the urbanization of the population in an area, as defined in Chapter III,

the greater the voters' tendency to approve questions directed towards solving urban problems as contrasted to the voting results obtained for more rural population areas with less interest in urban problems.

The three other characteristics may be similarly considered. The higher the average level of education in a given area, the greater the probability that the people in that area will vote for proposals providing more funds for higher education, since more of these people would be educationally qualified to use these facilities. The higher the median family income, the more willing the family would possibly be to substitute social services for consumer consumption. When compared with the state as a whole, the greater the number of persons in an area receiving welfare assistance, the greater the likelihood of high "yes" voting in that area in relation to state-wide voting for a question expanding welfare services.

Oklahoma has a sixty-year history of popular voting on issues that in other states might be considered entirely within the legislature's competency. Over four hundred proposals have been registered since statehood with one hundred ninety-five being voted upon through January, 1965.

The period of time covered by this thesis is from 1935 to 1964. The study considers thirty state questions which are grouped into six categories: legislative salaries, schools, roads, taxation, repeal of prohibition, and welfare. It is assumed that the questions selected generate more voter interest than questions concerning, for example, the legal or organizational aspects of state government and that they can serve as adequate measures of interested public opinion.

To facilitate this study, the state has been divided into a set of economic areas composed of territorially contiguous and homogeneous countries. The areas are dissimilar to each other. The use of the state's seventy-seven countries as basic units was rejected since it would have unduly complicated the study.

The voting results are expressed as percentages: the number of "yes" votes to the total cast on each question. The percentages are given by economic areas for each of the questions considered. The voting results in the form of percentages are correlated with the various economic characteristics selected. The correlations are derived by using the statistical concept of coefficient of correlation. The result is a series of numbers ranging between a positive and negative one. A correlation with a high value (above +.5 or below -.5) represents a strong relationship between the statewide voting by areas on a question and the ranking of the various areas of the state in terms of the economic indices under consideration.

Limitations of the Study

This study does not attempt to consider all the significant factors that influence the public which votes on referenda. It is limited to a consideration of the relationship of certain observable economic characteristics to the voting of the electorate.

CHAPTER II

REFERENDA IN OKLAHOMA

The first part of this chapter describes the forms of referenda used in Oklahoma. The second part of the chapter is devoted to a detailed discussion of the questions chosen for study in this thesis. In the second part the questions are arranged in categories suitable to the study.

General Facts Concerning Referenda

The Oklahoma Constitution was written at a time when the efforts of reformers such as Robert M. LaFollette were having an important impact on the structure of government. In Oklahoma the results of those movements included the long ballot and the initiative petition (Article V, Section 2, Oklahoma Constitution), which provided the electorate with the means of bypassing legislatures whose actions or inactions were contrary to the popular will.

Any state citizen may propose constitutional amendments or specific laws by filing such proposals with the Secretary of State. These are initiative petitions. Ninety days are allowed after the filing date for obtaining the needed signatures on the petition from qualified voters of the state. For a proposed law signatures must be obtained totaling eight percent of the total vote for the highest state (rather than federal) office in the most recent general

election. For a constitutional amendment to be put to a vote, signatures equivalent to fifteen percent of the total vote as above must be secured. When the required signatures are obtained, they are turned over to the Secretary of State, who then establishes a period for filing protests. Subsequent to this waiting period and additional time consumed by litigation and court settlements, the measure will be placed on a ballot at the next general or special election.[1]

The Oklahoma Constitution states that a petition must receive a majority of all votes cast in an election for it to be adopted. No unusual results are produced by this requirement in a special election since the votes cast on the question constitute the total votes for the election. In a general election people often vote on the offices on the ballots but fail to express themselves upon the referenda that is submitted. This results in a so-called "silent vote." Thus a question may receive a plurality of the votes cast on it but not a majority of the votes cast in the election. Table I is illustrative. Questions 415 and 421 were defeated because of the requirement of their receiving a majority of the votes cast in the election.

Citizens may also subject an act of the legislature to a referendum vote. This may be done so long as the legislature has not made the act effective immediately through an emergency clause. The petition is called a "referendum petition." The text of such a petition must be submitted to the Secretary of State within ninety days of the end of the legislative session in which the bill in question was passed. An acceptable petition must bear voter

signatures totaling five percent of the total vote cast for the highest state office voted upon at the last general election.

TABLE I

RESULTS OF VOTING ON SEVEN STATE QUESTIONS IN THE GENERAL ELECTION, NOVEMBER 3, 1964

QUESTION	414	415	420	421	422	423	424
YES	188,753	397,823	310,358	417,638	362,468	403,865	307,173
NO	583,480	370,694	458,037	405,612	461,717	418,070	497,198
TOTAL VOTE	772,233	768,517	768,395	823,250	824,185	821,935	804,371
TOTAL VOTE CAST IN THE ELECTION							949,330
NECESSARY FOR PETITION TO BE ADOPTED							474,666

Source: State of Oklahoma, Election Results and Statistics, 1964, pp. 44-52.

The subsequent steps are the same as with the initiative petition with one significant exception.[2] Article V, section 3 of the Oklahoma Constitution states that "any measure referred to the people by a referendum shall take effect and be in force when it shall have been approved by a majority of the votes cast thereon and not otherwise."[3] Between statehood and the time this study was made, sixteen referendum petitions were submitted to the vote of the people.

The legislative referendum is a proposal the legislature submits to a vote of the people. The legislature must put certain matters to the vote of the people: proposed amendments to the Constitution and proposals for calling a constitutional convention. Article V, section 3 of the Oklahoma Constitution gives the legislature the power to call a special election on any issue it wishes to submit to the people. Adoption of a measure requires a simple majority of the votes cast.

Article V, section 3 states that the "veto power of the Governor shall not extend to measures voted on by the people." The other branches of state government are not similarly restricted except for constitutional issues. For example, the courts may declare a voter-approved question unconstitutional or that an error was committed in the submission of the question so that the result of the election is null and void as happened in the case of Question 214. The legislature is granted the power to revoke any statutory law (Article V, section 7) so that it may repeal an initiative or referendum vote of a statutory nature.[4]

Article V, section 4 states that a referendum may strike out a certain provision of a legislative act without striking the entire act. The filing of a petition against a portion or section of an act will not hinder the rest of the act from becoming effective.[5]

Article V, section 6 of the state constitution holds that when an initiative or referendum measure is defeated, it may not be reintroduced within a three-year period without a petition signed by twenty-five percent of the legal voters.[6]

TABLE II

DISTRIBUTION AND VOTING ON OKLAHOMA REFERENDA, 1908-1964

PERIOD	INITIATIVE		LEGISLATIVE REF.		REFERENDUM PETITIONS		TOTALS	
	Adopt	Reject	Adopt	Reject	Adopt	Reject	Adopt	Reject
1908-1914	5	12	4	9	1	2	10	23
1915-1924	1	5	4	15	1	0	6	20
1925-1934	2	11	2	7	2	3	6	21
1935-1944	6	7	10	11	0	3	16	21
1945-1954	4	4	10	4	2	0	16	8
1955-1964	0	12	16	18*	0	2	16	32
Totals	18	51	46	64	6	10	70	125

Source: Directory and Manual of the State of Oklahoma, 1963, pp. 192-227.

The totals arranged along the bottom constitute the vertical summation of the totals for all the years. The totals at the end of the separate periods represent summations of the adopted and rejected for all three types of questions.

*In this table Question 368 was included in the 1955-1964 series. Where it is discussed fully in Chapter IV, it is included in both the 1945-1955 and the 1955-1964 periods.

It is apparent from Table II that the legislative referendum has been the most frequently used type of referendum. One hundred and ten of these have been submitted to the electorate. This result may be attributed to the greater ease by which a legislative

referendum may be submitted to a vote as compared to the other two types of referenda. The percentages of adoption for each method are: (1) twenty-six percent for the initiative petitions, (2) forty-two percent for legislative referenda, and (3) thirty-eight percent for referendum petitions. The period of greatest activity was 1955-1964 when forty-eight questions were voted upon.

The Referenda Studied

Explained below is the method used in choosing the questions studied and the rationale behind the categories in which they were classified. The last part of this section contains a discussion of the questions used in the study.

From the one hundred ninety-five questions voted on between statehood and 1964, eighty-two were initially selected for study and classified into six general categories. legislative salaries, education, roads, taxation, alcoholic beverages, and public welfare. The reasons for the establishment of these categories are that: (1) questions relating to each were proposed during each of the time periods to which this study was limited, and (2) whatever relationship there is between the economic characteristics and voting of the public may best be demonstrated by using questions relating to economic matters.

The list of eighty-five questions was shortened by the exclusion of those voted on prior to 1925 for two reasons: (1) many of the early county-by-county votes were lost, and (2) the economic data in these early periods are less reliable than those of later periods. The means of census data collection are much improved in

later years and independent means of obtaining similar data, as a check, are available. Prior to 1949 no statistical measurement was made of family income. All voting on questions studied from the 1930's was correlated with the economic data from the 1940 Census of Population.

The next elimination of questions brought the number used in the study down to thirty. This reduction was to eliminate those questions that were similar in nature to other questions investigated during the same time period.* It was assumed that for similar questions, one was generally sufficiently representative. The study is directed towards discovering general relationships rather than establishing what specific factors affected individual questions. The selected questions were arranged in groups around the decennial census of population nearest the respective dates they were voted upon. For example, the 1950 period includes questions presented from 1945 to 1955 which are correlated with the economic date obtained for 1950. This method makes it possible for a question to overlap into two periods. Of the questions considered in the study, only one overlaps. It is Question 368, discussed in Chapter IV under low correlations. It was correlated with the economic data from both 1950 and 1960. The thirty questions finally selected are in the periods as follows: (1) twelve are in the 1960 period, (2) nine

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*An exception to this is the inclusion of Questions 396 and 398. A full explanation of this exception is given in Chapter IV under high correlations.

are in the 1950 period, (3) and nine are in the period for 1940. The discussion of the questions is organized around the six categories of questions rather than by chronological order of all the questions. Within the categories, the questions are considered chronologically.

Five questions relate to legislative salaries. The first of these is Question 243, legislative referendum 77, voted on at the general election of November 8, 1938. It proposed that the members of the House and Senate be given an annual salary of not more than two thousand four hundred dollars. It was rejected by a vote of 92,264 "yes" votes to 256,745 "no" votes.

Next is Question 329, legislative referendum 94, voted on at the special election (primary election) of July 6, 1948. It proposed that the members of the legislature be paid one hundred dollars per month when not in session and fifteen dollars per legislative day for the first seventy-five days while in session. The measure was adopted by a vote of 165,953 "yes" to 159,225 "no." The results of this election were compared with the characteristics of the population as described in the 1950 economic data.

The voter expressions on the next questions were correlated with the public as described in the 1960 economic data. The first is Question 389, legislative referendum 124, voted on at the special election (primary election) of July 5, 1960. It proposed that the monthly pay of the legislators be raised to two hundred dollars per month with the per diem for seventy-five legislative days not to exceed fifteen dollars. Included was compensation for travel from the legislator's home to the state capital. The proposal was rejected by a vote of 156,723 "yes" to 236,438 "no." The three

other state questions voted on at that election passed by substantial margins. The next proposition is Question 405, legislative referendum 131, voted upon at the special election (run-off primary election) of May 22, 1962. This measure proposed ten dollar per diem payments and extending the time limit for such payments to ninety-one legislative days plus payments for special sessions lasting up to twenty legislative days. The senators and representatives would be reimbursed for transportation costs to and from home once each week while the legislature was in session. In addition each member would receive three hundred dollars each month. This proposal was decisively rejected by a vote of 154,413 "yes" to 235,965 "no." Another question voted upon that day was adopted by as lopsided a margin.

The last proposal included in this category is Question 414, legislative referendum 140. It was voted upon at the general election of November 3, 1964. This proposed that the legislators be paid paid twenty-five dollars per diem for up to seventy-five legistive days for the regular session and twenty-five dollars per day for up to forty days of legislative council meetings. Ten cents a mile was to be paid for travel to and from the capital and the member's home.[7] The measure was rejected by a vote of 188,753 "yes" to 583,480 "no". The rejection of this measure was a good expression of general voter opinion since seventy-two percent of the registered voters participated in the election.[8]

The next category is of questions dealing with funds for the public school system. Of the five questions selected for study in this category, four were concerned with common schools and one with higher education. Most questions on higher education have dealt

with organizational problems rather than economic. An example of that type of question was one setting up the board of regents on a constitutional basis.

The earliest proposal considered in this category is Question 208, legislative referendum 66, voted on at the special election of Spetember 24, 1935. It proposed that homesteads be exempted from ad valorem taxation up to fiteeen hundred dollars, except that this would not apply to valuations and taxation for common schools. The measure was rejected by a vote of 119,612 "yes" to 146,229 "no." Seven questions were voted on at that time. Five were rejected, one adopted, and one declared illegally submitted by decision of the State Supreme Court. The voting on Question208 is considered in terms of the electorate as it is described economically in the 1940 Census of Population. The dates of the voting on the next two questions are closest in time to the economic data collected for 1950. Question 314, initiative petition 224, was voted upon in the general election of November 5, 1946. It proposed that the patrons of the individual school districts in the state be authorized to vote a special fifteen mill levy for the district's schools. The measure was adopted by a vote of 271,331 "yes" to 175,257 "no." All four questions voted upon at that election were adopted by similar majorities. The next issue considered is Question 327, legislative referendum 92, voted upon at the special election (primary election) of July 6, 1948. It proposed that the local school boards be allowed to impose an additional one mill levy for the maintenance of "separate schools for white and negro children." The measure was adopted by a vote of 253,815 "yes" to 106,486 "no." Question 368,

legislative referendum 110, was previously mentioned as being voted upon during the overlap year of the 1950 and 1960 economic data. It was voted upon at the special election of April 5, 1955. The terms of it were such as to allow school districts to increase their indebtedness and establish contracts that would be continuous for more than one year. The additional bonds would be paid for by raising the mill levy of the ad valorem tax and used for capital improvements. The amendment was adopted by a vote of 231,097 "yes" to 73,021 "no." Next is Question 393, legislative referendum 128, voted on at the special election (primary election) of July 5, 1960. The proposal authorized improvement bonds for state institutions totaling 35.5 million dollars. Most of the money went for a higher education building program. Five million dollars was for construction of Hissom Memorial Center for mentally retarded children. The proposal was adopted by a vote of 244,609 "yes" to 164,167 "no." Four questions were voted upon at that election and the only one defeated was Question 389 (discussed above with the legislative salary questions). Question 393 received the largest percentage of "yes" to total votes of the ones voted upon that day.

The next general category consists of questions relating to the roads and highways of the State. The voting on one question in this category is considered relevant for comparison with the economic data of 1940. It is Question 253, initiative petition 176, voted upon at the general election of November 5, 1940. It provided that the majority of taxes collected from road users (including motor vehicle mileage taxes) would be allocated to cities, countries, and incorporated towns. The measure would have reduced the funds

available to the state highway department. It failed to carry, the vote being 355,431 "yes" to 198,109 "no," with 423,886 "yes" votes needed for adoption. All six questions voted upon that day were rejected.

The economic characteristics of the voters on the following two questions are best described by the 1950 data. Question 326, initiative petition 235, was voted upon at the general election on November 7, 1950. The object of its proponents was just the opposite of the proponents of Question 253, which was described in the preceding paragraph. The intention was to amend the state constitution so as to prohibit the diversion from the state highway department of revenues derived from taxes upon gasoline, registration fees, and operators' licenses. The proposal specifically was not to apply to revenues resulting from that portion of motor vehicle license taxes imposed in lieu of ad valorem taxes or to excise taxes upon the sale of motor vehicles or to any taxes on fuels used for farm tractors, airplanes, or other non-highway purposes. The proposal was rejected by a vote of 165,776 "yes" to 348,044 "no." The voting patterns displayed on Questions 253 and 326 show a striking degree of similarity, although both proposals were rejected, the former on a technicality. The question reducing the financial power of the state received a plurality while the question failed that proposed increased state control of public funds. Such action by the voters shows their interest in maintaining decentralization of road building.

The next proposal in this category is Question 359, referendum petition 105, voted upon at the special election of January 26, 1954.

Its purpose was to authorize the Oklahoma Turnpike Commission to construct, operate and maintain turnpikes from Tulsa, Oklahoma to Joplin, Missouri; Oklahoma City, Oklahoma to Wichita Falls, Texas; and a route from Oklahoma City, Oklahoma, to the connection point with the Kansas Turnpike leading towards Wichita, Kansas. The measure was adopted by a vote of 174,236 "yes" to 133,650 "no," thus sustaining a similar bill enacted by the legislature.

Voting on two of the questions dealing with roads and highways took place when the electorate was best described economically by the 1960 data. These were voted upon at the same election, but the issues with which they are concerned vary enough for both to be of value in this study.

The first of these proposals is Question 396, initiative petition 265, voted upon at the special election on September 20, 1960. It proposed that a constitutional highway commission be established whose members would be removable only for cause and would have membership with staggered terms. The commission was to evolve a master development plan for the state's highway system, be in charge of the highway department, and be responsible for the funds allocated to the highway department. The issue was rejected by a vote of 186,176 "yes" to 351,774 "no."

The second of these proposals is Question 398, initiative petition 267. It proposed that at the option of the individual counties, the construction and maintenance of county roads be taken from the hands of the county commissioners and placed under the direction of the state highway department. Those counties opting for the system would be given special credits for turning over

equipment to the state and there would be an adjusted distribution of tax revenues to these counties. The proposal was defeated by a vote of 183,173 "yes" to 353,446 "no." All questions voted upon that day were defeated similarly. The questions were the result of campaign promises by the then governor, J. H. Edmondson. The results could be interpreted as influenced by his personality and limited popularity. Such results on questions with varying proposals indicate that factors beyond the scope of this study were significant in the voters' minds.

Taxation matters compose the next category of questions. Four questions are considered. The voters on the first proposal are best described by the economic data of 1940. It is Question 298, legislative referendum 80, voted on at the special election of March 11, 1941. This referendum prohibited the state legislature from "appropriating in excess of legal estimate of revenues." Also, it required funding of the debt acquired previously. The amendment was adopted by a vote of 163,886 "yes" to 85,752 "no."

The economic data for 1960 best describes the voters on the following three proposals. The first is Question 379, legislative referendum 117, voted upon at the special election of July 1, 1958. This proposal provided that personal property would not be assessed at more than thirty-five percent of its fair market value. The issue was adopted by a vote of 251,317 "yes" to 132,972 "no."

The next proposal is Question 390, legislative referendum 125, voted upon at the special election (primary election) of July 5, 1960. This act authorized county voters to adopt a special 2.5 mill levy on personal property for the purpose of maintaining a county

department of health. The act permitted various units of government, i.e. counties, cities, and towns, to function together for the sake of carrying out the terms of the act. The act was adopted by a vote of 201,218 "yes" to 193,497 "no."

The final measure in the taxation category is Question 395, referendum petition 130, voted upon at the general election of November 8, 1960. This referendum was intended to sustain a law enacted by the state legislature. Its acceptance would have authorized the state to require employers to withhold part of an employee's wages for the purpose of paying state income taxes. The law was rejected by a vote of 246,157 "yes" to 450,015 "no."

When the Oklahoma Constitution was written, a section was included that prohibited the sale of alcoholic beverages above 3.2 percent alcoholic content. Subsequently, several proposals have been made to modify this section--three during the time period covered by this study.

The voters on one of these three questions are best described by the 1940 economic data. This is Question 289, initiative petition 210, voted upon at the general election of November 5, 1940. It proposed the repeal of the existing statues and provided for the regulation of the importation, manufacture, transportation, and sale of alcoholic beverages by a new agency of state government created for that purpose. It prohibited the "employment of minors and females to serve liquors other than beer except in hotels, restaurants, and cafes." It proposed county option on alcoholic beverages other than beer. This measure was defeated by a vote of 290,752 "yes" to 374,911 "no." None of the six questions voted upon that

day were adopted.

The next question was decided by an electorate described most closely by the 1950 economic data. It was Question 343, initiative petition 248, voted upon at the special election of September 27, 1949. This proposal provided for regulation by the state of the sale, manufacture, and distribution of intoxicating liquors. It prohibited "forever" the "open saloon" which the legislature was later to define. This measure was defeated by a vote of 267,870 "yes" to 323,270 "no." Another question voted on that day was approved by a wider margin than Question 343 was disapproved.

The economic characteristics of the voters on the following question are best described by the data collected for 1960. It is Question 386, legislative referendum 121, voted upon at the special election on April 7, 1959. This referendum proposed the establishment of the Alcoholic Beverages Control Board and placed certain restrictions upon the manufacture, distribution, and sale of alcoholic beverages. The spirits were to be distributed through privately owned package stores. The measure was adopted by a vote of 396,845 "yes" to 314,380 "no."

The final question studied in this category did not propose repealing the ban on legal sales of liquor as did those above. It proposed that at a minimum of every two years the voters of each county be allowed to vote on whether or not to permit the sale of 3.2 beer in the county. This proposal was Question 376, initiative petition 259, voted upon at the special election on December 3, 1957. The proposed amendment was rejected by a vote of 214,012 "yes" to 275,528 "no." The three questions in this category that

were defeated were initiative petitions while the one that did pass was a legislative referendum.

The final category of questions in this study is composed of proposals relating to the state system of public welfare. The characteristics of the voters who decided four of the six questions discussed in this category are best portrayed by the 1940 data. The 1950 material best characterizes the voters on the two later questions. Question 390 may be indirectly linked to welfare activities but is best considered as a taxation motion.

The first welfare proposal is Question 214, initiative petition 144, voted upon at the special election on September 24, 1935. This was an attempt to establish an old-age assistance program to be operated and financed by appropriations of the legislature from the state tax revenues. It proposed a "Commission of Old Age Pensions and Security." It did not become law even though it received a popular vote of 204,626 "yes" to 78,783 "no" because the Oklahoma Supreme Court ruled it illegally submitted.

Next is Question 220, initiative petition 154, voted upon at the primary election on December 17, 1935. This act appropriated from the state treasury to the Oklahoma State Board of Public Welfare a total of two million five hundred thousand dollars for the fiscal years ending on June 30, 1936 and 1937. These funds, which were to be locally administered by county welfare boards, were for the support of indigents and widows and for "necessities for destitute unemployables" who were Oklahoma citizens. The proposal was adopted by a vote of 82,950 "yes" to 45,079 "no."

The third proposition in the welfare series is Question 226, initiative petition 155, voted upon in the primary election of July 7, 1936. The essential point of this proposal was that provision was made for "assistance to needy persons aged sixty-five or over, needy blind persons, needy crippled children, and needy persons aged fifteen and younger." It defined requirements to be met by recipients and set the maximum amounts of assistance. It proposed raising of the state sales tax and motor vehicle excise tax from one to two percent as a means of paying for the new benefits. The act was adopted by a vote of 340,438 "yes" to 229,542 "no." This question was the basis for the public welfare system under which the state is still operating. The proposal was considered a stop-gap measure to last until the Federal Old Age and Dependants Insurance system would cover a high percentage of the retired. There was no initial expectation that before the system reached its peak, twenty percent of the population in some countries would be receiving state welfare payments.

The fourth proposal is Question 299, legislative referendum 81. It was voted upon at the special election of March 11, 1941. It proposed that the amount of assistance provided needy persons be set by the legislature and not be limited by an amendment to the Oklahoma Constitution as in Question 226. Specifically, the legislature was authorized to provide whatever assistance might be needed while at the same time cooperating with the Federal Government in the operation of its program. Finally, it proposed that the legislature have the power to levy taxes other than ad valorem for the execution of the programs of assistance that the legislature

might vote. This question was adopted by a vote of 193,170 "yes" to 59,838 "no."

The fifth proposition in this category is Question 345, legislative referendum 96, voted upon at the special election (primary election) of July 4, 1950. It proposed that the legislature be authorized to enact a law that would insure payment of a death benefit for the death of workers, provided death resulted from injuries suffered while employed under the terms of the Oklahoma Workmen's Compensation Act. The amendment was adopted by a vote of 423,518 "yes" to 89,555 "no." This proposal is included in this category because it implies the idea of welfare in the sense of gratuity even though it is received for persons who made contributions from their salaries to the system of payments to unemployed workers. This point is discussed in Chapter IV, low correlations.

The final question in the welfare category is Question 349, initiative petition 249, voted upon at the general election of November 4, 1952. It proposed increasing the state sales tax from two to three percent. Ninety-eight percent of the money so collected would have gone to the assistance fund. The proposal was defeated by a vote of 115,592 "yes" to 727,540 "no."[9]

This chapter has consisted of a discussion of the forms that referenda take in Oklahoma and a presentation of some specific examples. The examples have generally been the questions selected for study in this thesis. Other questions have also been mentioned that aided in clarifying the discussion of the questions actually selected. The following chapter is used to discuss the method of presentation of the economic data associated with this study. The

fourth chapter brings together the voter reaction to the referenda proposals and the economic characteristics of the electorate in a form that hopefully will provide some insight as to why the electorate acts as it does when it steps into the polling place to vote on referenda.

FOOTNOTES

[1]H.V. Thornton, An Outline of Oklahoma Government (Norman, Oklahoma, 1959), pp. 49-50.

[2]Ibid., pp. 50-51.

[3]Constitution of the State of Oklahoma (St. Paul, Minnesota, 1957), p. 11.

[4]Thornton, p. 51.

[5]Constitution of the State of Oklahoma, p. 12.

[6]Ibid.

[7]Frank Reneau, ed., Directory and Manual of the State of Oklahoma (Oklahoma City, Oklahoma, 1963), pp. 209, 214, 221, 224, 226.

[8]Frank Reneau, ed., State of Oklahoma, Election Results and Statistics, 1964 (Oklahoma City, Oklahoma, 1964), pp. 44, 52.

[9]Directory and Manual of the State of Oklahoma, pp. 206-223.

CHAPTER III

THE OKLAHOMA ELECTORATE

The economic characteristics of the electorate that voted on the specific referenda described in Chapter II are discussed in this chapter. The first part of the chapter describes the population's characteristics using counties as the units of enumeration. The second part of the chapter establishes a basis and lays a ground work for describing the population of geographic entities larger than counties. These enlarged counties or economic areas, as they are called here, are the units used in Chapter IV for comparing the population's economic and voting characteristics.

The Electorate by Counties

The county is the unit of geographic political organization below the state level for which there is relatively accurate and complete statistical data. The four indicators used in this study for analyzing the population are: (1) median family income, (2) degree of urbanization, (3) median education, and (4) the percentage of the total population subsisting on public welfare payments.

The state of Oklahoma is divided into seventy-seven counties. Registration of the electorate and voting is conducted on the basis of counties. The majority of the statistical data published for the U. S. Census is based on the county unit. State publications

dealing with statistical data are usually based on counties. For these reasons a study of Oklahoma requiring the use of more detailed data than the state totals requires the use of the county as the basic unit. Using the county data as building blocks, it is possible to set up specific areas, as is done in the second portion of this chapter, that suit the purposes of this study, are realistic, and can be much more easily managed statistically than the smaller county units.

One of the most important economic indicators in the analysis of county population is median family income, which for the families of the state, has doubled since 1929. Individual county estimates of it have been placed in the Census of Population for 1950 and 1960. The lack of such data in the 1940 Census limits the demonstration of relationships between this indicator and voting of that and later periods.

As may be noted from Table III, there is a wide divergency in the income levels of the various counties of the state ranging in 1959 from Washington with a median family income of one hundred thirty-six percent of the state average to Adair with forty-two percent of the state average. A map indicating median family incomes by counties would show that the lowest eighteen counties lie entirely in the southeastern part of the state. In 1959 the county with the highest mediam family income of these eighteen had only 62.3 percent of the state median. Of the nine counties with more than five thousand dollars per year as the median family income, two (Tulsa and Washington) were in the northeast, one (Kay) was in the north central, two (Oklahoma and Cleveland) were in the center, one (Stephens) was in the southwest, and three (Harper, Cimarron, and

Texas) were in the northwest or panhandle, The only general region of counties with high median family incomes consists of those starting with Washington and Tulsa and extending along the border with Kansas to the western end of the state. As indicated in Table III, there have been only slight changes in ranking over the years being considered. The changes that do occur are generally attributable to exogenous factors such as the establishment or closing of military bases or periods of drought or other natural disasters. Between 1949 and 1959 there was a degree of narrowing of the differences in income levels among all the counties. At the earlier date the range of median income was from 157.8 percent to 36.9 percent of the state median. In 1959 the range was from 135.9 percent to 41.5 percent of the state median.[1] The trend has been towards a higher overall distribution with the lower end rising percentage-wise much more rapidly than the higher. For example, the median income in Adair County doubled during the period 1949-1959 while that in Washington County showed no such drastic change.

The data in Tables IV and V indicate a wide variation in the population characteristics of various counties. County populations varied in 1960 from 4496 persons in Cimarron County (the most westerly in the panhandle) to 439,506 persons in Oklahoma County. Education, in terms of median years of school completed in 1960 by persons over twenty-five years of age, varied from 12.1 in Washington County to 8.1 in McCurtain County in the southeastern corner of the state. The state average was 10.4 years completed. Only eighteen of the counties of the state lie above this average, which is indicative of the fact that the counties with the largest

TABLE III

OKLAHOMA COUNTIES RANKED BY MEDIAN FAMILY INCOME, 1949 AND 1959
(In Current Dollars)

	1949			1959		
Rank	County	Median Family Income	% of State Median Family Income	County	Median Family Income	% of State Median Family Income
1	Texas	3,767	157.8	Washington	6,279	135.9
2	Washington	3,486	146.0	Tulsa	5,995	129.8
3	Cimarron	3,355	140.6	Cimarron	5,832	126.2
4	Tulsa	3,306	138.5	Oklahoma	5,708	123.5
5	Oklahoma	3,221	134.9	Kay	5,396	116.8
6	Kay	3,047	127.6	Texas	5,246	113.5
7	Garfield	2,961	124.0	Harper	5,113	110.7
8	Beaver	2,941	123.2	Cleveland	5,067	109.7
9	Woods	2,767	115.9	Stephens	5,039	109.1
10	Comanche	2,736	114.6	Osage	4,918	106.5
11	Harper	2,667	111.7	Garfield	4,893	105.9
12	Stephens	2,663	111.6	Beaver	4,861	105.2
13	Osage	2,584	108.3	Woodward	4,814	104.2
14	Canadian	2,570	107.7	Comanche	4,624	100.1
15	Ellis	2,563	107.4	Canadian	4,515	97.7
16	Payne	2,562	107.3	Custer	4,464	96.6
17	Cleveland	2,545	106.6	Woods	4,413	95.5
18	Woodward	2,485	104.1	Alfalfa	4,406	95.4
19	Beckham	2,481	103.9	Carter	4,387	95.0
20	Harmon	2,440	102.2	Payne	4,376	94.7
21	Seminole	2,439	102.2	Garvin	4,327	93.7
22	Grant	2,427	101.7	Nowata	4,290	92.9
23	Noble	2,386	100.0	Creek	4,265	92.3
24	Carter	2,353	98.6	Grant	4,237	91.7
25	Ottawa	2,326	97.4	Pottawatomie	4,219	91.3
26	Alfalfa	2,318	97.1	Ellis	4,164	90.1
27	Kingfisher	2,280	95.5	Jackson	4,120	89.2
28	Pontotoc	2,256	94.5	Ottawa	4,120	89.2
29	Major	2,250	94.3	Kingfisher	4,053	87.7
30	Creek	2,242	93.9	Okmulgee	4,048	87.6
31	Jackson	2,224	93.2	Noble	4,042	87.5
32	Custer	2,215	92.8	Muskogee	3,933	85.1
33	Pottawatomie	2,196	92.0	Grady	3,895	84.3
34	Kiowa	2,165	90.7	Washita	3,882	84.0
35	Washita	2,152	90.2	Pontotoc	3,874	83.9
36	Garvin	2,146	89.9	Rogers	3,855	83.4
37	Muskogee	2,133	89.4	Beckham	3,821	82.7
38	Tillman	2,133	89.4	Seminole	3,815	82.6
39	Blaine	2,124	89.0	Logan	3,710	80.3
40	Nowata	2,099	87.9	Harmon	3,693	79.9

TABLE III (Continued)

	1949			1959		
Rank	County	Median Family Income	% of State Median Family Income	County	Median Family Income	% of State Median Family Income
41	Okmulgee	2,091	87.6	Craig	3,691	79.9
42	Roger Mills	1,970	82.5	Major	3,681	79.7
43	Caddo	1,959	82.1	Kiowa	3,658	79.2
44	Cotton	1,948	81.6	Dewey	3,615	78.2
45	Logan	1,911	80.1	McClain	3,599	77.9
46	Greer	1,887	79.1	Pawnee	3,580	77.5
47	Marshall	1,864	78.1	Blaine	3,527	76.3
48	Grady	1,846	77.3	Lincoln	3,506	75.9
49	Murray	1,845	77.3	Mayes	3,468	75.1
50	Rogers	1,823	76.4	Greer	3,358	72.7
51	Pittsburg	1,792	75.1	Murray	3,348	72.5
52	Jefferson	1,739	72.9	Tillman	3,330	72.1
53	Dewey	1,724	72.2	Caddo	3,325	72.0
54	Lincoln	1,718	72.0	Wagoner	3,271	70.8
55	McClain	1,710	71.6	Pittsburg	3,212	69.5
56	Pawnee	1,708	71.6	Marshall	3,202	69.3
57	Mayes	1,511	63.3	Jefferson	3,137	67.9
58	Craig	1,510	63.3	Cotton	3,130	67.7
59	Hughes	1,479	62.0	Roger Mills	2,976	64.4
60	Bryan	1,417	59.4	Love	2,876	62.3
61	Love	1,390	58.2	Bryan	2,802	60.6
62	Okfuskee	1,362	57.1	Hughes	2,700	58.4
63	Wagoner	1,360	57.0	Cherokee	2,657	57.5
64	Latimer	1,359	56.9	LeFlore	2,648	57.3
65	Haskell	1,358	56.9	Latimer	2,618	56.7
66	LeFlore	1,346	56.4	Sequoyah	2,492	53.9
67	Atoka	1,252	52.5	McCurtain	2,455	53.1
68	Johnston	1,223	51.2	Johnston	2,439	52.8
69	Sequoyah	1,198	50.2	Okfuskee	2,396	51.9
70	Coal	1,185	49.6	Delaware	2,352	50.9
71	Cherokee	1,178	49.4	Coal	2,349	50.8
72	McCurtain	1,140	47.8	Haskell	2,247	48.6
73	Pushmataha	1,110	46.5	Choctaw	2,239	48.5
74	Delaware	1,108	46.4	Atoka	2,217	48.0
75	McIntosh	1,101	46.1	McIntosh	2,066	44.7
76	Choctaw	1,096	45.9	Pushmataha	1,987	43.0
77	Adair	881	36.9	Adair	1,919	41.5
--	STATE	2,387	100.0	STATE	4,620	100.0

Source: 1949--U.S. Bureau of the Census, Census of Population: 1950, Volume II, Parts 1 & 36. For counties see Part 36, Table 45, pp 36-106 thru 36-108. State figure --- Part I, Table 85, p. 1-137. 1959--U.S. Bureau of the Census, Census of Population: 1960, General Social and Economic Characteristics, PC(1)-1C and PC(1)-38C. For counties see PC(1)-38C Oklahoma, Table 36, pp. 38-142 and 38-143. State figure--PC(1)-1C U.S. Summary, Table 137, p. 1-286.

TABLE IV

OKLAHOMA POPULATION CHARACTERISTICS, BY COUNTY, 1960

County	Median School Years Completed (Persons 25 & Over)	Per Cent Urban	Population	Per Cent Change in Population 1950 - 1960
Adair	8.2	---	13,112	-12.1
Alfalfa	11.1	---	8,445	-21.1
Atoka	8.3	27.8	10,352	-27.5
Beaver	10.5	---	6,965	- 6.0
Beckham	9.4	62.5	17,782	-17.8
Blaine	9.2	26.9	12,077	-19.7
Bryan	8.9	43.2	25,252	-16.4
Caddo	8.9	22.0	28,621	-18.0
Canadian	9.9	57.8	24,727	- 3.6
Carter	10.3	59.1	39,044	7.1
Cherokee	8.6	32.9	17,762	- 6.5
Choctaw	8.4	40.2	15,637	-23.4
Cimarron	11.2	---	4,496	- 2.0
Cleveland	11.5	77.5	47,600	-14.9
Coal	8.3	---	5,546	-31.2
Comanche	11.9	68.2	90,803	64.6
Cotton	9.5	35.2	8,031	-21.1
Craig	8.8	37.0	16,303	-10.7
Creek	8.9	57.4	40,495	- 6.1
Custer	10.5	67.1	21,040	- 0.3
Delaware	8.5	---	13,198	-10.4
Dewey	9.3	---	6,051	-31.2
Ellis	9.7	---	5,457	-25.5
Garfield	11.4	73.4	52,975	0.3
Garvin	8.9	48.2	28,290	- 4.1
Grady	9.7	50.2	29,590	-15.1
Grant	11.3	---	8,140	-22.2
Greer	9.9	44.5	8,877	-24.4
Harmon	9.3	51.4	5,852	-27.6
Harper	10.5	---	5,956	- 0.4
Haskell	8.2	---	9,121	-31.5
Hughes	8.5	37.7	15,144	-26.7
Jackson	11.4	71.4	29,736	48.1
Jefferson	8.8	---	8,192	-26.3
Johnson	8.5	---	8,517	-19.7
Kay	11.3	73.3	51,042	4.4
Kingfisher	10.0	30.6	10,635	-17.3
Kiowa	9.6	34.6	14,825	-21.7
Latimer	8.4	---	7,738	-20.1
LeFlore	8.3	21.6	29,106	-17.5
Lincoln	8.7	13.4	18,783	-15.0
Logan	9.0	50.9	18,662	-15.8
Love	8.7	---	5,862	-24.1
McClain	8.7	29.3	12,740	-13.2
McCurtain	8.1	19.2	25.851	-18.2
McIntosh	8.3	21.1	12,371	-30.6
Major	8.9	---	7,808	-24.0
Marshall	8.8	42.5	7,263	-11.2
Mayes	8.8	32.3	20,073	1.7
Murray	8.8	44.6	10,622	- 1.4
Muskogee	9.7	61.5	61,866	- 5.7
Noble	9.7	50.2	10,376	-14.6
Nowata	9.0	38.4	10,848	-14.8
Okfuskee	8.4	24.2	11,706	-30.9
Oklahoma	12.0	96.8	439,506	35.1
Okmulgee	8.9	60.9	36,945	-17.1
Osage	10.0	39.8	32,441	- 1.9
Ottawa	9.1	54.5	28,301	-12.2
Pawnee	8.9	23.1	10,884	-20.1
Payne	11.7	74.0	44,231	- 4.7

TABLE IV (Continued)

County	Median School Years Completed (Persons 25 & Over)	Per Cent Urban	Population	Per Cent Change in Population 1950 - 1960
Pittsburg -----	8.9	50.7	34,360	-16.3
Pontotoc -----	9.1	51.1	28,089	- 9.0
Pottawatomie --	9.4	65.0	41,486	- 4.7
Pushmataha ----	8.2	---	9,088	-24.3
Roger Mills --	9.0	---	5,090	-31.2
Rogers ------	9.0	32.2	20,614	5.5
Seminole ----	8.8	62.1	28,066	-31.0
Sequoyah -----	8.2	18.6	18,001	- 9.0
Stephens -----	10.7	63.3	37,990	11.5
Texas -------	11.4	40.7	14,162	- 0.5
Tillman -------	9.4	40.1	14,654	-16.7
Tulsa ---------	12.1	88.9	346,038	37.5
Wagoner -------	8.6	28.5	15,673	- 6.4
Washington ----	12.2	75.3	42,347	28.8
Washita -------	10.6	19.8	18,121	2.6
Woods ---------	10.3	52.4	11,932	-17.9
Woodward ------	10.2	55.7	13,902	- 3.3
	10.4	62.9	2,328,284	4.3

Source: U.S. Bureau of the Census, Census of Population: 1960, Parts 38A and 38C. County source detailed by column--Column 1: Part 38C, Table 35; Column 2; derived from Part 38C, Table 35 and Part 38A, Table 6; Columns 3 and 4: Part 38A, Table 6.

TABLE V

OKLAHOMA POPULATION CHARACTERISTICS, BY COUNTY, 1950

County	Median School Years Completed (Persons 25 & Over)	Per Cent Urban	Per Cent Rural (Non-farm)	Per Cent Rural (Farm)
Adair -----	7.6	---	14,918	- 5.3
Alfalfa ---	10.3	24.6	10,699	-24.3
Atoka ----	7.8	18.6	14,269	-23.7
Beaver ----	8.9	---	7,411	-14.3
Beckham ---	8.8	52.4	21,627	- 2.4
Blaine ----	8.8	21.6	15,049	-18.8
Bryan -----	8.6	36.3	28,999	-24.0
Caddo -----	8.6	17.7	34,913	-16.0
Canadian --	9.0	42.9	25,644	- 6.2
Carter ----	8.9	56.1	36,455	-15.8
Cherokee --	8.1	25.0	18,989	- 9.7
Choctaw ---	8.0	29.3	20,405	-28.0
Cimarron --	9.0	---	4,589	25.6
Cleveland -	11.4	65.2	41,443	49.5
Coal ------	8.0	---	8,056	-37.1
Comanche --	10.0	63.0	55,165	41.5
Cotton ----	8.7	26.9	10,180	-21.0
Craig -----	8.6	30.2	18,263	-13.4
Creek -----	8.6	54.8	43,143	-22.3
Custer ----	9.3	52.5	21,097	- 8.5
Delaware --	8.3	---	14,734	-20.8
Dewey -----	8.7	---	8,789	-26.6
Ellis -----	8.9	---	7,326	-13.5
Garfield --	10.9	68.2	52,820	16.1
Garvin ----	8.6	33.6	29,500	- 5.3

TABLE V (Continued)

County	Median School Years Completed (Persons 25 & Over)	Per Cent Urban	Population	Per Cent Change in Population 1940 - 1950
Grady	8.8	45.4	34,872	- 15.2
Grant	10.8	---	10,461	- 20.3
Greer	8.9	36.4	11,749	- 19.3
Harmon	8.7	38.2	8,079	- 19.4
Harper	8.9	---	5,977	- 7.4
Haskell	7.9	---	13,313	- 23.2
Hughes	8.3	30.0	20,664	- 29.2
Jackson	9.1	48.5	20,082	- 11.6
Jefferson	8.5	---	11,122	- 26.4
Johnston	8.2	---	10,608	- 33.5
Kay	10.3	67.5	48,892	3.8
Kingfisher	8.9	26.0	12,860	- 17.7
Kiowa	8.9	28.4	18,926	- 17.1
Latimer	7.9	---	9,690	- 21.7
LeFlore	7.8	18.3	35,276	- 23.1
Lincoln	8.5	12.3	22,102	- 25.2
Logan	8.8	45.6	22,170	- 12.2
Love	8.2	---	7,721	- 32.5
McClain	8.3	24.2	14,681	- 23.6
McCurtain	7.2	14.8	31,588	- 23.5
McIntosh	7.8	29.0	17,829	- 26.0
Major	8.7	---	10,279	- 14.0
Marshall	8.4	34.1	8,177	- 34.0
Mayes	8.5	22.7	19,743	- 8.9
Murray	8.6	40.7	10,775	- 22.2
Muskogee	8.9	56.9	65,573	- 0.5
Noble	9.0	42.3	12,156	- 18.0
Nowata	8.6	31.1	12,734	- 19.3
Okfuskee	8.1	20.4	16,948	- 35.5
Oklahoma	11.5	86.4	325,352	33.3
Okmulgee	8.8	59.0	44,561	- 11.1
Osage	8.9	31.0	33,071	- 20.3
Ottawa	8.7	48.9	32,218	- 10.1
Pawnee	8.6	21.0	13,616	- 21.7
Payne	11.2	68.9	46,430	28.8
Pittsburg	8.5	43.6	41,031	- 16.2
Pontotoc	8.8	51.8	30,875	- 22.4
Pottawatomie	8.8	52.7	43,517	- 20.0
Pushmataha	7.6	20.9	12,001	- 38.3
Roger Mills	8.7	---	7,395	- 31.1
Rogers	8.5	28.1	19,532	- 7.3
Seminole	8.8	52.4	40,672	- 33.5
Sequoyah	7.4	14.6	19,773	- 14.5
Stephens	9.0	55.0	34,071	9.6
Texas	10.0	33.1	14,235	43.8
Tillman	8.9	31.1	17,598	- 15.2
Tulsa	11.8	82.3	251,686	30.2
Wagoner	8.2	26.3	16,741	- 22.6
Washington	11.1	66.1	32,880	7.6
Washita	8.8	16.5	17,657	- 20.7
Woods	9.3	44.8	14,526	- 2.6
Woodward	8.9	41.1	14,383	- 11.6
STATE	9.1	51.0	2,233,351	- 4.4

Source: U.S. Bureau of the Census, Census of Population: 1950, Volume II, Part 36. County source detailed by column--- Columns 1,2,3,4: Vol II, Part 36, Table 12.

population are also those with the best educated population. Only Creek County, with a population of 40,495 whose median education was 8.9 years completed, and Pottawatomie County, with a population of 41,486 and median education of 9.4 years completed, had populations of over forty thousand with median education below the state average. However, all the counties with high median education rates were not high in population. Cimarron with the smallest county population in the state rated very high terms of median educaton.*

The scope of urbanization is an important characteristic of the population in a county. Urbanization for the 1950 and 1960 Census of Population is defined as comprising all persons living in

> "(a) places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns; (b) the densely settled urban fringe, whether incorporated or unincorporated, of urbanized areas;. . . . ; (d) counties in states other than the New England States, New Jersey and Pennsylvania that have no incorporated municipalities within their boundaries and have a density of fifteen hundred persons or more per square mile; and (e) unincorporated places of twenty-five hundred inhabitants or more."[2]

For the 1960 Census of Population, there was a tremendous variation across the state for this indicator. In Oklahoma County 96.8 percent of the people were urbanized while in eighteen counties there was no urbanization, using the above definition. This study uses urbanization data for the years 1940, 1950, and 1960.

Urbanization is defined slightly differently for the 1940 Census than in the latter two. The statistical variation produced by the changes is generally small. For example, under the old definition

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*The relationship of median education and other characteristics is touched on further toward the end of this section.

49.6 percent of the 1950 state population would have been considered urbanized, while 51.0 percent were so considered under the new definition. This variation is so slight that it is ignored for this study.

The non-urban population is divided by the Bureau of the Census into rural farm and rural non-farm. In 1960 Oklahoma County had 0.5 percent of its population listed as rural-farm, while by means of contrast, Roger Mills County had 56.6 percent of its entire population listed as being rural-farm.

Among some countries there was a great divergence in the amount of population shift from 1950 to 1960. Haskell County incurred a 31.5 percent loss of population during the period while Comanche County had a 64.6 percent increase.

Except where production is dominated by a single activity, a high percentage of workers in manufacturing indicates a high level of income and generally a high level of education. In 1960 the percent of the population employed in manufacturing ranged from 31.5 in Kay County to 0.4 in Roger Mills County. The second and third counties in manufacturing were McCurtain and Sequoyah respectively. Lumbering is important in the latter counties there being little other economic activity. For the entire state 13.2 percent of the entire population were involved in manufacturing and 9.5 percent were involved directly in agriculture. The percentage of the population employed in agriculture ranged from 62.2 percent in Roger Mills County to 1.1 percent in Oklahoma.

Several ideas may be concluded from the facts mentioned above, particularly in relation to median family income. When counties are

ranked according to median family income and median school years completed, the results tend to be similar. The higher the median income, the higher the median education. From this it may be inferred that by raising the median years of education, the median income may well be raised, whether it be by new activities that the persons may enter into or by an out-migration of the people who have been motivated through education and are no longer satisfied with the limited economic opportunities in their home counties.

Rapid out-migration from low median family income counties has in fact taken place except from the three contiguous counties of Adair (-12.1), Cherokee (-6.5), and Sequoyah (-9.0) for the ten year period between 1950 and 1960. Losses from the above counties do not at all compare with those of counties like Dewey, Haskell, McIntosh, Okfuskee, and Seminole, each of which lost over thirty percent of its population during those ten years.

The high median family income counties did not generally have population declines during the period 1950-1960 nor did they all have large increases. The counties with high incomes per family unit which have relatively stable populations are those in the northwest where emigrations occurred several decades ago so that a balance has been established in the land-men ratio of these predominantly agricultural counties. It was only in the highly urbanized-high income counties such as Comanche, Oklahoma, Tulsa, and Washington that the significant increases in population occurred. Kay County did not have a major rise in population even though the median family income was quite high and the county was 73 percent urban.

There appears to be a correlation between the median family income and the number of non-whites in a county; the median family income of the whites is higher than that of the non-whites. This is related to the fact that the white segment of the population has a higher median number of years education than does the non-white population of a county. The significance of the non-white population for this study is that the counties with the highest ratios of non-white to total population lie for the most part in the southeastern and poorest part of the state.

Several characteristics distinguish the low income counties of the state from the rest of the state. (1) In these counties a characteristically low level of urbanization suggests some link between urbanization and income. (2) These areas have generally a high percentage of the population involved in agriculture with the average size of farms being small. (3) Also, as mentioned above, several have significant percentages of the population involved in manufacturing (lumbering).

The high income counties have such divergent characteristics that it is difficult to treat them as a group. There are several significant factors however that do characterize the majority of the high income counties. These include: (1) generally a high level of urbanization with the exception of the three western counties, (2) high levels of education, and (3) sizeable population increase for urban areas and small rates of decrease for the agricultural areas. In addition, there are two features that distinctly characterize the high income agricultural areas: (1) low non-white population and (2) high soil fertility.[3]

Since agriculture is so important in the lives of the people of Oklahoma, its effect must be included in any discussion of median family incomes. There is no adequate means of measuring farm income so it is necessary to use a variety of other tools in approximating what farm income may be. Some of the various indicators that may be used to arrive at farm income are presented in Table VI which presents the characteristics by county. Those listed include the percent of population employed in agriculture, 1960; average size of farm, 1959; percent of farm acreage worked by tenants, 1959, and value of all farm products sold per farm--a statistically weighted arithmetic average for 1954 and 1959. Also reproduced from Table III is the county median family income. This last index is especially applicable in counties where there is a very high percentage of the population directly involved in farming.

To be noted from the data of Table VI is that generally when the median family income is low, the average value of farm products sold per farm is also low. This relationship is most apparent for ten of the fifteen lowest ranked counties in terms of value of farm products sold per farm. The worst off counties are again those in the southeastern corner of the state. A high median family income and high value of production per farm are also interrelated. For example, Cimarron County is ranked first in terms of value of production per farm and third in terms of median family income, behind the urbanized counties of Washington and Tulsa. Further, Texas County which was second in the value of production per farm was sixth in median family income for the entire state, following the urban centers of Oklahoma and Kay Counties.

TABLE VI

OKLAHOMA INCOME AND FARM CHARACTERISTICS BY COUNTY, 1954, 1959, AND 1960

County	Median Family Income 1959 (In Dollars) (1)	Dollar Average Value of All Farm Products Sold Per Farm 1954 & 1959 Average (2)	Average Size of Farms 1959 (In Acres) (3)	Per Cent of Acres in Farms Worked by Tenants 1959 (4)	Per Cent Employed in Agri-culture 1960 (5)
Adair -----	1,919	2,096	137.6	9.5	25.9
Alfalfa ---	4,406	11,117	388.6	21.5	34.1
Atoka -----	2,217	2,175	393.2	10.3	24.8
Beaver ----	4,861	8,221	991.0	14.5	36.2
Beckham ---	3,821	5,389	399.2	17.4	21.4
Blaine ----	3,527	6,713	418.7	23.0	31.7
Bryan -----	2,802	3,386	292.0	13.4	20.0
Caddo -----	3,325	6,197	332.3	26.5	28.9
Canadian --	4,515	7,778	340.0	23.4	17.8
Carter -----	4,387	2,239	329.7	11.3	6.1
Cherokee --	2,657	1,641	187.1	6.0	14.4
Choctaw ---	2,239	1,879	286.8	5.4	21.0
Cimarron --	5,832	15,190	2,000.5	13.7	38.2
Cleveland -	5,067	2,922	229.0	20.1	4.9
Coal -----	2,349	3,767	450.3	6.7	26.5
Comanche --	4,624	4,428	393.1	17.0	5.3
Cotton ----	3,130	5,463	442.3	19.2	26.7
Craig ----	3,691	4,842	314.5	7.8	18.7
Creek ----	4,265	1,574	316.9	13.0	4.0
Custer ----	4,464	8,043	467.2	18.6	19.7
Delaware --	2,352	2,689	177.4	7.6	21.3
Dewey ----	3,615	6,088	629.5	13.3	38.7
Ellis ----	4,164	6,673	853.3	20.5	35.4
Garfield --	4,893	7,536	344.6	23.4	8.9
Garvin ----	4,327	3,658	286.5	13.9	12.0
Grady ----	3,895	5,266	314.8	18.4	17.2
Grant ----	4,237	9,070	412.0	29.6	42.1
Greer ----	3,358	5,701	451.0	19.1	26.6
Harmon ----	3,693	8,515	451.9	18.9	37.4
Harper ----	5,113	9,740	992.8	17.7	28.5
Haskell ---	2,247	2,299	328.8	8.0	24.2
Hughes ----	2,700	2,488	333.6	15.2	20.4
Jackson ----	4,120	8,669	410.9	19.6	17.8
Jefferson --	3,137	5,417	594.3	11.5	21.2
Johnston ---	2,439	4,114	459.3	6.9	22.7
Kay -----	5,396	7,739	320.4	25.2	8.0
Kingfisher -	4,053	8,288	375.4	23.0	37.9
Kiowa -----	3,658	7,234	472.8	19.5	27.1
Latimer ---	2,618	1,588	311.0	6.8	15.5
LeFlore ----	2,648	2,107	221.2	4.6	13.2
Lincoln ----	3,506	2,212	267.1	13.4	16.2
Logan -----	3,710	4,482	322.4	20.0	13.9
Love ------	2,876	4,383	371.7	13.4	27.4
McClain ---	3,599	4,611	280.9	17.4	22.3
McCurtain --	2,455	1,514	180.5	6.7	14.3

TABLE VI (Continued)

County	Median Family Income 1959 (In Dollars) (1)	Dollar Average Value of All Farm Products Sold Per Farm 1954 & 1959 Average (2)	Average Size of Farms 1959 (In Acres) (3)	Per Cent of Acres in Farms Worked by Tenants 1959 (4)	Per Cent Employed in Agri-culture 1960 (5)
McIntosh ---	2,066	2,584	277.2	16.9	24.4
Major -----	3,681	5,708	438.0	22.0	37.1
Marshall ---	3,202	5,929	546.3	12.5	14.3
Mayes -----	3,468	2,919	198.0	8.0	13.3
Murray ----	3,348	5,729	442.3	6.8	15.3
Muskogee ---	3,933	3,085	207.2	15.3	7.3
Noble ----	4,042	6,496	423.1	20.0	20.0
Nowata ----	4,290	4,270	341.4	7.7	16.3
Okfuskee --	2,396	2,159	296.6	12.5	20.9
Oklahoma ---	5,708	3,520	183.1	22.1	1.1
Okmulgee --	4,048	2,043	246.9	11.2	6.2
Osage ----	4,918	7,524	981.3	12.2	10.6
Ottawa ----	4,120	3,523	191.6	9.5	8.4
Pawnee ----	3,580	3,802	357.9	16.6	15.7
Payne ----	4,376	2,908	256.4	16.7	7.3
Pittsburg -	3,212	2,474	392.3	8.4	11.2
Pontotoc --	3,874	3,131	310.1	5.9	6.8
Pottawatomie	4,219	2,559	224.1	12.7	7.4
Pushmataha -	1,987	1,460	405.6	6.6	19.8
Roger Mills-	2,976	5,859	736.0	10.3	62.2
Rogers ----	3,855	2,798	232.3	9.3	11.6
Seminole --	3,815	1,876	232.6	8.6	6.5
Sequoyah ---	2,492	1,726	197.0	6.9	18.6
Stephens --	5,039	3,165	347.5	14.0	5.3
Texas -----	5,246	14,119	1,161.0	22.5	22.1
Tillman ---	3,330	10,160	445.8	23.1	30.4
Tulsa ----	5,995	4,258	252.5	9.4	1.2
Wagoner ---	3,271	3,630	234.5	22.0	19.8
Washington -	6,279	3,785	351.6	5.3	2.9
Washita ---	3,882	7,220	311.9	22.6	40.1
Woods -----	4,413	8,894	697.7	17.3	23.5
Woodward ---	4,814	7,501	859.8	9.9	17.6
STATE -----	4,620	4,783	378.1	15.6	9.4

Source: Column (1): See Table III, of this study.
Column (2): Computed from Census of Agriculture: 1959, Vol. I, Part 36, Oklahoma, County Table 5, lines 63 and 64, pp. 187-193.
Column (3): Census of Agriculture: 1959, Vol. I, Part 36, Oklahoma, County Table 1, line 8, pp. 156-161.
Column (4): Computed from Census of Agriculture: 1959, Vol. 1, Part 36, Oklahoma, County Table 3, lines 13 and 21, pp. 174-179.
Column (5): Derived from Census of Population; 1960, Part 38C, Table 85.

While the value of production per farm in the highly urbanized counties is below the state average, it is still above that of the very lowest counties in the southeastern corner of the state. Further, the farming in the urbanized counties is generally part time in nature.

The data of Table VI indicates that there are wide variations among counties in the percentage of people employed in agriculture. The range was from 1.1 percent in Oklahoma County to 62.2 percent in Roger Mills County with the state average being 9.4 percent. In Le Flore County the percentage of total land that is farmed by tenants is 4.6 while in Grant County it is 29.6. The agriculturally dominated counties which have high levels of median family income appear to have considerable tenant farming. Finally, among the various counties there is a wide variance in the average size of farms, the counties in the east having much smaller ones than those in the west and north. The range is from 2000 acres per farm in Cimarron County to 138 acres in Adair County. The size of farms is still increasing in the west so that the variation in average size will probably continue to increase.

The concentration of economic activity in agricultural production does not of itself mark a low or high median family income county. More significant are the relationships between the types of soil, size of farms, etc. For example, those counties with farmers marketing receipts per farm above the state average have an average size of farm greater than the state average with the exception of Garfield and Canadian Counties. The panhandle counties of Cimarron and Texas rank one and two respectively in both size and average

value of products sold per farm. The same relationship between value of products sold and the size of the average farm holds true for low income counties also. Other problems of the southeastern low income families are: (1) high agricultural employment, (2) low farm productivity,[4] (3) low soil fertility, and (4) minimum tenant tenure. The lack of economic activity in the southeastern part of the state, particularly as it concerns limited mineral production in the area, results in very limited encouragement to resource-oriented industries to locate there.[5]

Oklahoma and Tulsa Counties dominate retail trade. In 1929 the two localities accounted for 28.9 percent of all retail sales and for 31.6 percent of the retail employees in the state. By 1958 the percentages had risen to 40.7 and 44.6 respectively. Comanche, Garfield, and Kay Counties, located away from the two dominant areas, had considerable retail activity. Carter, Stephens, Payne, and Pontotoc have developed significant retail trade because of specialised industries in them. Those counties with fair amounts of retail trading that are located around the two metropolitan centers include Muskogee, Washington, Okmulgee, and Creek around Tulsa and Pottawatomie and Cleveland which are adjacent to Oklahoma County. In 1958 Tulsa and Oklahoma Counties accounted for 68 percent of all wholesale sales in the state. Increasingly, wholesale and retail trade is concentrated in the two metropolitan areas.[6]

The state of Oklahoma devotes an important part of its income to expenditures on social welfare. In 1957 the state spent 17.1 percent of total expenditures on welfare payments while nationally the average was 7.2 percent of governmental expenditures. The state

spent more money per capita on social welfare during that year than any other state. The last part of Chapter II has a discussion of why the entirety of state sales tax proceeds less administrative costs are given to the Department of Public Welfare. For the first few years of its operation, there was a rapid rise in the caseload handled by the Oklahoma Public Welfare Department, but since 1947 there has been a general leveling off of the number of cases.

The distribution of welfare funds is such that the same counties that have low median family incomes also have the highest percentages of county populations receiving welfare payments. Thus, those with the largest number of people on welfare are those counties that lie in the southeastern part of the state. The urbanized and high income counties of northwest have very low percentages of their populations receiving welfare assistance. For this study, the totals of persons receiving assistance were derived from statistics included in the monthly bulletin of the Oklahoma State Department of Public Welfare. Three groups of recipients were added together to get the total for each county. These groups included the receivers of Old Age Assistance, the number covered by Aid to the Blind, and the number of children receiving Aid to Dependent Children.[7] The county totals of these groups were added to form the area totals that are used in this study.

While the discussion of the economic characteristics of the population is most important for this study, the political characteristics of the county populations can not be ignored. A brief discussion of these follows.

Electorate voting on state questions is often less than on

officeholder elections held on the same day. There is also a difference between general and special elections. In a study of Oklahoma voting up to 1962, the University of Oklahoma Bureau of Government Research noted that in the General Elections of 1952, 1956 and 1960, the voter turnout was relatively impressive. In each of those three elections, only two of the seventy-seven counties had a turnout of potential (persons over twenty-one years of age) voters of less than fifty percent; sixty-one of the counties had a turnout of potential voters of better than sixty percent.[8]

A difficulty encountered by the authors of the report mentioned above is that prior to 1960, there was no reporting to the Oklahoma State Election Board of the total voter registration in each of the counties. It was only in 1959 that the legislature passed an act requiring this. In order to determine the percentages of voter turnout, it was necessary to obtain the number of persons over twenty-one years of age from the Census of Population. The use of totals derived from the census presents problems when considering voter interest. The percentage of voter turnout in any election appears lower when considering the number who voted in relation to the total population of voting age than for those who voted in relation to the registered voters. The use of registered voter figures gives a much better indication of the amount of voter interest in the issue of a specific election. The State Election Board has, in publications concerning the election results of 1962 and 1964, made use of registerations to determine voter participation. It may be noted from this source that at the regular primary election of May 1, 1962, thirty-five of the seventy-seven counties had turnouts of sixty

percent or more of the registered voters, while the voting in twenty counties was below the state average turnout of fifty-two percent of the registered voters.[9] In the general election of November 6, 1962, only three counties (Choctaw, Jefferson and McClain) had voter turnout below fifty percent while fifty-three counties were above sixty percent in turnout. The turnout for the entire state at that election was sixty-three percent.[10] In the general election of November 3, 1964 (a presidential election), voters in only five counties (Atoka, Choctaw, Haskell, Pushmataha, and Sequoyah) turned out below fifty-six percent. The state average turnout was seventy-two percent with forty-one counties at or above this percentage.[11] The above statistics tend to demonstrate that when the state electorate votes, at least in elections with candidates running for major offices, there is generally a relatively high turnout. State questions voted upon at these elections usually have voting totals about fifteen percent less than for the elected office races. The results must still be considered representative of the opinion of the interested portion of the electorate.

The Electorate by Regions

This portion of Chapter III is concentrated upon establishing geographic areas. The economic areas of this study are similar to the design of such areas by Dr. Donald J. Bogue in association with the Bureau of the Census. He attempted to construct homogeneous subdivisions of all the states. The results of these efforts has been the establishment for statistical purposes of "state economic areas" consisting of single or groups of counties having like social and economic characteristics.

In creating these areas, factors other than industrial and commercial activities were taken into account although economic indicators were the predominant factors. The data produced by the U. S. Census Bureau for the economic areas have been, as the name applies, basically economic in nature. Also taken into account were demographic, climatic, physiographic, and cultural factors as well as those pertaining more directly to the production and exchange of agricultural and non-agricultural goods. The name given to them, "state economic areas," implies that each area may be considered to have something of an economy all its own, so that intra-area or "service" traffic may in some respects be more important than inter-area or "basic" traffic. The term "economy" is used in a very broad sense implying "the total adjustment which the population of an area has made to a particular combination of natural resources and other environmental factors."[12]

For this study economic data have been collected from the decennial Census of Population for each of the seventy-seven counties in the state for each of the indices being discussed (except median family income for 1940 and the number of persons receiving social welfare assistance which was derived as described above). The county data have been totaled into the economic areas which cover the entire state. A county or portion thereof is in no case included in more than one area for a particular census, although several counties are shifted from one ten-year period to another when it is apparent that an individual county has changed its characteristics over the period to the extent that it no longer resembles the rest of the area to which it was originally assigned.

Use of areas is made in order to facilitate statistical correlations of the economic data with the electorate voting on the various questions. The physical problem of attempting to run statistical correlations using data from each of seventy-seven counties is quite great, especially when using only hand calculators. The data assembled on an area basis provide a small number of figures for the entire state that do adequately demonstrate regional variations but do not carry the burden of the multitude of figures required when working with county units.

Areas of high urban density titled "metropolitan" state economic areas are given special attention. Whereas the other areas are given numerical designations, the metropolitan areas are given alphabetical designations. While these metropolitan areas may have many of the physiographic features of the areas surrounding them, they do reveal special characteristics such as a non-agricultural economy which is well integrated and quite distinct from that of the areas lying around them. When originally set up in 1950, the metropolitan areas for Oklahoma included only Tulsa and Oklahoma Counties. For the 1960 Census of Population, Cleveland County was attached to the Oklahoma City area. Creek and Canadian Counties were regarded as separate areas because of the relationship that had developed between them and the Tulsa and Oklahoma City areas respectively. When the state economic areas were initially defined, the metropolitan areas were in fact the previously determined "standard metropolitan areas" established by a Federal Interagency Committee sponsored by the Division of Statistical Standards, Bureau of the Budget.[13]

A "standard metropolitan area" contains at least one central city of 50,000 inhabitants or more. It contains the county in which the central city lies and those surrounding counties that are contiguous and meet the following qualifications: (1a) at least half of the county's population lives in civil divisions with a density of 150 or more per square mile which are relatively close or contiguous to the central city, or (1b) the county has at least 10,000 non-agricultural workers employed in the standard metropolitan area, (2) non-agricultural workers constitute at least two-thirds of the county's resident-employed labor force, and (3) the county has the appearance of being economically and socially integrated with the central city of the area.

In originally delineating state economic areas, it was decided that the metropolitan areas as defined above would not be included as metropolitan economic areas unless they had a population of at least 100,000. If they had less than 100,000 population, they were included in the non-metropolitan state economic area with which they were most closely associated.[14]

For the 1960 tabulations a change was made in the treatment of metropolitan economic areas by the U. S. Bureau of the Census. Metropolitan statistical areas with a central city of 50,000 or more and a total population of 100,000 or more were distinguished as "metropolitan state economic areas."[15] This change affected treatment of Creek and Canadian Counties which became areas C and D respectively. Pottawatomie County might also have been regarded as part of the Oklahoma City metropolitan area where it would have been placed on the grounds of the statistical framework used above in placing

Canadian County. Through the political pressure of the daily newspaper in Shawnee and the district's Congressman, this move was dropped so that Pottawatomie County remains in what is called Area No. 5.

State economic areas have been utilized in this study in conformity with the U. S. Census Bureau's practice for the years 1940, 1950, and 1960. Since these are the only specific years for which information on the amount of urbanization, population, median level of education, and median family income are available, the figures reported for these years have been assumed to be representative of the situation in the immediately preceding and succeeding years. In order to arrive at the percentage of the population on welfare in each area, it has been necessary to use the data for each respective Census of Population and divide the total number on welfare at the time the census was taken by the total population figure. The U. S. Bureau of the Census lists two reasons why the organizational and geographical boundaries of an area would be altered for statistical purposes: (1) the area's economic characteristics may change because of technological innovations, the discovery of new mineral resources, a change in agricultural pursuits (as in the demise of cotton in many parts of Oklahoma over the past thirty years), or the introduction of an entirely new type of industry that may have major impact upon the features of at least a part of an area, and (2) changes around metropolitan economic areas might occur so that more counties would have to be included (as Cleveland County mentioned above in this section), or there may be growth within a non-metropolitan area around a central city to the extent that it is necessary to change its classification from non-

metropolitan to metropolitan economic area.

Changes of the first type tend to be gradual, so that Dr. Bogue felt when the areas were set up (1951) that the original non-metropolitan classifications would be realistic for at least three decades. The experience from 1950 to 1960 generally tended to confirm this viewpoint. Any changes that occurred had an effect upon the entire area, not just one portion.

Since what constitutes a metropolitan area is an arbitrary decision on the part of the U. S. Census Bureau, it is recognized that this type of classification must be revised after each decennial census. Cities grow above 50,000 population and become central cities. Also, the influence of a metropolitan area on adjacent areas often necessitates readjustment of these area so as to reflect the changing situation, as was the case with Creek and Canadian Counties. Significantly, Dr. Bogue felt that these changes did not adversely affect the uniformity of the framework of the non-metropolitan regions.[16]

Certain changes in the 1950 and 1960 delineation of areas as set up by Dr. Bogue are necessitated for this study. The arrangement made by the census bureau for 1940 (Figure 1) has not been changed since there appear to be no individual county voting patterns that differ greatly from the county's assigned area. Washington County, for the 1950 delineation (Figure 2), has been added to the metropolitan area of Tulsa and subtracted from the area in the northeastern corner of the state, here called Area No. 3. Osage County has also been subtracted from Area No. 3 so that the continuity of the area could be maintained. It has been added to Area No. 2 which covers the north

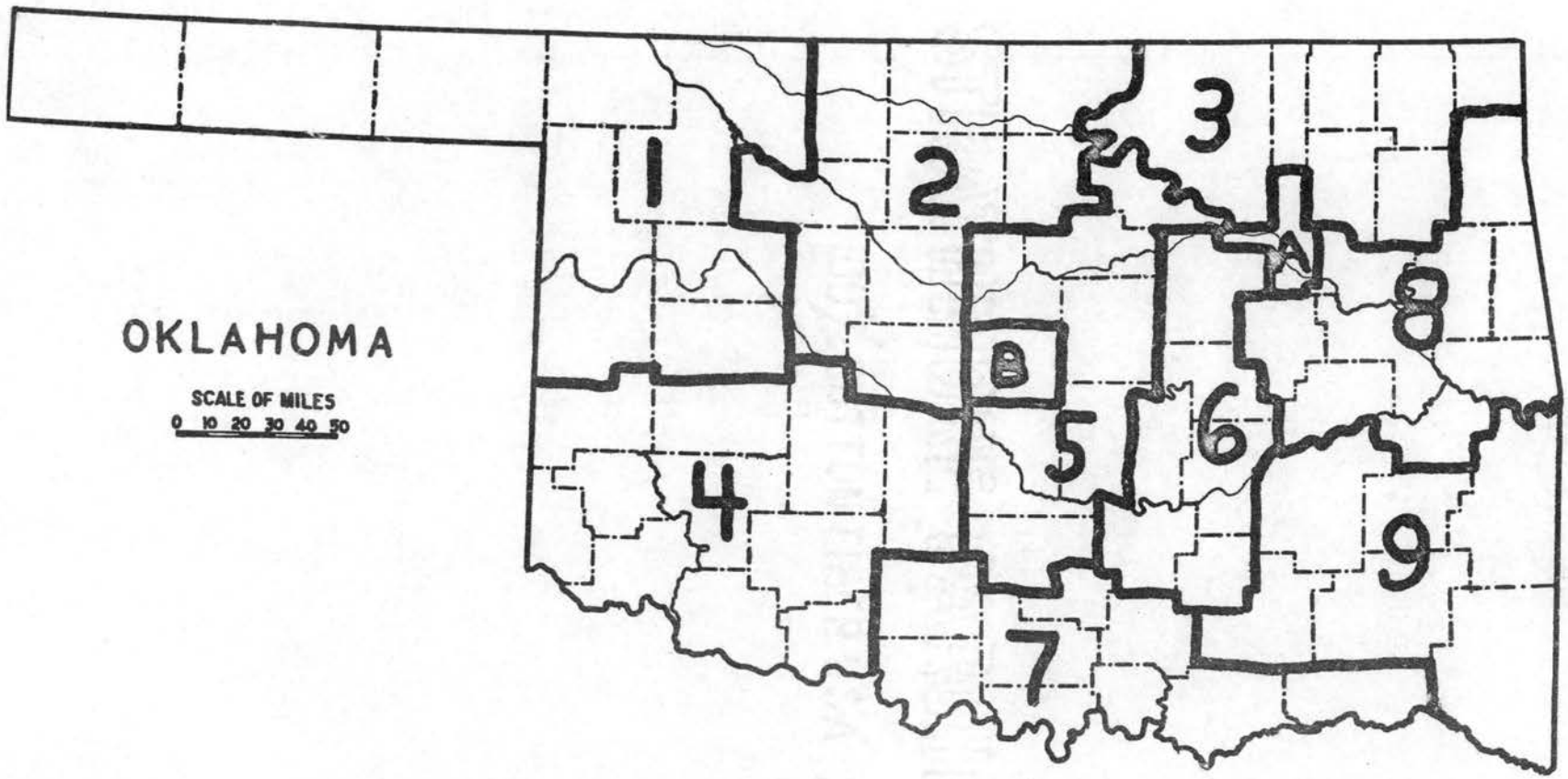

Figure 1. Oklahoma Economic Areas for the 1940 Period

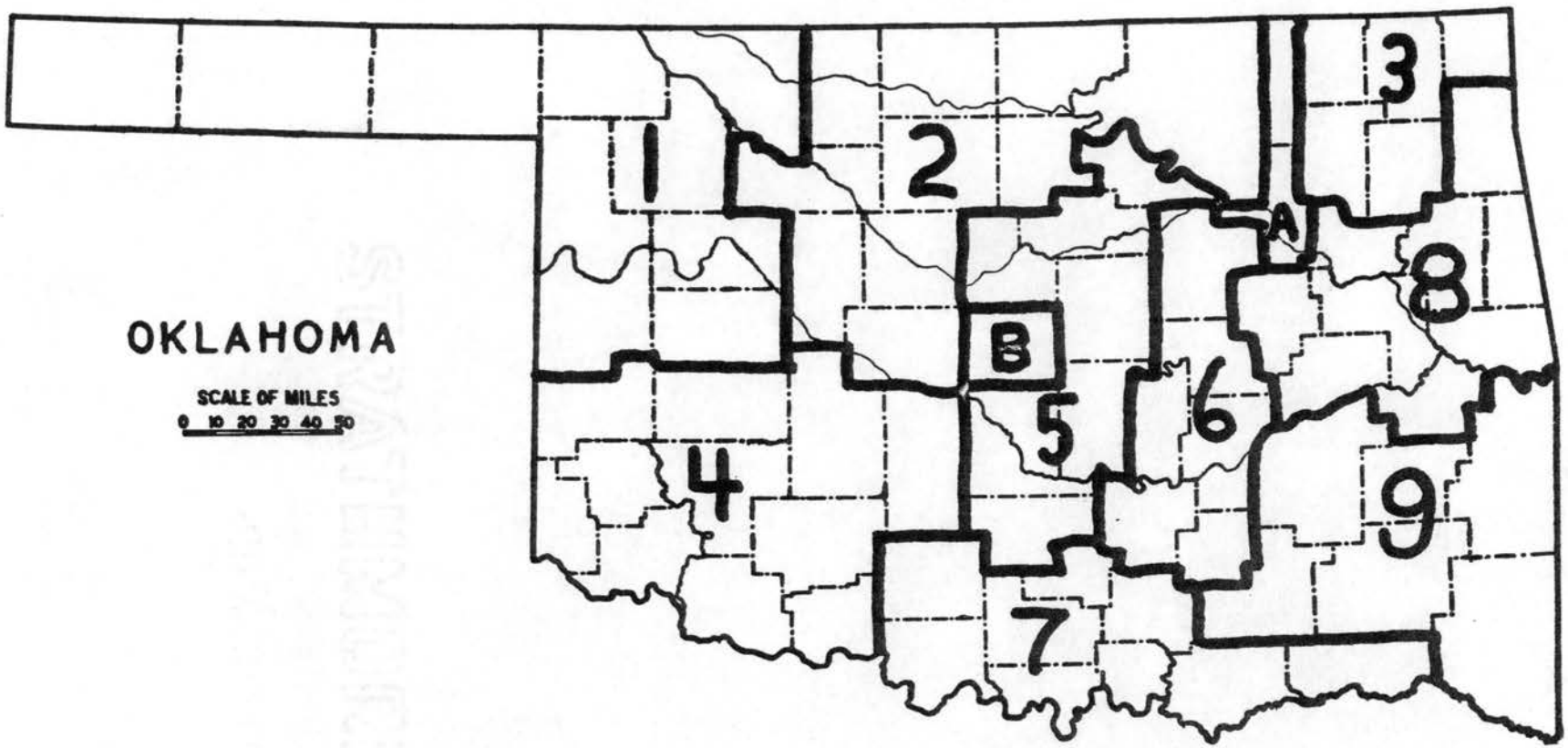

Figure 2. Oklahoma Economic Areas for the 1950 Period

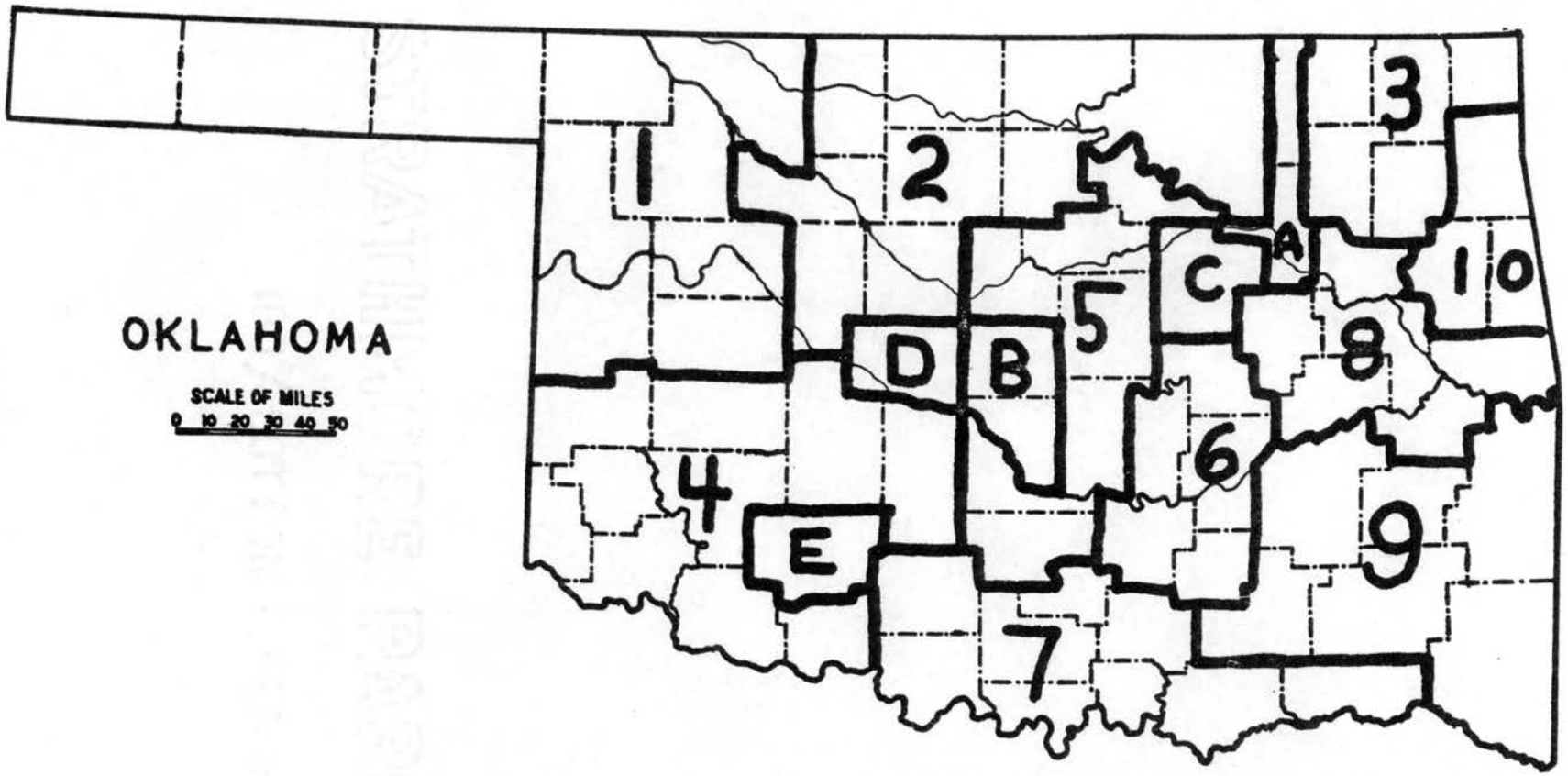

Figure 3. Oklahoma Economic Areas for the 1960 Period

central part of the state. These two changes, affecting three areas, have been the only necessary ones for the 1950 delineation. The shift of Washington County was because of the growth of Bartlesville during the period 1940-1950. Between those years the urbanized population increased by 53.2 percent to 66.1 percent of the entire county population. Urbanization in Area No. 3 for 1940 (including Washington and Osage Counties) was 29.5 percent and for 1950 (excluding the two counties) was 44.7 percent. There were significant differences in median family incomes. Excluding Washington and Osage Counties the median family income in Area No. 3 was $1806 in 1950. It was $3486 for Washington County and $3306 for Tulsa County. The similarity between Tulsa and Washington Counties for this indicator was much closer than for Washington County and the rest of Area No. 3. Median family income for 1940 is not available so no comparisons can be made.

The changes made for this study in the composition of the areas for 1960 (Figure 3) include those by the U. S. Bureau of the Census and others made by the author that attempt to recognize major changes in the population characteristics used in this study. In that year the census bureau took Osage County from its Area No. 3 classification and expanded the Tulsa area to include it. For this study Osage County is left in Area No. 2 (north central Oklahoma) as in the 1950 groupings in order to maintain stability and in consideration of the small degree of relationship between Tulsa and Osage Counties. As described above, Creek and Canadian Counties were separated from their former areas and made individual areas. Another change by the census bureau was to separate Area No. 8 into two areas, parts

A and B. Area No. 8A became Area No. 8 and Area No. 8B became Area No. 10.

Comanche County, in Area No. 4 for 1950, is one of the metropolitan areas recognized in the Census of Population of 1960, but the population is less than 100,000 so that under the terms of the criteria for the metropolitan economic areas, its status could not be changed. However, in view of the wide variation in voting patterns between Comanche County and the remainder of the area and because of the considerable changes in the county's economic indicators between 1950 and 1960, the author has made the county a separate area, here called Area E. In 1960, 68.8 percent of the Comanche County population was classified as urban while the remainder of Area No. 4 was only 44.2 percent urbanized. The percentages of the total population on welfare were 2.9 and 8.9 respectively, the lowest county percentages in the state. That same year the median family income was $4624 for Comanche County and $3713 for the remainder of Area No. 4. Another decisive factor is that Comanche County had an increase in population from 1950 to 1960 of 64.6 percent, which was the highest county gain in the state, making Lawton the third largest city in population. The rest of the area had a slight decrease in population. No changes in the areas were made other than those discussed above. Area alterations were limited to those where counties had become radically differentiated from the areas in which they were originally grouped.

The area assignments have definite pattern and continuity despite the few changes already noted. The 1940 and 1950 dispositions divide the state into eleven areas and the 1960 structure splits it into fifteen areas.

Chapters II and III deal with basically two types of factors. Chapter II is concentrated on the method that the drafters of the Oklahoma Constitution provided for direct expression by voters on specific issues of major and minor importance. Chapter III deals with the economic characteristics of the state population. These characteristics are discussed on a county and area basis in order to demonstrate the differences in economic characteristics between various parts of the state.

Chapter IV serves to bring the two parts of the study together in a form that will provide some insight as to how the electorate acts or can be expected to act when it votes on referenda.

FOOTNOTES

[1]Richard W. Poole, The Oklahoma Economy (Stillwater, Oklahoma, 1963), pp. 9-14.

[2]U.S. Census of Population, 1960--State Economic Areas (Washington, 1960), p. x.

[3]Poole, pp. 27-36.

[4]Ibid., pp 52-57.

[5]Ibid., pp 62-63.

[6]Ibid., pp. 116, 119.

[7]Ibid., pp. 98-101.

[8]Oliver Benson, Oklahoma Votes 1907-1962 (Norman, Oklahoma, 1964), pp. 13, 32-43.

[9]Frank Reneau, ed., State of Oklahoma, Election Results and Statistics, 1962 (Oklahoma City, Oklahoma, 1964), pp. 3-5.

[10]Ibid., p. 109.

[11]Frank Reneau, ed., State of Oklahoma, Election Results and Statistics, 1964 (Oklahoma City, Oklahoma, 1964), pp. 51-52.

[12]Donald J. Bogue, State Economic Areas (Washington, 1951), p. 1.

[13]Ibid., p. 2.

[14]Ibid., p. 6.

[15]U. S. Census of Population, 1960--State Economic Areas (Washington, 1960), p. x.

[16]Donald J. Bogue, Economic Areas of the United States (New York, 1961), p. xiv.

CHAPTER IV

CORRELATIONS AND FINDINGS

Obtaining Usable Results

The author of this study considered two methods of demonstrating the relationships between voting and economic indices. One is graphical; the second is statistical. Of the two the latter method has been used much more extensively. This procedure has been followed because of the difficulty of using graphic methods to adequately demonstrate the varying relationships of the indices. The only evaluation that is possible when graphically displaying the relationships of the indices being compared is to visually note the differences in the shapes of the patterns that emerge. The optimum result of the graphic method would be a locus of intersection points generally linear in nature.

Utilization of the graphic method is as follows. The datum of one of the economic indices is located on one coordinate axis of a graph, while at the same time on the other axis of the graph is placed the range of the percentage of "yes" votes resulting on the state question being considered. The next step is to take the relevant values for each economic area (that is, the values of each index plotted on the axis of a graph for a certain area) and make a notation at the point of intersection in the body of the graph of the values of the two axes for that area. Then it is necessary to

see if a pattern emerges from the plotting of the various intersection points. Patterns derived by this method include clusters where the intersection points are centered in a general area and portray no specific linear function, and the generally linear type which does approach being a specific function. The graphic method has been used for plotting the county by county indices as well as those of the area basis. Usage of the graphic method has been quite restricted because of its limitations in adequately displaying the results of this study.

The second method of demonstrating results is the one used extensively in this study. Using it, the variously named correlation, coefficient of correlation, and product-moment coefficient of correlation are derived. However it is named, it is defined for two sets of variables expressed in their respective standard deviations as units as "the arithmetic mean of the products of deviations of corresponding values from their respective means."[1] The example below demonstrates the manner by which the coefficient of correlation was derived. A fundamental theorem in connection with the use of the coefficient of correlation, identified by the letter R, is that "the value of R is independent of the origin of reference and the units of measurement."[2] Thus, no matter what the values are of the indices used, the resulting value of R will always fall between plus one and minus one. Positive values of R indicate that as one of the indices increases, the other does also. If R is a negative value, then as one of the indices increases, the other decreases. This method is unusable whenever either one or both of the indices is a constant throughout all the areas for which the indices are obtained.

The closer the value of R is to either value of one, the greater the degree of ranking of the variables considered, while the closer R is to zero, the less the symmetry of ranking between the two factors being considered for each area and those for every other area. Portrayed graphically, a value of R that is close to one produces a series of points that approximate a line. The closer R is to zero the lower the possibility of the points approaching a linear function.

The specific formula used for the mathematical computations is:

$$R = \frac{\frac{1}{N}\sum xy - \bar{x}\bar{y}}{\sqrt{\frac{1}{N}\sum x^2 - \bar{x}^2}\cdot\sqrt{\frac{1}{N}\sum y^2 - \bar{y}^2}}$$

In this formula R is the coefficient of correlation, N is the number of economic areas into which the state is divided, X is the value of the economic variable in use, and Y is the percentage of "yes" votes on the question being considered.[3]

High Correlations

The results of the mathematical correlations are presented in sections on high and low correlations. These parts are divided into the categories of questions as presented in Chapter II. The categories have been set up as follows:

Legislative Salaries	5 Questions
Schools	5 Separate Questions (No. 368 repeated)
Roads	5 Questions
Taxation	4 Questions
Liquor	4 Questions
Welfare	6 Questions

Of the six categories high correlations were found between the election results and the economic characteristics of the voters in

the case of those questions concerned with highways and liquor. These two categories are discussed in this section. The remaining categories have generally low correlations although several include questions having high correlations. These latter categories of questions are discussed in the next part of this chapter.

Table VII presents the correlations that have been obtained for the questions that make up the roads and highways category.

TABLE VII

CORRELATIONS OF THE PERCENTAGE OF "YES" VOTING AND THE ECONOMIC INDICES OF URBANIZATION, EDUCATION, AND INCOME BY STATE ECONOMIC AREAS ON SELECTED ROAD QUESTIONS, 1940-1960

QUESTION	DATE	URBAN	EDUCATION	INCOME
253	Nov. 7, 1940	-.71	-.60	(No data)
326	Nov. 7, 1950	+.81		+.60
359	Jan.26, 1954	+.44		+.32
396	Sep.20, 1960	+.81		+.68
398	Sep.20, 1960	+.91		+.58

Two correlations were derived for each question in the category. The correlations are between the results of voting on the road questions and the level of urbanization as well as the level of income. An exception to this is the correlation of the votes on Question 253 with the median family income indices because the income

data is not obtainable for the time period of the question. Instead the average level of education was utilized. The results obtained by using the alternate indicator do not appear to affect the demonstration of the overall pattern however.

Except for Question 359 there are high correlations for every question in the category. The question related directly to the interests of the voters only in the north central, northeastern, and southwestern parts of the state. The interest it attracted may then be said to lie elsewhere than in the economic interest of the entire state's electorate so that "yes" voting would be highest in the areas directly affected and not be relevant to the indices considered here. Neither of the correlations reaches .50 which has been accepted as the demarcation line between high and low correlations. Since what correlation there is is positive, it may be said that the more urbanized and wealthier areas supported it somewhat better than the rural and poor areas.

The negative correlation between the "yes" votes and degree of urbanization for the 1940 vote may be the result of the way the question was worded. The general tenor of the proposal was the opposite of the three questions in the category with high correlations. This first question attempted to decrease the powers of the state (specifically the highway department) and to increase the obligations placed on the county governments for constructing and maintaining roads.

Question 326, which produces a very nearly opposite correlation result from that derived for Question 253, is in meaning the very opposite of the earlier question. This 1950 question proposed that

with minor exceptions all highway user taxes would go to the state highway department. A possible cause for the variations in the correlation figures of Questions 326 and 253 is the increased urbanization in some state areas relative to others during the ten year period between the voting on the two issues. Another reason could be the varying changes that occurred over the years in the economic areas.

Questions 396 and 398 were voted upon on the same day. There is some variation between the correlations of the voting on the two questions, but not over +.10 for either set of correlations. Question 396 proposed that those counties so wishing could turn over their road building activities to the state highway department. The correlation between the "yes" votes on this question and the level of urbanization was particularly strong, indicating that those areas with little rural population were enthusiastic about the proposal while the less urbanized areas were not. Areas A and B (for the 1960 organization) had "yes" votes above 65 percent while none of the other areas, except for Area E with 46 percent, had voting above 27 percent "yes".

Question 398 proposed the establishment of a constitutional highway commission to oversee the operation of the state highway department. The similarity of the voting on the three questions voted upon on September 20, 1960 suggests that there may well have been outside factors influencing the voting that had little relationship with the proposals themselves.*

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*This is further discussed in Chapter II.

The second category of high correlations relates to votes on liquor and beer questions. The results that have been obtained for these questions are listed in Table VIII.

TABLE VIII

CORRELATIONS OF THE PERCENTAGE OF "YES" VOTING AND THE ECONOMIC INDICES OF URBANIZATION, EDUCATION, AND INCOME BY STATE ECONOMIC AREAS ON SELECTED LIQUOR QUESTIONS, 1940-1959

QUESTION	DATE	URBAN	EDUCATION	INCOME
289	Nov. 5, 1940	+.77	+.07	
343	Sept.27, 1949	+.87		+.64
376	Dec. 3, 1957	-.34		-.33
386	Apr. 7, 1959	+.86		+.80

The liquor category includes another case where it would have been desirable to have the median family income data available. The result obtained from using education as the second variable arouses doubt as to the category being one of high correlations. However, by considering the education correlation as an exception to the normal pattern, the rest of the results can be said to show basic similarities of voting behavior.

The correlations of the urbanization levels and the voting on the three repeal questions were similarly strong. It may be that before passage of such a measure, the state's total population had

to be urbanized to a certain point which will remain undefined for this study. It might be noted that in 1951 the statewide level of urbanization was 51 percent of the population while in 1960 this level had risen to 63 percent of the total. Further research is needed in this area to determine what the voting patterns of the younger voters were since they make up a large percentage of the population transfers from the rural to the urban areas. There may well be a linkage between this migration and the final acceptance of repeal of prohibition.

When the liquor voting is correlated with the median family income characteristics, a pattern becomes quite clear, especially when a correlation is done of the same indicator and the 1957 voting results on the 3.2 percent beer question. Whereas the other questions related to the repeal of prohibition and a reduction in restrictions on the sale of alcoholic beverage, Question 376 proposed the reverse. Passage of the measure would have given individual counties the opetion of regulating intra-county beer sales. While the correlation of the voting on the two liquor repeal questions with the median level of family income produces a high correlation, the vote on Question 376 when correlated with the same economic indices produces a negative value. This value is low and stands in sharp contrast to the correlations of the repeal voting. The same reasoning is applicable for the entire category for the correlations of the voting and urbanization factors.

The results of the 1957 county option vote may have heartened the repeal supporters even though there was not as strong a correlation factor as had appeared in the two previous repeal votes. Had they

used the method of analysis utilized here they would have been the more heartened the stronger the negative correlation on this question. The reverse relationship between the correlations of the voting on repeal and county option and the median family income data is also applicable to the correlation of the same voting and the urbanization data. In the latter case the county option on beer question has a low negative correlation which stands in radical contrast to the results of the correlations for the repeal votes.

Low Correlations

The discussion of this section is of those categories of questions for which coefficients of correlation were derived that were generally quite low, although some individual questions do have relatively high correlation values. The categories of questions in this section include legislative salaries, schools, tax measures, and welfare measures. The correlations derived from the voting on legislative salaries are listed in Table IX.

TABLE IX

CORRELATIONS OF THE PERCENTAGE OF "YES" VOTING AND THE ECONOMIC INDICES OF URBANIZATION AND EDUCATION BY STATE ECONOMIC AREAS ON SELECTED LEGISLATIVE SALARY QUESTIONS, 1938-1964

QUESTION	DATE	URBAN	EDUCATION
243	Nov. 8, 1939	-.04	-.20
329	July 6, 1948	+.14	+.04
389	July 5, 1960	+.27	+.29
405	May 22, 1962	+.498	+.30
414	Nov. 3, 1964	+.35	+.30

The correlation results in this category tend to become more positive over the years of the study. This result is particularly apparent for the correlations dealing with the median level of education. This may in part be attributed to the possibility of a growing realization over the years by persons with more education that some of the problems the state legislature faces may be solved by providing greater financial inducements so as to attract candidates of higher quality. This argument implies that certain persons who might be tempted to run for legislative office are deterred by the financial losses they will incur due to the low salaries they would be paid. This statement is made only as a possible explanation for the apparent rising degree of correlation on the measures of this category. The same may generally be said of the correlations for the urban factor. No significance is apparent in the fact that the only question that received a majority of the votes was Question 329. All of the rest were defeated by generally large margins. None of the questions that failed received "yes" votes of over fifty percent of the total vote in any of the areas. The area votes on Question 329 indicate that only five areas voted for the measure by more than fifty percent. Of these, four were below fifty-five percent and one (Tulsa) was at sixty-five percent. In general what this series of issues tends to demonstrate is that there is a general lack of enthusiasm for providing the members of the legislature with a larger income for their work.

The next category for consideration consists of those questions having to do with the educational system of the state. The correlations that have been derived for these questions are found in Table X.

TABLE X

CORRELATIONS OF THE PERCENTAGE OF "YES" VOTING AND THE ECONOMIC INDICES OF URBANIZATION, EDUCATION, AND INCOME BY STATE ECONOMIC AREAS ON SELECTED EDUCATION QUESTIONS, 1935-1960

QUESTION	DATE	URBAN	EDUCATION	INCOME
208	Sept. 24, 1935	-.39	-.48	
314	Nov. 5, 1946	+.14	-.075	
327	July 6, 1948		+.51	+.22
368 (1950 Census)	April 5, 1955		-.09	-.35
368 (1960 Census)	April 5, 1955		-.20	-.31
393	July 5, 1960	+.75	+.68	

This category contains the one question (368) used in the study that overlaps into two time periods. The correlations of the voting on the question are very similar except for a .11 difference in the median education correlations. This difference is particularly small when it is considered that over the ten-year period from 1950 to 1960 major changes occurred in the level of education of the entire state's population. During that time period the median level of education rose from 9.1 years in the earlier year to 10.4 years in the latter. If anything, the smallness of the variations between the two correlations of income and education is the surprising thing. Median family income for the state rose by over twenty-two hundred dollars

during the ten-year period from 1950 to 1960. The respective figures were 2387 dollars and 4620 dollars.

The question having the highest level of negative correlation of the ones in this category is Question 208 which was indirectly linked with schools. The purpose of the measure was to exempt homesteads from non-school ad valorem taxes for a certain amount of valuation. The measure was defeated as discussed in Chapter II. The negative correlation of the voting on this question may be explained as follows. The people who lived in the areas of higher median education did not care to support a measure that would provide special exemptions from taxation. The people who lived in the areas with low median education showed slight concern for the restriction incurred by the taxation. Since the correlations fall below the .50 level of correlation, no really strong indication of a significant pattern is produced. The total "yes" voting to total votes was forty-five percent.

The results of voting on two questions in this category produced positive correlations, one being a low correlation and the other fairly high. Question 327 proposed that individual school boards be permitted to increase the tax levy by one mill on their own initiative. This measure was passed by a voting ratio of 2.5 to 1. The second measure whose results produced a positive correlation is Question 393 which proposed the issuance of bonds for the improvement of the state system of higher education and the issuance of other bonds for the establishment of a center for mentally retarded children. This measure's high correlation of "yes" votes with urbanizational and educational factors demonstrates that the population of areas with

high levels of such economic characteristics tends to strongly support measures directed to assisting higher education. The areas with populations that are less urbanized and have lower average median school years completed did not support the measure strongly.

The correlation results of Questions 314 and 368 and the economic indices of urbanization, education, and income produce low levels of correlation. Both measures were adopted by sizeable margins. Both of these measures permitted the individual school districts of the state to raise additional revenues by voting increases in the mill levy of ad valorem taxes. Such measures have two advantages: (1) they permit the continuation of local control to improve school services and (2) they provide an opportunity for direct popular expression on taxation and the usage of public income.

Questions in the educational category were accepted by large voting majorities with the exception of Question 208 which was narrowly defeated. The electorate may have considered it to not be directly related to education. For the question studied, there has been a general tendency across the state to vote for education as noted by the margins of passage and correlations of the questions in this category. Except for Question 393 educational measures appear to be equally popular in all the state economic areas. The results of the voting on Question 393 show that this interest does not appear to carry over to higher educational measures in the areas with lower urbanization and education. The general popular approval appears then to be concentrated in measures dealing with local school systems.

The next grouping of questions is the general category of taxation. The compilations for these questions are listed in Table XI.

TABLE XI

CORRELATIONS OF THE PERCENTAGE OF "YES" VOTING AND THE ECONOMIC INDICES OF URBANIZATION, EDUCATION, AND INCOME BY STATE ECONOMIC AREAS ON SELECTED TAXATION QUESTIONS, 1941-1960

QUESTION	DATE	URBAN	EDUCATION	INCOME
298	March 11, 1941	+.36	+.55	
379	July 1, 1958	+.17		+.23
390	July 5, 1960	-.12		-.45
395	Nov. 8, 1960	+.47		+.39

Question 298 was adopted by an almost two to one ratio of votes. This measure prohibits the state legislature from appropriating funds beyond expected receipts. Except for Areas 7, 8, and 9, the voters in every economic area in the state voted for this measure by more than sixty percent. The percentage of "yes" votes to total votes for Tulsa was 91 percent and that for each of the above three exceptions was between 53 and 59 percent.

Question 379 may be analyzed in the same manner as Question 298. Question 379 was accepted by a voting margin of nearly two to one. This voting produces low correlations for income and urbanizational factors, in part due to the fact that by areas the

range in the percentage of "yes" voting to total votes varies only between 53 and 73 percent. The measure proposed limiting ad valorem assessments to 35 percent of the fair market value. This measure might be described as a protective measure for the individual property owner and would thus appear to have strong appeal for the majority of voters all across the state.

Question 390 is the only one in this category to produce negative correlation results. The range in "yes" voting on this question was between 40 and 59 percent of the total vote for the various economic areas. The measure was adopted by a very slim margin. In many respects this proposal could be classed as a welfare measure because it allowed the local units of government to jointly establish public health units. Although the correlation results of the voting on this question with the urban and economic indices does not indicate high correlations, the correlations do stand out because they are negative. The rest of the correlations of the measures in this category are positive.

Question 395 proposed that the state withholding tax law, which the legislature passed, be upheld. It provided that employers would be required to deduct a percentage of their employees' income for the purpose of the state income tax. Statewide the "yes" vote amounted to 35 percent of the total vote. The correlations of this voting with the urban and income indices are positive and low. The positive correlations indicate that there was more enthusiasm for this measure in the high income and heavily urbanized areas than in the low income and generally rural areas. It is in the higher income and urbanized areas that the larger percentage of people are employed who would be covered by this act and who thus might find convenience in having some

deduction made from their salaries each week rather than having to make a lump-sum payment once a year. Generally, the population of areas with large numbers of people employed in agriculture would not be covered by the act and so would have little interest in such a matter. Thus, since they could derive no direct benefit from it, they would tend to vote against the measure. Such voting in high income agricultural areas may account for the income correlation on this question being lower than the urbanizational one.

The final category that has been included in this study is that of questions relating to public welfare. The results of the correlations in this category are found in Table XII.

TABLE XII

CORRELATIONS OF THE PERCENTAGE OF "YES" VOTING AND THE ECONOMIC INDICES OF URBANIZATION, INCOME, AND WELFARE BY STATE ECONOMIC AREAS ON SELECTED WELFARE QUESTIONS, 1935-1952

QUESTION	DATE	URBAN	INCOME	WELFARE
214	Sept. 24, 1935	-.68		+.72
220	Dec. 17, 1935	-.04		+.45
226	July 7, 1936	+.47		+.90
299	March 11, 1941	+.499		-.14
345	July 4, 1950	+.14	+.016	
347	Nov. 4, 1952	-.50	-.86	+.97

This category presents a major difficulty in relating the correlation results of it to the rest of the study. Four of the six questions come from the same time period and have been correlated

with the economic data from 1940. The first three questions, numbers 214, 220, and 226, deal with the establishment of the state welfare in Oklahoma. The final two questions, numbers 345 and 349, were correlated with the economic data from 1950. Unfortunately there are no questions concerned with the welfare system to be correlated with the 1960 economic data. This prevents an analysis of any changing electoral voting patterns over the entire period of study.

The welfare system in Oklahoma was established with the idea that the state free-aid system would be a short-time project covering a few people. It was only to last until the federally sponsored Old Age Survivors and Dependents Insurance (Social Security) would cover nearly all the mature population. This, however, did not occur and the number of people covered by the state old age assistance payments system has increased. In 1940, 4.65 percent of the entire population of the state was on the state welfare assistance rolls. By 1950 the percentage of the state population on welfare assistance had risen to 7.7 percent of the entire state population.

Question 214 proposed a system of assistance payments to the elderly. It received a "yes" vote ratio of 2.5 to 1. This vote showed a strong negative correlation between "yes" voting and the degree of urbanization. Those areas which by 1940 had relatively high percentages of their population on the welfare payment rolls tended to vote strongly for the measure while those areas that developed small welfare rolls tended to have little enthusiasm for the issue.

Question 220 appropriated funds to the state board of public welfare for a two-year period. The correlation of the results of

the voting and the urbanization characteristic presents no clear idea about voter behavior. The correlation of the voting and the welfare parameter reaffirms that these measures were best received in areas that tended to develop the greatest percentage of population on welfare.

The passage of Question 226 legalized the establishment of the present welfare system and raised the sales tax from one to two percent. A very strong correlation exists between the results on this question and the welfare indices. While Areas 2 and A (see map of 1940 economic areas) had percentages of "yes" votes to total votes in the low forties, the other areas gave the majority of their votes to the issue.

The correlations worked out between the voting and the urban and welfare indices for Questions 226 and 299 provide considerable help in establishing a pattern to the welfare category of questions. The weak negative correlation obtained from the correlation of the welfare indices for 1940 and the voting on Question 299 is in sharp contrast to the strong positive correlation derived from the same economic indices and the voting on Question 226. Question 229 proposed that the legislature determine the amount of individual welfare assistance to be provided by the state, thus removing the financial limitations imposed by Question 226. It also proposed allowing the legislature to levy taxes, other than ad valorem, for the support of the system. This question was popular across the entire state with the area range of "yes" voting as a percentage of the total vote being from 69 to 83. The difference in "yes" vote percentages of the results of the two questions may be

attributed to the fact that a specific tax increase was not proposed under Question 299. The electorate may have more heavily supported a measure that tended to increase benefits without at the same time directly increasing taxes rather than a measure (as 226) that proposed an increase in service along with a tax increase. The difference in the correlations of the welfare indices and the "yes" voting on Question 226 and 299 may well be caused by a certain fear on the part of the voters in areas with high welfare receipts that when the welfare activities were placed under direct legislative control, there would be a new element of jeopardy injected into the constitutional structure. This new legislative power could be used to decrease the benefits handed out by the state. All of this must remain as conjecture however since the study at hand does not involve material on voter opinion.

Question 345 provided that relatives of employees who die of injuries sustained while working under the terms of coverage of the Workman's Compensation Law would receive a death benefit. This proposal was enthusiastically accepted by voters in all areas of the state. The "yes" vote amounted to 83 percent of the entire vote. There were only three areas where the "yes" vote was not between eighty and eighty-seven percent of the total vote. These three areas were numbers 1, 2, and 3 and had a range in "yes" voting of between 72 and 77 percent. This is a type of measure that most voters in the state can easily support since it will directly cost them nothing if it passes and may well furnish their heirs some monetary compensation if they should die while working at a job included under the Workman's Compensation scheme.

Question 345 is the one question in this category that presents no special problems in terms of analysis. The question proposed that the state sales tax be raised to three percent and that ninety-eight percent of this be given to the public assistance fund. There is a strong negative relationship between the median level of income and the vote on this question. In this connection it is well to note the difference in the correlation of the urbanization characteristic with the voting result and the correlation of the same economic factor with the results of Question 226. While Question 226 passed with a substantial majority, the apparent dissatisfaction the voters in the heavily urbanized areas have come to feel concerning the value of welfare expenditure is indicated in their voting on this question. Only in the poorest areas of the state did Question 349 receive as much as twenty-seven percent of the vote. The high income areas had voting results substantially below this figure, generally not above eleven percent in terms of "yes" votes to the total vote.

In Chapter IV the results obtained from correlating the various questions with the appropriate economic data have been discussed. The discussion in Chapter V consists of a few conclusions concerning the approach the study has taken as well as the light that has been shed on the hypotheses suggested in Chapter I.

FOOTNOTES

[1] John F. Kennedy, Mathematics and Statistics, Part One (New York, 1950), p. 173.

[2] Ibid., p. 174.

[3] Ibid., p. 173.

CHAPTER V

CONCLUSION

This study has focused on one aspect of referendum voting in Oklahoma. The specific purpose of the study has been to discern some of the relationships between voting in the state on a regional basis for state questions and selected economic parameters relating to the population. This chapter is concerned with how the hypotheses developed in Chapter I have been substantiated or disproven.

The general hypothesis of the study is that there is a relationship between the voting by the electorate on referenda and the relative economic position of the electorate. It may be concluded that this hypothesis is essentially correct. Although there is always the possibility of a chance association between the two variables considered in each instance, the number of examples used in the study tends to limit this contingency. The general hypothesis of the study is affirmed by the results obtained for the questions on roads and highways as well as alcoholic beverages. Not all the results substantiate the hypothesis however.

Between the specific categories of state questions there is such a variation in the results of the correlations of the voting results and economic characteristics that conclusions in regard to the specific hypotheses vary. It was hypothesized that the higher the amount of urbanization in an area relative to the other areas,

the greater would be the tendency for the electorate to approve measures increasing social activities. Such is the case for those questions in the categories of roads and liquors. For this index in the other categories of questions the voting was such that either all the areas were equally enthusiastic or unenthusiastic about the questions or the level of urbanization did not demonstrate significance as a determining factor in the voter behavior.

Another hypothesis suggested in Chapter I is that the higher the relative level of education, the greater would be the tendency of the electorate to vote for educational measures. Only in one instance does this prove to be true for this study. That instance is a question that proposed bonds for higher education. On all those issues primarily concerned with common schools, the results of the correlations have been inconclusive except that there is a consistent willingness of the voters to accept measures increasing the funds to be earmarked for that purpose, even when it results in higher taxes.

A third specific hypothesis is that the size of the "yes" voting is related to the relative ranking of the median family income of the areas. This hypothesis is correct for those questions relating to the repeal of prohibition but not to the one of county option on beer. Less conclusively, it is correct for the questions relating to roads and highways. The exception here is the question in 1954 which permitted the turnpike commission to expand the state turnpike system. This question was probably of more appeal in the regions where the roads were to be built than in any others (as discussed in Chapter IV). The results obtained from studying this question of somewhat regional interest makes the votes on other questions in

the category, which did have wide appeal, stand out in confirming the hypothesis. The voting on the other highway questions produced high results of between +.81 and +.91 when correlated with the economic indices of the level of urbanization. The voting on these highway questions produced results between +.58 and +.68 when correlated with the economic factor of median family income. The turnpike question had voting results which produced correlation factors of +.44 and +.32 when correlated with the economic parameters of urbanization and median family income respectively.

A fourth hypothesis is that the greater the number of persons receiving assistance from the state welfare system relative to the total population of a region, the greater the likelihood of the area's voting for an expansion of the system. Correlations using the welfare economic indices have only been derived from those questions assigned to the welfare category (as discussed in Chapter IV). Judging the validity of this hypothesis is difficult because of the variations in the correlations between the various questions. Three of the correlations for this factor are high and of these, two are quite high so that it may be tentatively said that the higher the percentage of an area's total population on state assistance, the greater the likelihood of the voting of the area's electorate to be for this type of proposal.

Finally, it is possible to conclude that there is a demonstrable relationship in some cases between voting on referenda and the economic indices considered in this study. The relatedness varies from category to category and from index to index so that broad generalizations cannot be made. Each question must be considered

on an individual basis. In fact the only broad generalization it is possible to make is that in numerous cases popular expression in the form of voting can be linked to the average economic status of the people concerned. By actually demonstrating that such a relationship can occur, the author considers that the study has been a success.

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APPENDIX A

EXAMPLES OF THE DERIVATION OF THE CORRELATIONS

State Question No. 345 — Voted Upon July 4, 1950

X - Median Family Income

Y - Compensation for death under Workman's Compensation Law. (% "yes" votes).

Areas	X	Y	XY	X^2	Y^2
1	2549	71.8	18,301.82	6,497,401	5155.24
2	2672	76.8	20,520.96	7,139,584	5898.24
3	1806	72.9	13,165.74	3,261,636	5314.41
4	2214	80.8	17,889.12	4,901,796	6528.64
5	2183	83.3	18,184.39	4,765,489	6938.89
6	2045	85.6	17,505.20	4,182,025	7327.36
7	1876	84.2	15,795.92	3,519,376	7089.64
8	1579	85.1	13,437.29	2,493,241	7242.01
9	1366	86.0	11,747.60	1,865,956	7396.00
A	3316	86.8	28,782.88	10,995,856	7534.24
B	3221	85.8	27,636.18	10,374,841	7361.64

Totals $\sum_x$ 24827 $\sum_y$ 899.1 $\sum_{xy}$ 202,967.10

$\frac{1}{N}$ $\bar{x}$ 2257 $\bar{y}$ 81.7 $\frac{1}{N}$ xy 184.52 $\sum_{x^2}$ 59,997,201 $\sum_{y^2}$ 73,786.31

$\bar{X}^2$ 5,094,049 $\bar{y}^2$ 66.75 $\bar{x}\bar{y}$ 184,396.9 $\frac{1}{N}x^2$ 5,454,291 $\frac{1}{N}y^2$ 6708

$$r = +.016$$

APPENDIX A (Continued)

State Question No. 243 — Voted Upon November 8, 1938

X - percent of population in urban areas — Y - Legislative Salary Questions

Areas	X	Y	XY	X^2	Y^2
1	17.3	22.0	380.60	299.29	484.00
2	38.7	21.0	812.70	1497.69	441.00
3	29.5	30.6	902.70	870.25	936.36
4	27.6	23.1	637.56	761.76	533.61
5	32.2	24.7	795.34	1036.84	610.09
6	31.2	31.8	992.16	973.44	1011.24
7	25.0	26.1	652.50	625.00	681.21
8	24.0	32.5	780.00	576.00	1056.25
9	15.3	28.4	434.52	234.09	806.56
A	76.7	31.7	2431.39	5882.89	1004.89
B	86.4	22.5	1944.00	7464.96	506.25
Totals	$\sum_x$ 403.9	$\sum_y$ 294.4	$\sum xy$ 10,763.47		

$\frac{1}{N}$ $\bar{x}$ 36.7 $\bar{y}$ 26.76 $\frac{1}{N}xy$ 978 $\sum_{x^2}$ 20,222.21 $\sum_{y^2}$ 8071.46

$\bar{x}^2$ 1346.9 $\bar{y}^2$ 716 $\bar{x}\bar{y}$ 982 $\frac{1}{N}x^2$ 1838.4 $\frac{1}{N}y^2$ 734

$r = -.04$

State Question No. 349 — Voted Upon November 4, 1952

X - Median Family Income — Y - Raise state sales tax to three percent (Percent of votes "yes")

Areas	X	Y	XY	X^2	Y^2
1	2549	7.2	18,352.8	6,497,401	51.84
2	2672	10.1	26,987.2	7,139,584	102.01
3	1806	17.8	32,146.8	3,261,636	316.84
4	2214	13.8	30,553.2	4,901,796	190.44
5	2183	12.6	27,505.8	4,765,489	158.76
6	2045	17.6	35,992.0	4,182,025	309.76
7	1876	18.1	33,955.6	3,519,376	327.61
8	1579	21.9	34,580.1	2,493,241	479.61
9	1366	26.3	35,925.8	1,865,956	691.69
A	3316	8.6	28,517.6	10,995,856	73.96
B	3221	11.7	37,685.7	10,374,841	136.89
Totals	$\sum_x$ 24827	$\sum_y$ 165.7	$\sum_{xy}$ 342,202.6		

$\frac{1}{N}$ $\bar{x}$ 2257.0 $\bar{y}$ 15.06 $\frac{1}{N}xy$ 31.109 $\sum_{x^2}$ 59,997,201 $\sum_{y^2}$ 2,839.41

$\bar{x}^2$ 5,094,049 $\bar{y}^2$ 227 $\bar{x}\bar{y}$ 33,990 $\frac{1}{N}x^2$ 5,454,291 $\frac{1}{N}y^2$ 258

$r = -.86$

APPENDIX A (Continued)

State Question No. 349 Voted Upon November 4, 1952

X - Percent of Population on Welfare

Y - Raise state sales tax to three percent (% of votes "yes").

Areas	X	Y	XY	X^2	Y^2
1	4.2	7.2	30.24	17.64	51.84
2	4.9	10.1	49.49	24.01	102.01
3	9.5	17.8	169.10	90.25	316.84
4	6.3	13.8	86.94	39.69	190.44
5	6.8	12.6	85.68	46.24	158.76
6	9.4	17.6	165.44	88.36	309.76
7	11.4	18.1	206.34	129.96	327.61
8	12.6	21.9	275.94	158.76	479.61
9	14.0	26.3	368.20	196.00	691.69
A	4.2	8.6	36.12	17.64	73.96
B	3.2	11.7	37.44	10.24	136.89

Totals $\sum_x$ 86.5 $\sum_y$ 165.7 $\sum_{xy}$ 1510.93

$\frac{1}{N}$ $\bar{x}$ 7.86 $\bar{y}$ 15.06 $\frac{1}{N}\sum xy$ 137.36 $\sum_{x^2}$ 818.79 $\sum_{y^2}$ 2839.41

$\bar{x}^2$ 62 $\bar{y}^2$ 227 $\bar{x}\bar{y}$ 118.69 $\frac{1}{N}\sum x^2$ 74 $\frac{1}{N}\sum y^2$ 258

$r = +.97$

APPENDIX B

VOTING BY AREAS ON INDIVIDUAL STATE QUESTIONS OVER TEN YEAR PERIODS (1940, 1950, 1960)

1940

Areas	Questions (Total vote, "yes" vote, and percentage "yes" of total.)								
1	208	214	220	226	243	253	289	298	299
	15629	17050	19068	33499	26892	35692	40884	15815	15826
	6378	11143	5928	16977	5927	24243	12361	12361	10941
	40.8%	65.4%	31.1%	50.8%	22.0%	67.9%	30.2%	78.2%	69.1%
2	28503	30209	15229	48932	52159	66272	77542	28016	28161
	9443	21720	5504	20240	10970	45263	30154	19720	20795
	33.1%	71.9%	36.1%	41.4%	21.0%	68.3%	38.9%	70.4%	73.8%
3	21980	24109	15441	46910	32034	47413	56744	20429	20640
	11429	16429	6379	28583	9790	27112	27246	16309	17346
	52.0%	68.1%	41.3%	60.9%	30.6%	57.2%	48.0%	79.8%	84.0%
4	30515	33822	12063	68196	34128	59014	69005	24424	24952
	13679	24704	7263	40227	7892	42976	25705	15287	18559
	44.8%	73.0%	60.2%	59.0%	23.1%	72.8%	37.2%	62.6%	74.4%
5	28472	30596	13712	62821	40591	58974	71088	24623	24903
	13695	21454	8104	36301	10012	39574	27384	15514	18199
	48.1%	70.1%	59.1%	57.8%	24.7%	67.1%	38.5%	63.0%	73.1%
6	23388	25631	10301	53881	27374	47140	57135	21649	21922
	12777	19978	7436	35166	8710	30575	22623	13226	16584
	54.6%	77.9%	72.2%	65.3%	31.8%	64.9%	39.6%	61.1%	75.6%
7	25182	27884	11104	59075	22975	41413	48856	21458	21230
	14436	2338	8633	43310	6005	29601	20045	11389	15042
	57.3%	83.8%	77.7%	73.3%	26.1%	71.5%	41.0%	53.1%	70.8%
8	33013	34893	16881	63950	35628	62430	64740	27507	27932
	22633	28489	12382	45930	11581	37447	31756	16126	21130
	68.6%	81.6%	73.3%	71.8%	32.5%	60.0%	49.0%	58.6%	75.6%
9	22510	25592	15446	47835	21421	31586	40586	19078	19429
	11447	21989	12938	36171	6076	21435	16897	10956	15072
	50.8%	85.9%	83.8%	75.6%	28.4%	67.9%	41.6%	57.4%	77.6%
A	14143	14930	6271	34607	24740	51192	63386	22141	22032
	6243	7788	4037	14697	7852	25493	37577	20331	19342
	44.1%	52.4%	64.4%	42.5%	31.7%	49.8%	59.3%	91.8%	87.8%
B	18014	19429	6311	42981	32067	59031	75896	24518	24885
	7154	12655	3858	22876	7449	31694	41055	15071	19045
	39.7%	65.1%	61.1%	53.2%	22.5%	53.7%	54.1%	61.5%	76.5%

APPENDIX B (Continued)

1950

Areas
Questions (Total vote, "yes" vote, and percentage "yes" of total.)

	314	326	327	329	343	345	349	359	368
1	23967	31750	16729	15619	32894	27184	43013	19574	15420
	11345	5421	10300	6606	9746	19525	3092	5165	7426
	47.3%	17.1%	61.6%	42.3%	29.6%	71.8%	7.2%	26.4%	48.2%
2	57954	66406	34227	32017	68452	53000	101361	40751	38469
	32759	14665	22090	13511	31086	40714	10202	16257	25825
	56.5%	22.1%	64.5%	42.2%	45.4%	76.8%	10.1%	39.9%	67.1%
3	25152	25265	18213	16545	25421	24416	35599	12481	14083
	14958	7621	12412	8455	11635	17810	6343	4134	11433
	59.5%	30.2%	68.1%	51.1%	45.8%	72.9%	17.8%	33.1%	81.2%
4	41045	49477	39703	36163	63487	59546	81771	38811	23476
	25158	8565	23978	17451	20099	48125	11266	13976	16983
	61.3%	17.3%	60.4%	48.3%	31.6%	80.8%	13.8%	36.0%	72.3%
5	44941	53099	35810	32550	60785	51658	83483	29444	29785
	27655	13666	25129	14769	23573	43045	10559	14285	21563
	61.5%	25.7%	70.2%	45.4%	38.8%	83.3%	12.6%	48.5%	72.4%
6	33784	33787	30012	26757	40250	40735	52188	14846	18465
	22714	9107	22279	14477	14913	34889	9197	9869	15663
	67.2%	27.0%	74.2%	54.1%	37.0%	85.6%	17.6%	66.5%	84.8%
7	29203	32105	36695	31923	43651	50164	59783	18722	19197
	18225	7181	26770	17260	14939	42249	10835	8670	15230
	62.4%	22.4%	73.0%	54.1%	34.2%	84.2%	18.1%	46.3%	79.3%
8	47737	45687	40217	36187	50939	50951	68401	22148	25338
	30098	13825	27387	20551	23742	43348	14961	8647	22173
	63.0%	30.3%	68.1%	56.8%	46.6%	85.1%	21.9%	39.0%	87.5%
9	22242	25893	29312	25042	29895	39097	39554	12274	17231
	15240	5347	20394	12546	10191	33627	10388	6214	14579
	68.5%	20.6%	69.6%	50.1%	34.1%	86.0%	26.3%	50.6%	84.6%
A	63785	73696	29604	27269	77443	49775	126887	41631	49130
	42616	46190	23174	17879	49331	43225	10970	35418	43894
	66.8%	62.7%	78.3%	65.6%	63.7%	86.8%	8.6%	85.1%	89.3%
B	54636	72120	48973	45106	96405	66423	151918	57218	53452
	32154	29661	35250	22447	58579	56961	17779	47601	36328
	58.8%	41.1%	72.0%	49.8%	60.8%	85.8%	11.7%	83.2%	68.0%

APPENDIX B (Continued)

1960

Areas	Questions (Total vote, "yes" vote, and percentage "yes" of total.)					
	368	376	379	386	389	390
1	15420	22364	16393	32164	20113	19892
	7426	12765	8776	12276	6462	7958
	48.2%	57.1%	53.5%	38.2%	32.1%	40.0%
2	34360	53037	36955	71024	34708	34723
	23029	20869	23540	39760	12033	16265
	67.0%	39.3%	63.7%	56.0%	34.7%	46.8%
3	14083	21844	16323	30562	18269	18241
	11433	9581	9734	15743	7334	9010
	81.2%	43.9%	59.6%	51.5%	40.1%	49.4%
4	20275	34801	26330	50168	30265	29907
	14680	20810	16836	20691	10536	13580
	72.4%	59.8%	63.9%	41.2%	34.8%	45.4%
5	24719	41154	33510	56510	33217	33532
	17750	19371	21943	28135	12150	17342
	71.8%	47.1%	65.5%	49.8%	36.6%	51.7%
6	12386	20799	16275	28722	17861	18114
	10231	11771	11184	11783	6484	9524
	82.6%	56.6%	68.7%	41.0%	36.3%	52.6%
7	19197	36065	32094	47570	33670	34074
	15230	20190	19241	21664	13060	18320
	79.3%	56.0%	60.0%	45.5%	38.8%	53.8%
8	18812	29488	25400	42632	28071	28749
	16463	11987	17770	23631	12627	16834
	87.5%	40.6%	70.0%	55.4%	45.0%	58.6%
9	17231	24393	20531	31086	23230	24233
	14579	13937	12434	12093	9575	14227
	84.6%	57.1%	60.6%	38.9%	41.2%	58.7%
10	6526	8348	6111	11077	7975	8199
	5710	4675	3805	4254	3450	4532
	87.5%	56.0%	62.3%	38.4%	43.3%	55.3%
A	49130	86558	64708	127924	50102	59715
	43894	25827	45972	90641	21881	28724
	89.3%	29.8%	71.0%	70.8%	43.7%	48.1%

APPENDIX B (Continued)

1960 (Continued)

Areas
Questions (Total vote, "yes" vote, and percentage "yes" of total.)

	368	376	379	386	389	390
B	58518	89523	70785	148992	64673	64209
	40141	32879	47302	95736	27904	34078
	68.6%	36.7%	66.8%	64.2%	43.1%	53.1%
C	6079	8222	6427	11182	5655	5788
	5432	3576	4364	6412	2445	3340
	89.4%	43.5%	67.9%	57.3%	43.2%	57.7%
D	4109	6096	5200	8534	5138	5118
	2796	2242	3078	5221	1762	2274
	68.0%	36.8%	72.7%	61.2%	34.3%	44.4%
E	3201	9001	8784	14299	10196	10221
	2303	3512	5045	8805	4651	5210
	71.9%	39.0%	57.4%	61.6%	45.6%	51.0%

	393	395	396	398	405	414
1	21319	33467	32096	32276	17639	36691
	11832	8123	1916	2016	8488	6397
	55.5%	24.3%	5.0%	6.2%	48.1%	17.4%
2	35820	72902	50724	50617	30272	78045
	19692	24435	13488	12248	9647	14348
	55.0%	33.5%	26.6%	24.2%	31.9%	18.4%
3	19031	31302	26859	22841	17078	35624
	11269	10446	7262	3239	7464	8892
	59.2%	33.4%	27.0%	14.2%	43.7%	25.0%
4	37601	45976	44777	44698	35746	52060
	20411	12949	4587	4448	14319	13286
	54.3%	28.2%	10.2%	10.0%	40.0%	25.5%
5	34295	54218	45018	44918	34000	62012
	19593	13113	10345	10187	15676	13553
	57.1%	24.2%	23.0%	22.7%	46.1%	21.8%

APPENDIX B (Continued)

1960 (Continued)

Areas
Questions (Total vote, "yes" vote, and percentage "yes" of total).

	393	395	396	398	405	414
6	18624	23241	24123	24083	21967	28832
	10406	6965	4095	4004	10992	5668
	55.9%	30.0%	17.0%	16.6%	50.0%	19.6%
7	35664	41780	39867	39737	34145	49414
	21382	13248	6585	6306	14298	13246
	60.0%	31.7%	16.5%	15.9%	41.9%	26.8%
8	29166	41958	33640	33430	28885	51369
	18286	16492	9479	9329	14470	15718
	62.7%	39.3%	28.2%	27.9%	50.1%	30.6%
9	24754	29951	33969	32899	25671	35436
	15210	8104	3638	3625	10984	8250
	61.4%	27.0%	10.7%	11.0%	42.8%	24.0%
10	8443	11701	11829	11759	6482	16609
	3808	4047	1556	1482	2869	3545
	45.1%	34.6%	13.2%	12.6%	44.3%	21.3%
A	61533	137805	85524	85336	54965	132061
	39345	60969	58445	57726	35168	35444
	63.9%	44.2%	68.3%	67.6%	64.0%	26.8%
B	66266	139592	89762	89549	65228	151598
	41641	48749	59809	59129	27615	36645
	62.8%	34.9%	66.6%	66.0%	42.3%	24.2%
C	5796	11676	7413	7373	5294	14064
	3569	4448	1792	1757	2512	3506
	61.6%	38.1%	24.2%	23.8%	47.4%	24.9%
D	5260	8144	5967	5955	5594	9760
	2767	2457	1710	1651	2130	1843
	52.6%	30.2%	28.7%	27.7%	38.1%	18.9%
E	11134	16145	11375	11336	9626	18654
	7482	5792	5469	5260	4175	6705
	67.2%	35.9%	48.1%	46.4%	43.4%	35.9%

APPENDIX C

ECONOMIC INDICATORS FOR EACH CENSUS BY AREAS

1940

Areas	Total Population	Median School Years	Percent Urban	Percent on Welfare
1	114,100	8.5	17.3	4.4
2	208,100	8.6	38.7	3.6
3	187,500	8.2	29.5	5.0
4	269,900	8.4	27.6	4.2
5	240,700	8.2	32.2	4.8
6	224,800	8.0	31.2	4.8
7	209,600	7.9	25.0	5.6
8	257,600	7.7	24.0	5.9
9	186,700	7.3	15.3	6.0
A	193,400	10.0	76.7	3.7
B	244,200	10.3	86.4	3.0

1950

Areas	Total Population	Median School Years	Median Family Income	Percent Urban	Percent on Welfare
1	105,728	9.2	2549	26.7	4.2
2	231,931	9.8	2672	45.1	4.9
3	102,490	8.6	1806	44.7	9.5
4	250,848	8.5	2214	40.5	6.3
5	233,459	9.6	2183	47.6	6.8
6	160,358	8.6	2045	44.4	9.8
7	168,333	8.6	1876	37.4	11.4
8	226,431	8.4	1579	35.7	12.6
9	143,885	7.9	1366	23.8	14.0
A	284,556	11.7	3316	76.7	4.2
B	325,352	11.5	3221	86.4	3.2

APPENDIX C (Continued)

1960

Areas	Total Population	Median School Years	Median Family Income	Percent Urban	Percent on Welfare
1	95051	10.4	4573	35.6	4.4
2	193,939	10.6	4746	52.0	4.8
3	96,124	8.9	4050	40.3	9.1
4	176,088	9.8	3713	44.2	8.9
5	175,076	9.2	4032	52.4	8.3
6	88,551	8.7	3332	45.5	13.6
7	157,379	9.3	3645	45.6	12.9
8	153,977	8.8	3417	46.1	14.0
9	116,495	8.4	2658	27.1	17.6
10	44,072	8.4	2322	13.3	17.9
A	388,385	12.2	6129	87.4	3.8
B	487,106	12.0	5651	94.9	3.9
C	40,495	8.9	4265	57.4	9.6
D	24,727	9.9	4515	57.8	4.5
E	90,803	11.9	4624	68.2	2.9

VITA

Charles Bernard Johnson

Candidate for the Degree of

Master of Arts

Thesis: VOTER BEHAVIOR ON SELECTED OKLAHOMA REFERENDA IN RELATION TO ECONOMIC INDICATORS

Major Field: Political Science

Biographical:

Personal Data: Born in Shawnee, Oklahoma, October 11, 1942, the son of Bernard C. and Muriel Johnson.

Education: Attended grade school and junior high school in Shawnee, Oklahoma; graduated from Shawnee High School in 1960; received the Bachelor of Arts degree from the Oklahoma State University, with a major in Political Science, in May, 1964; completed requirements for the Master of Arts degree in August, 1969.

Professional experience: Entered the United States Navy in 1965, and is now a Lieutenant.