

THE RETAIL TRADE TERRITORY
OF OKLAHOMA CITY

THE RETAIL TRADE TERRITORY
OF OKLAHOMA CITY

By

A. RICHARD TOOTHAKER

Bachelor of Science

Oklahoma Agricultural and Mechanical College

Stillwater, Oklahoma

1941

Submitted to the Department of Business Administration

Oklahoma Agricultural and Mechanical College

In Partial Fulfillment of the Requirements

For the Degree of

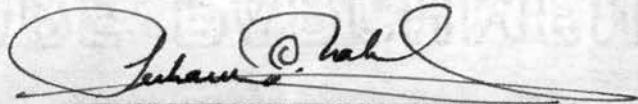
MASTER OF SCIENCE

1942

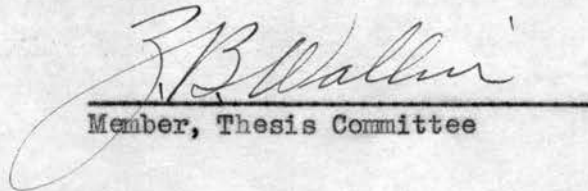
OKLAHOMA
AGRICULTURAL & MECHANICAL COLLEGE
LIBRARY
NOV 27 1942

111

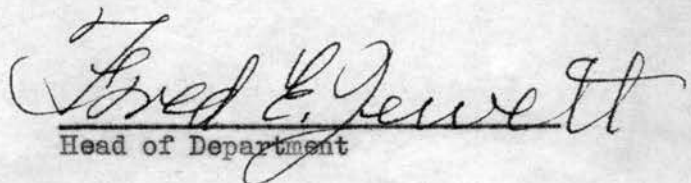
Approved by:



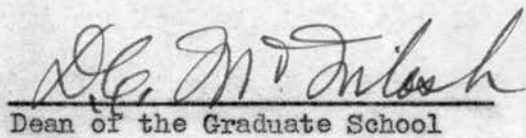
Chairman, Thesis Committee



Member, Thesis Committee



Head of Department



Dean of the Graduate School

146522

TABLE OF CONTENTS

I	INTRODUCTION	
	Need for the Study	1
	Purpose of the Study	3
	Limitations	4
	Definitions	6
II	OUTLINING THE TRADE TERRITORY	
	Delineation of the Retail Trade Territory	15
	Primary Trade Centers Within the Oklahoma City Trade Territory	23
III	SELECTING DATA FOR INDICES	
	Choosing Data for the Retail Sales Indices	25
	Choosing Data for the Purchasing Power Indices	25
IV	THE CONSTRUCTION OF INDICES OF RETAIL SALES AND PURCHASING POWER	
	Retail Sales Indices	30
	Indices of Purchasing Power	46
	The Auto Index	46
	The Index of \$1,500 Preferred Families	48
	The Per Capita Income Tax Liability Index	51
	The Average Value of Farm Land and Buildings Index	53
	The Composite Index	55
	The Selectivity of the Composite Purchasing Power Index	55
V	DISCOVERING AREAS OF SALES OPPORTUNITY, AND MEASURING COMPETITIVE CONDITIONS BY COMPARISON OF INDICES	
	Comparison of Indices of Purchasing Power and Retail Sales	59
	Discovering Areas of Sales Opportunity	60
	Measuring Relative Conditions of Competition	62
VI	INTERPRETATION OF RESULTS, AND CONCLUSIONS	
	Food Stores	65
	General Merchandise Stores	69
	Apparel Stores	73
	Furniture, Household Appliances, and Radio	77
	Automotive Group	81
	Filling Stations	86
	Lumber, Building Materials, and Hardware Stores	90
	Eating and Drinking Places	94
	Drug Stores	98
	General Conclusions	102
	BIBLIOGRAPHY	1

LIST OF TABLES

I	Classification of Counties by Zones, According to Distance from Oklahoma County	10
II	Classification of Counties by Direction from Oklahoma County	12
III	Counties of the Retail Trade Territory of Oklahoma City	14
IV	Population (1940) and Retail Sales (1939) by Store, Classification, Counties of the Oklahoma City Trade Territory	32-35
V	Per Capita Retail Sales (1939) Counties of the Oklahoma City Trade Territory	36-40
VI	Indices of Retail Sales by Store Classification, Counties of the Oklahoma City Trade Territory	41-45
VII	Number of Passenger Automobiles per 1,000 Families by Counties (1939) and the Auto Index of Purchasing Power	47
VIII	Number of \$1,500 Preferred Families, by Counties (1939) and the Preferred Families Index of Purchasing Power	50
IX	Per Capita Income Tax Liability, by Counties (1938) and Income Tax Index of Purchasing Power	52
X	Average Value of Farm Land and Buildings, per Farm (1940) and the Farm Index of Purchasing Power	54
XI	The Composite Index of Purchasing Power, Formed from Single Indices	56
XII	Results of Comparison of Purchasing Power and Retail Sales Indices, by Store Classification	63
XIII	Results of Index Comparison, Selecting Areas of Sales Opportunity and Competition for:	
a	Food Stores	66
b	General Merchandise Stores	69
c	Apparel Stores	73
d	Furniture, Household Appliances, and Radio	78
e	Automotive Group	82
f	Filling Stations	86
g	Lumber, Building Materials, and Hardware	91
h	Eating and Drinking Places	94
i	Drug Stores	98

LIST OF PLATES

I	Counties Divided into Zones According to Distance from Oklahoma County	9
II	Counties Divided into Groups According to Direction from Oklahoma County	11
III	The Retail Trade Territory of Oklahoma City, Showing Primary Trade Centers	13
IV	Approximate Boundaries of the Oklahoma City Trade Territory as Computed by Reilly's Law	20
V	Opportunity Zone, Direction, and Selected Counties for Food Stores	67
VI	Competitive Zone, Direction, and Selected Counties for Food Stores	68
VII	Opportunity Zone, Direction, and Selected Counties for General Merchandise Stores	71
VIII	Competitive Zone, Direction, and Selected Counties for General Merchandise Stores	72
IX	Opportunity Zone, Direction, and Selected Counties for Apparel Stores	75
X	Competitive Zone, Direction, and Selected Counties for Apparel Stores	76
XI	Opportunity Zone, Direction, and Selected Counties for Furniture, Household Appliance, and Radio	79
XII	Competitive Zone, Direction, and Selected Counties for Furniture, Household Appliance, and Radio	80
XIII	Opportunity Zone, Direction, and Selected Counties for Automotive Group	84
XIV	Competitive Zone, Direction, and Selected Counties for Automotive Group	85
XV	Opportunity Zone, Direction, and Selected Counties for Filling Stations	88
XVI	Competitive Zone, Direction, and Selected Counties for Filling Stations	89
XVII	Opportunity Zone, Direction, and Selected Counties for Lumber, Building Materials, and Hardware	92
XVIII	Competitive Zone, Direction, and Selected Counties for Lumber, Building Materials, and Hardware	93
XIX	Opportunity Zone, Direction, and Selected Counties for Eating and Drinking Places	96
XX	Competitive Zone, Direction, and Selected Counties for Eating and Drinking Places	97
XXI	Opportunity Zone, Direction, and Selected Counties for Drug Stores	100
XXII	Competitive Zone, Direction, and Selected Counties for Drug Stores	101

CHAPTER I

INTRODUCTION

Need for the Study

Sweeping changes have characterized the progress of marketing within the past twenty years. Virtually every function and every institution engaged in facilitating the movement of merchandise from the producer to the ultimate consumer has had to stand the acid test of efficiency. The success of each marketing institution has come to depend upon how well its functions answer the following questions:

1. What products, in what price, form, and quantity best satisfy the wants of the consumer?
2. What operations must be performed upon these products to put them in the desired form and have them available to the consumer at the time he wishes to buy?
3. What institutions most economically and effectively perform these services?

These appear to be simple questions, but their answers have brought about revolutionary transformations. Products are more frequently marketed as partially prepared or completely manufactured goods than formerly. Commodities are purchased in smaller quantities at more frequent intervals, and many of the changes in marketing have come about in an attempt to place items more conveniently at the disposal of the consumer.

Manufacturers found that the unit price of the finished product can be lowered by large-scale production. Having a lower price, the product is in a more favorable competitive position. Mass production requires mass distribution, so that chain-stores, department stores, and mail-order houses developed, replacing to a certain extent their less efficient independent competitors.

Faced with increasing competition, the independent merchant encountered the necessity of improving his efficiency in order to operate at a profit. Retail prices on manufactured products have had a downward trend due to these changes, with a corresponding impetus toward increasing retail volume in order to maintain former net profit figures.

This desire for increased sales has led to many studies; studies having to do with the product to be sold, the buying habits of customers, and of the trade territories from which customers come.

Speaking of the transition from management by methods of guesses and simple estimates to management by more scientific measurements, Mr. Paul T. Cherington, Director of Research of the J. Walter Thompson Company, once said

...the buying capacity of the United States market, as applied to the sale of the products of any one concern, could be measured with sufficient accuracy by any good thumb-rule. The National Cash Register Company, for example, is said to have based its sales plans quite successfully for many years on an estimated annual consumption of one cash register for each four hundred people. Other concerns did a satisfactory business on similar rough general approximations of consuming capacity. But in recent years the shortcomings of such general averages have been increasingly apparent. They have required so many local adjustments that they have long ago ceased to be even roughly approximate bases for the construction of sales quotas. Within the past ten years many new suggestions have been tried out, and within the past five years substantial progress toward more accurate methods has been made. In this connection, one of the principal efforts has consisted of weighing the counties according to some measure of purchasing power.¹

More competitive conditions of trade make it imperative for the retail merchant to observe changing conditions which affect the wants, locations, or buying power of his customers. To maintain a profitable

1. Riggleman, John R. and Ira N. Frisbee, Business Statistics (McGraw Hill, New York, 1938) p. 445.

volume of business it is necessary to make intelligent study of sources of new business, and in this search for new outlets the alert merchant has become territory conscious. Shifts in population, changing crop conditions, the creation of new industries, amount of rainfall, and periods of prosperity and depression, all are important to retail sales. Not the least important of changing conditions are the changes which occur in purchasing power and competition within a retail trade territory which offer an opportunity for trade extension.

For the metropolitan department store or for the national chain-store organization, the problem has been considered of sufficient importance to warrant the employment of experts in research. Trade extension has become a science in which a veritable army of research workers are now employed. Associated groups of retailers make studies which are beneficial to members. Chambers of commerce and advertising media conduct research projects designed to point out opportunities which are consistent with their own interests.

Feeling the need for dependable market information, the Department of Commerce of the United States Government has made available a great amount of factual material regarding retail trade. Information concerning virtually every phase of trade is now available from some bureau of the Department of Commerce. However, this information is usually presented in detail with little attempt at interpretation so that a certain amount of synthesis and analysis is required to arrive at their meaning for an individual retail concern. *

Purpose of the Study

The purpose of the present study is to demonstrate a method of interpretation of factual data, with applications to different classifications of retail stores, pointing out the areas within the outlying retail trade territory where trade extension may be conducted most advantageously.

The study is intended as a model for a preliminary survey of a trade territory, and is designed especially for retailers. While other organizations may find a study of this kind beneficial to an understanding of their territorial problems, the study is intended for the retailer who desires to supplement his Oklahoma City business with profitable trade from the outlying districts, surrounding towns, and rural areas, and to know which of these areas may be insufficiently supplied, for some reason or other, with the types of merchandise handled by his organization.

Under competitive conditions, it is essential to contemplate the cost of sales extension. The time is past when million-dollar sales campaigns could be undertaken upon the naive assumption that "It pays to advertise." Retailers, as well as manufacturers, realize that increased sales are desirable only if attainable within certain cost limits. Every dollar spent in sales promotion must produce at least its equivalent in gross profit. Sales may occasionally be made at a lower proportionate cost in the more remote districts of the retail trade territory than within the metropolitan districts which are subjected to a continual bombardment of sales material.

In consideration of these points, the present study proposes to point out which areas offer the greatest opportunity for the merchant who desires to localize his sales extension in areas which have the greatest potential productivity.

Limitations

For purposes of this investigation, a limited number of store classifications are used. Explanations will be concentrated upon Food Stores; General Merchandist Stores; Apparel Stores; Automotive Stores; Filling Stations; Lumber, Building Materials, and Hardware Stores; Eating and Drinking Places; and Drug Stores.

Each of the above classifications includes stores which, while engaged in the same general type of business, have great differences in some respects. The Food Store division, for instance, includes the shopping-district, full-service organization and the suburban, cash-and-carry store, the grocery store, the combination grocery and meat store, and the meat market. Apparel stores include the ladies' ready-to-wear salon and the men and boys' shops, the shoe store and the haberdashery, the specialized, single-line dress shop, and the clothing-for-all-the-family store.

Such a variety of kinds of stores exist within each of the broader classifications that it will be impossible to analyze the data of each within the scope of this dissertation. Attention will be called to the importance of considering a store's individual differences in choosing indices with which to locate its sales potentialities. The interpretation of results must be made with due consideration for the peculiarities of any one store. Other than suggesting these variations, the interpretations here will be confined to the broad classifications as listed.

Bulletins published by the Department of Commerce, Bureau of the Census, supply data for retail sales by counties and by cities. Data used in this analysis are by counties. Figures for smaller geographical divisions were not used because in so many of the store classifications data were not available in areas where three or less stores of a type were located. It is realized that trade areas do not conform to geographical boundaries; smaller divisions would be desirable if complete data could be obtained, but since such information is not attainable it is necessary to use data by counties. The interpretations, then, are confined to differences between counties, and make no attempt to point out the most favorable part of a county for sales extension.

The applicability of the methods demonstrated will depend upon the availability of reliable data suitable and recent enough to furnish useful and dependable results. Every year the Department of Commerce is improving the quality of the information it makes available to business. Improved methods of tabulation are making more up-to-date information available, and more detailed break-downs of data will aid in selecting material more applicable to the individual retail concern.

The scope of this dissertation is limited to pointing out the relative purchasing power of the counties being studied, and the relative extent to which this purchasing power is reflected in retail sales in the different types of stores within each county.

No attempt is here made to indicate what trade center is drawing trade from counties which show an excess of purchasing power over retail sales or whether it would be possible for an Oklahoma City merchant to attract this trade to his store. It is sufficient, for purposes of this study, to indicate the areas wherein sales opportunities exist, and to measure relative conditions of competition.

It is not suggested that a highly competitive market should be avoided by the merchant who desires to increase his sales. Frequently, markets which absorb large quantities of goods are highly competitive. In the interpretation of data we point out these intensive markets and the relative degree of competition which exists in them.

Definitions

For purposes of analysis, the counties which constitute the outlying trade territory of Oklahoma City are presented in two different groupings, Zones and Directions.

The division of counties into Zones is made on the basis of distance from Oklahoma County. Zone I includes those counties within a distance of

fifty miles of Oklahoma County, as nearly as the irregularities of county lines will permit. Zone II includes those counties from fifty to one hundred miles distant from Oklahoma County, and Zone III includes those counties which may be considered within the Oklahoma City trade territory, which are more than one hundred miles from Oklahoma County.

Methods employed in selecting the counties to be included in the Oklahoma City trade territory will be explained in Chapter II, Section 1.

Table I lists the counties according to Zone, in alphabetical order, and Plate I indicates their positions relative to Oklahoma County.

The division of counties into Directions is made on the basis of direction from Oklahoma County. As nearly as possible, those counties to the North, East, South, and West of Oklahoma County are divided into groups and designated by their direction from Oklahoma County. Counties near the diagonal border line were, in some cases, arbitrarily placed in one group in preference to another for no other reason than to increase the number of counties in a group otherwise containing only a few. For instance, Payne County which lies north and east of Oklahoma County, perhaps more north than east, was placed in the East group because it is a border-line county and the East group contains only six other counties whereas the North group has nine.

Table II lists the counties according to Direction in alphabetical order, and Plate II indicates their position relative to Oklahoma County.

Oklahoma County is not included in the Zonal and Directional classifications.

In addition to these two divisions of counties with Oklahoma County excluded, the entire group of counties including Oklahoma County is used to indicate differences between individual counties. The term applied to this group in subsequent discussions is "The Trade Territory of Oklahoma City."

The counties, thus classified, are listed in alphabetical order in Table III, and shown on Plate III.

A Plus County is here defined as being a county in which the purchasing power index under discussion exceeds in numerical value the retail index being considered.

For example, if comparison is being made between the Composite Index of purchasing power and the Food Stores Index of Retail Sales, and the two indices have numerical values of 170 and 120, respectively, then the county is a "plus county" as far as these two indices are concerned. $(170 - 120 = 50)$

A Minus County is just the opposite of a Plus County. If a retail sales index for a county exceeds its purchasing power index in numerical value, the county is defined as being a Minus County, as far as the consideration of these two indices are concerned. Similarly, it may not be a Minus County if other indices are used.

For example, if the Composite Purchasing Power Index of a county is 170 and the Apparel Stores Index of Retail Sales is 210, then the county is a Minus County as a result of the comparison of these two indices.
 $(170 - 210 = -40)$

The same county which has a Food Stores index of 120 may have an Apparel Stores index of 210, in which case the county is Plus for Food Stores $(170 - 120 = 50)$ and Minus for Apparel Stores $(170 - 210 = -40)$. Thus, a county is defined as being Plus or Minus depending upon the numerical superiority or inferiority, respectively, of its Purchasing Power index over its Retail Sales index, and the same county may be Plus for one type of store and Minus for another.

PLATE I

COUNTIES DIVIDED INTO ZONES ACCORDING TO DISTANCE FROM OKLAHOMA COUNTY

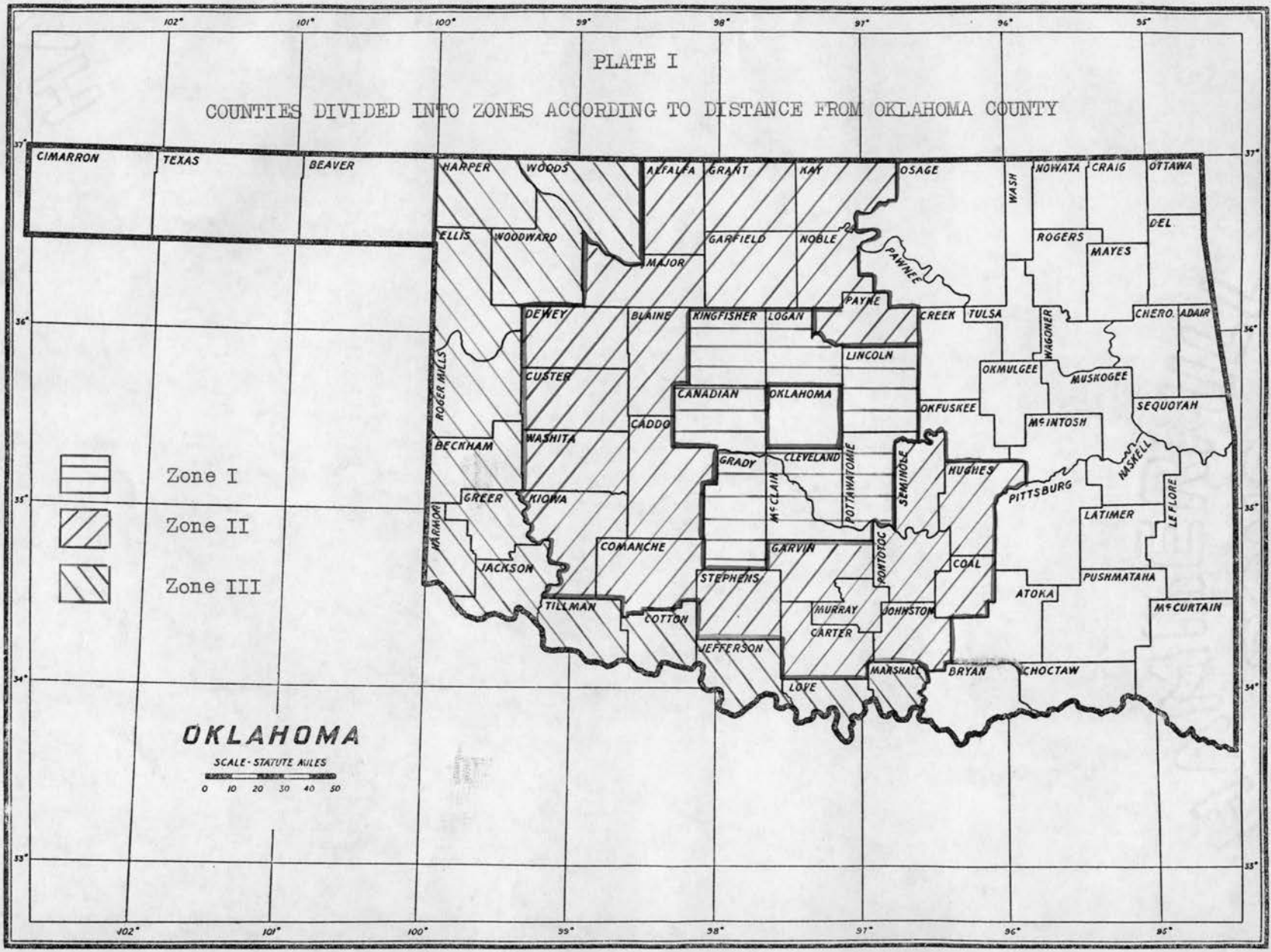


TABLE I

Classification of Counties by Zones
According to Distance from Oklahoma County

Zone I

Approximately 50 miles or less

Canadian	Lincoln
Cleveland	Logan
Grady	McClain
Kingfisher	Pottawatomie

Zone II

From 50 to 100 miles, approximately

Alfalfa	Johnston
Blaine	Kay
Caddo	Kiowa
Carter	Major
Coal	Murray
Comanche	Noble
Custer	Payne
Dewey	Pontotoc
Garfield	Seminole
Garvin	Stephens
Grant	Washita
Hughes	

Zone III

Over 100 miles

Beckham	Jefferson
Cotton	Love
Ellis	Marshall
Greer	Roger Mills
Harmon	Woods
Jackson	Woodward

Zone I, 8 counties

Zone II, 23 counties

Zone III, 14 counties

PLATE II

COUNTIES DIVIDED INTO GROUPS ACCORDING TO DIRECTION FROM OKLAHOMA COUNTY

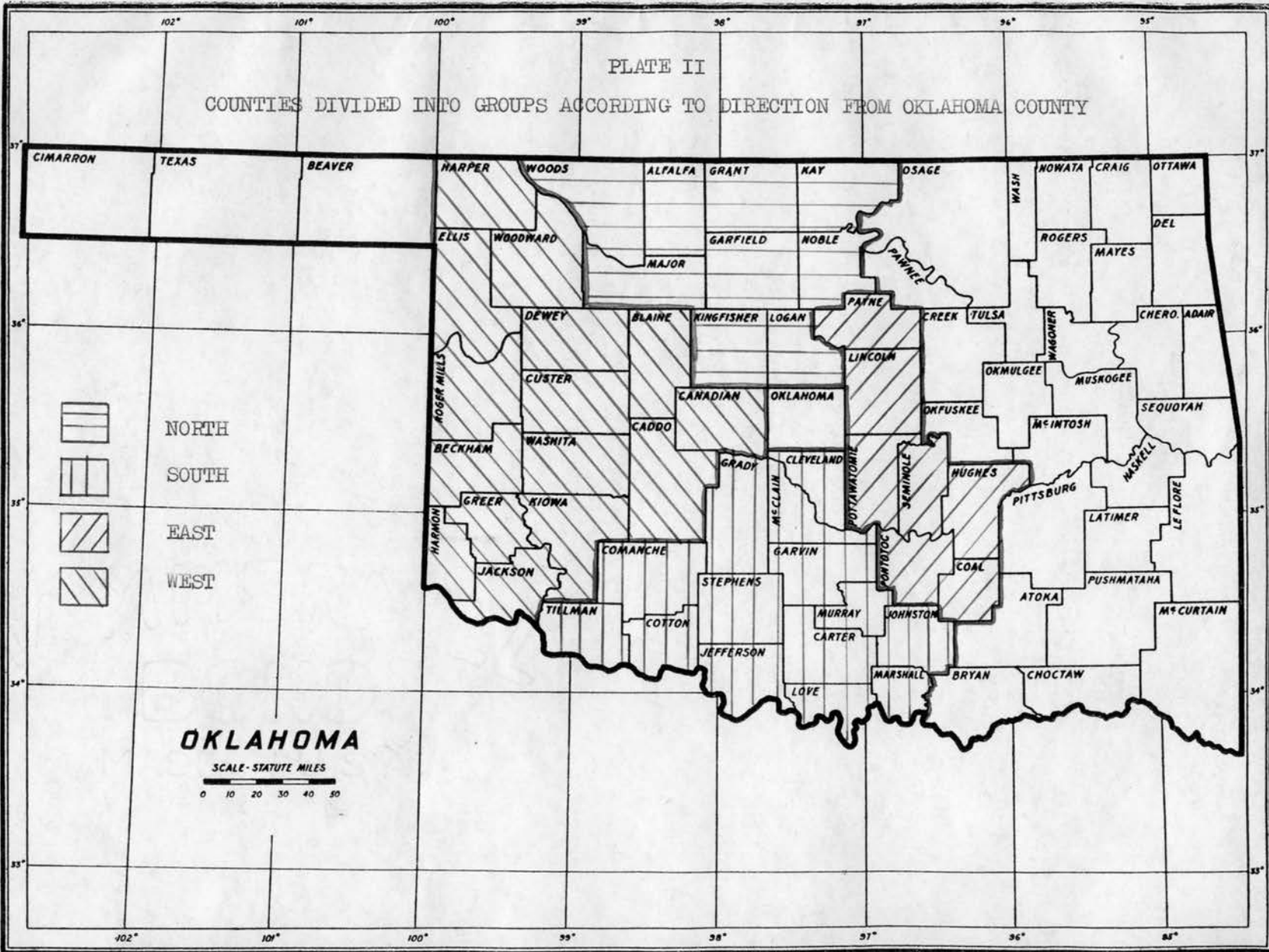


TABLE II

Classification of Counties by Direction
from Oklahoma County

NORTH

Alfalfa
Garfield
Grant
Kay
Kingfisher

Logan
Major
Noble
Woods

EAST

Coal
Hughes
Lincoln
Payne

Pontotoc
Pottawatomie
Seminole

SOUTH

Carter
Cleveland
Comanche
Cotton
Garvin
Grady
Jefferson

Johnston
Love
Marshall
McClain
Murray
Stephens
Tillman

WEST

Beckham
Blaine
Caddo
Canadian
Custer
Dewey
Ellis

Harper
Harmon
Jackson
Kiowa
Roger Mills
Washita
Woodward

North, 9 counties
East, 7 counties
South, 14 counties
West, 15 counties

PLATE III

THE RETAIL TRADE TERRITORY OF OKLAHOMA CITY, SHOWING PRIMARY TRADE CENTERS

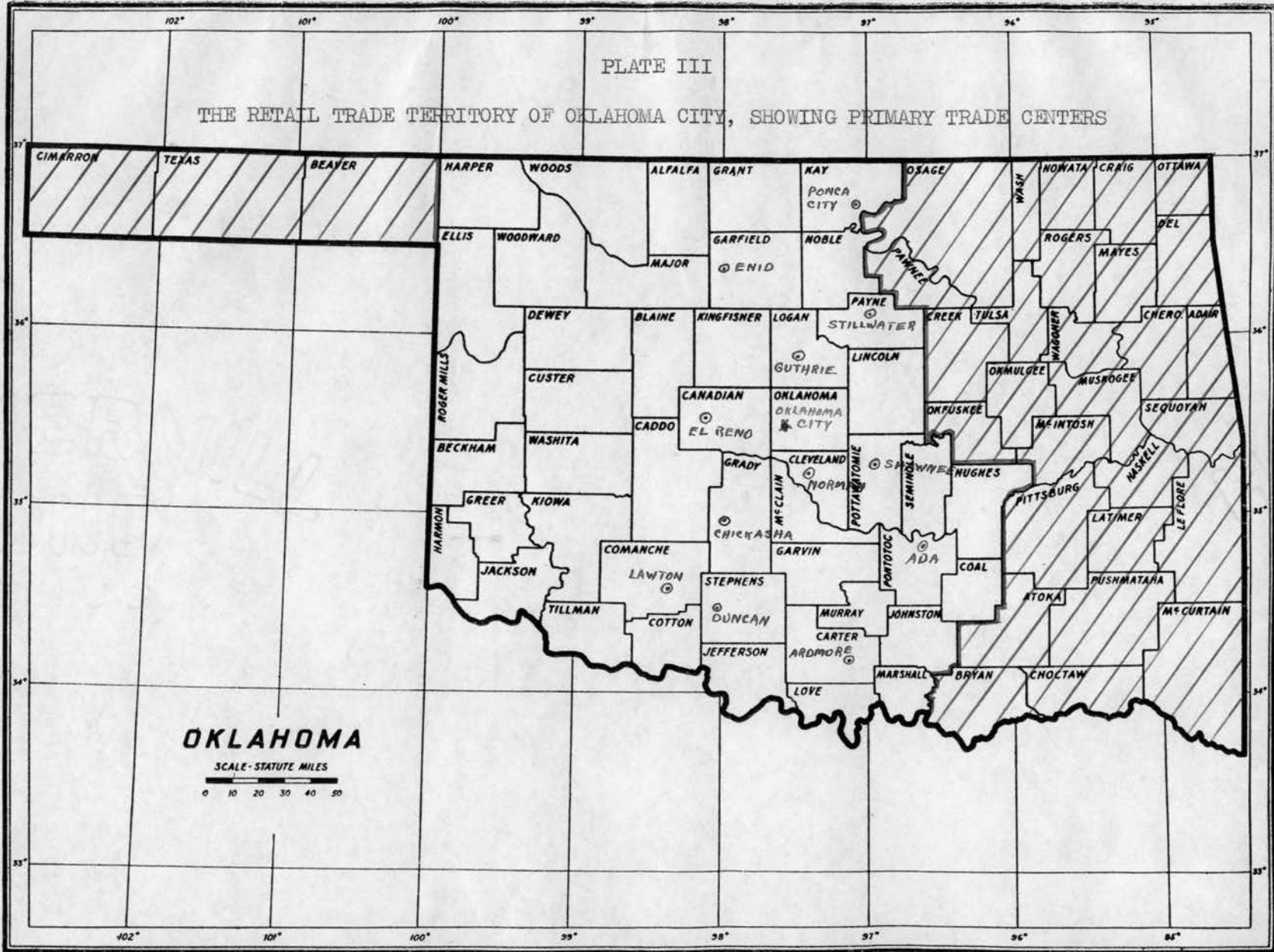


TABLE III

Counties of the Retail Trade Territory
of Oklahoma City

Alfalfa	Johnston
Beckham	Key
Blaine	Kingfisher
Caddo	Kiowa
Canadian	Lincoln
Carter	Logan
Cleveland	Love
Coal	Major
Comanche	Marshall
Cotton	McClain
Custer	Murray
Dewey	Noble
Ellis	Oklahoma
Garfield	Payne
Garvin	Pontotoc
Grady	Pottawatomie
Grant	Roger Mills
Greer	Seminole
Harmon	Stephens
Harper	Tillman
Hughes	Washita
Jackson	Woods
Jefferson	Woodward

46 counties

OUTLINING THE TRADE TERRITORY

1. Delineation of the Retail Trade Territory

Oklahoma City, with a population in 1940 of 204,517, serves as the metropolis for an extensive surrounding area. Situated near the geographical center of the state, of which it is the capital and largest city, it is the principal wholesale center of that part of the Southwest between Dallas and Kansas City.

The area surrounding Oklahoma City is dotted with a multitude of small towns, large towns, and small cities in sizes ranging from a few individuals to twenty-eight thousand people. Each of these towns and cities has its own trade territory which overlaps with that of neighboring cities, so that a map of the areas-of-influence of all these trade centers, in the sphere of retail trade, would appear as a series of interlocking cycles and epicycles.

And yet the influence of the largest city in an area extends beyond that of many of the smaller towns, drawing trade from them and from towns and rural sections beyond them, until at some distance away from the city, the attraction of another city of similar size draws this fluctuating trade to itself. At some place between these two cities is an area in which each of the two cities attract approximately half of those customers who seek the larger assortments of the big city stores. This area is commonly called the "fifty per cent area."

In the delineation of the retail trade territory of Oklahoma City, it is only necessary to glance at a map to observe the cities of comparable size which would compete with Oklahoma City for the custom of

residents of the outlying counties. These cities, their populations in 1940, their distances and directions from Oklahoma City are as follows:

<u>City</u>	<u>Direction</u>	<u>Distance</u>	<u>Population</u>
Wichita, Kansas	North	175 miles	113,540
Tulsa, Oklahoma	Northeast	119 "	141,750
Dallas, Texas	South	215 "	293,306
Ft. Worth, Texas	South	212 "	177,748
Wichita Falls, Texas	Southwest	159 "	45,112
Amarillo, Texas	West	262 "	51,686

Many studies have been made to measure the attracting power of a city as compared with other cities. Various techniques have been developed, the object of which was to determine the distance customers will travel to buy certain commodities. Surveys have been conducted to ascertain what types of merchandise are purchased in cities by people who live in surrounding towns.

No definite line of demarcation can be assigned as the limit of a city's trade territory. In the words of Paul D. Converse, "Trade areas are not sharply divided. Small villages compete with large villages and trading centers. Trading centers compete with the villages on one side and larger cities on the other."¹

However, there is a definite gravitation of retail trade toward the larger cities, a condition that is known as "shopping up." "The drift of trade is from the smaller to the larger town, with a smaller backflow to the smaller towns. The large town has the advantage of offering larger selections of goods and more amusements."²

The trade territory of Oklahoma City is shown in Plate III. In delineating this territory, an attempt was made to include those areas within Oklahoma from which Oklahoma City draws a larger proportion of

1. Converse, Paul D., Elements of Marketing (Prentice-Hall, New York, 1937) p. 791.
2. Ibid., p. 791.

trade than does any other city of comparable size. This area is intended to include the section of the state from which a majority of the consumers who seek the larger assortments of goods and amusements come to Oklahoma City in preference to one of the metropolitan centers listed above.

Several methods of delineating the extent of a retail trade territory are in general use. One method is the tabulation of the home addresses of department-store charge customers, and determining the "breaking point" between cities by finding the place between the two cities where an approximately equal number of customers trade in each.

Another method suggests counting parked automobiles during shopping hours, ascertaining from their license plates the counties of their origin. The success of this method depends upon counting the out-of-town cars for a sufficient number of days to overcome unusual conditions, such as conventions, which may bring a number of automobiles to the city out of proportion to the frequency of their shopping visits.

A third method, which has been used extensively, is the personal interview method. Trained interviewers with carefully prepared questionnaires make personal calls near the place where the "breaking point" is thought to exist, and follow their findings until the 50% area is definitely located. This method is expensive and is subject to the errors of sampling as well as a multitude of difficulties in preparing the questionnaire and training interviewers. The advantage is that much information can be obtained upon other subjects than merely the extent of the trade territory.

The fourth method, one that is simple and inexpensive, is the comparison of the maps of daily newspaper circulation. The trade area of a metropolitan center is gauged by the predominance of its circulation over that of other cities. The use of this method involves the assumption that readers of the paper come in to trade, which may not be justified.³

The fifth method, suggested by Austin S. Bratcher of the University of Arizona, recommends

...the tabulation of out-of-town checks from the transit sheet records of the cooperating banks...As checks are deposited by customers (the retailers) they are sorted three ways by the bank of deposit: Own accounts, local banks, and out-of-town banks. The checks drawn on out-of-town banks are the ones used in delineating the trade zone.⁴

In the use of this method, precautions are taken to eliminate checks drawn in payment of other than retail accounts.

Perhaps the simplest method of delineating a trade zone is that known as Reilly's Law of Retail Gravitation. This method requires a knowledge only of the populations of two cities and the distance between them on the best improved highways. The "law" holds that

...two cities attract retail trade from an intermediate city or town in the vicinity of the breaking point (the 50 per cent point), approximately in direct proportion to the populations of the two cities and in inverse proportion to the square of the distances from these two cities to the intermediate town.⁵

3. Bratcher, Austin S., A Method of Delineating Retail Trade Zones (University of Arizona, Tucson, 1939) p. 1-2.

4. Ibid., p. 3.

5. Converse, op. cit., p. 792.

In this manner, the proportion of trade drawn from a town by either of two cities may be found.

Finding a breaking point between two cities is accomplished by means of formula, as follows:⁶

"A" represents the larger town; "B" represents the smaller town.

$$\text{Breaking point (miles from B)} = \frac{\text{Miles between A and B}}{1 + \sqrt{\frac{\text{Population of A}}{\text{Population of B}}}}$$

According to Converse, Reilly's Law of Retail Gravitation is the "...simplest and most accurate one available without extensive field investigation."⁷

Thus, in arriving at the retail trade territory of Oklahoma City by means of the formula, it was found that:

The boundary line of the retail trade territory lies
at a distance from Oklahoma City of

65 miles toward Tulsa, Oklahoma

98 miles toward Dallas, Texas

110 miles toward Ft. Worth, Texas

103 miles toward Wichita Falls, Texas

174 miles toward Amarillo, Texas

100 miles toward Wichita, Kansas

6. Ibid., p. 792.

7. Ibid., p. 792.

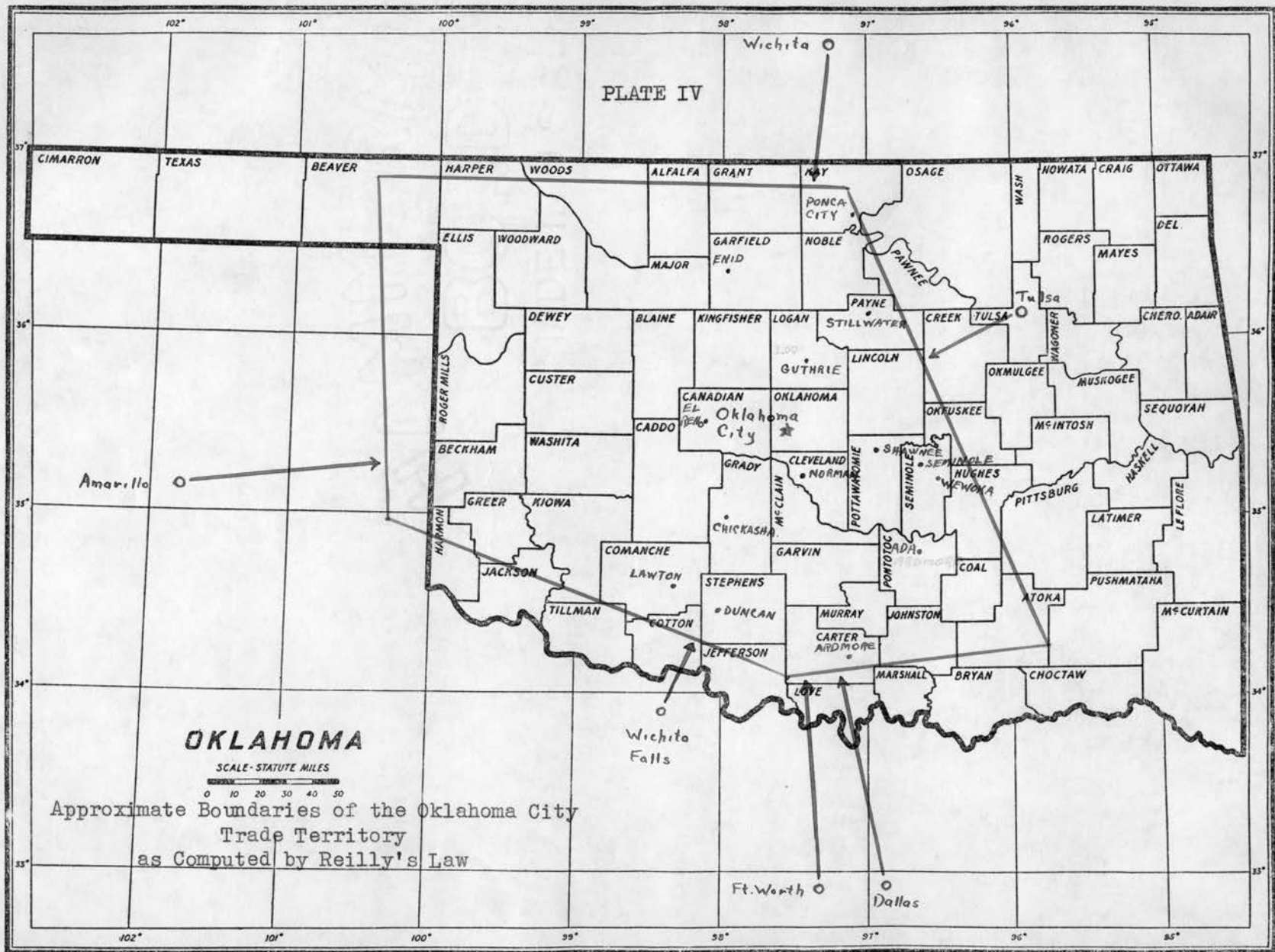


Plate IV shows the dividing lines which approximately delineate Oklahoma City's trade territory according to these measurements.

According to Reilly's Law, there is some question whether the northern tier of counties belong to the trade territory of Oklahoma City or to Wichita, Kansas. The dividing line which would approximate the center of the 50 per cent zone, bisects these counties. Similarly, those counties along the southern edge of Oklahoma would fall within the trade territories of Dallas, Ft. Worth, and Wichita Falls. There is no doubt that these cities attract trade from the areas in question.

The Trading Area Map of the United States as published by Batten, Barton, Durstine, and Osborn, advertising concern, concedes the counties along the southern border of the state to Oklahoma City and includes with them the counties in the extreme southeastern part of the state. This map gives the counties to the northwest, namely, Harper, Woods, Alfalfa, Woodward, Ellis, and Grant, to Wichita, Kansas.⁸

These matters were given due consideration in selecting the counties which should be included as part of the Oklahoma City trade territory. The counties in the southeastern part of the state were omitted for three reasons. First, from a personal knowledge of the buying habits of people in the vicinity of McAlester, Atoka, and Antlers, a majority of the shopping trips made by the people from this part of the state are made to Tulsa rather than to Oklahoma City.

8. "Trading Area Map of the United States," Batten, Barton, Durstine, and Osborn, Incorporated, Map No. 2319. New York.

Second, recent improvements in U. S. Highway No. 69 from Durant, Atoka, and McAlester to Muskogee and Tulsa have made that highway preferable to U. S. Highway No. 270 from McAlester to Shawnee and Oklahoma City, due to the extremely heavy traffic from Seminole on in to Oklahoma City.

Third, it was not considered of major importance for purposes of this study just which counties of the outer fringe were included, and some counties from which Oklahoma City doubtless draws considerable trade were omitted. Pittsburg County, for example, presented a problem. McAlester, the county seat of Pittsburg County, is a primary trade center. Within the county are coal mines and many manufacturing industries. The B. B. D. and O. Map gives the county to Oklahoma City. Reilly's Law delegates it to Tulsa, or perhaps to Muskogee. One certainty is that the out-of-town traders of Pittsburg County are divided between Oklahoma City, Tulsa, Muskogee, and Ft. Smith, Arkansas, so that probably none of them can claim as much as fifty per cent. It was decided to omit Pittsburg County.

The counties along the northern edge of the state, which the B. B. D. and O. Map gives to Wichita, Kansas, were included as a part of the Oklahoma City trade territory. Reilly's Law gives at least half of each of these counties to Oklahoma City, and the recent improvements in U. S. Highway No. 270 to Woodward as well as the excellent highways No. 81 and 77, make auto travel from that part of the state pleasant and convenient.

Tillman, Cotton, Jefferson, Love, and Marshall counties, along the southern edge of the state, are shown by Reilly's Law to belong

to Dallas, Ft. Worth, or Wichita Falls, Texas. The relative proximity of these counties to the North-Texas trade centers leaves little doubt that Oklahoma City receives a minor share of their out-of-county trade.

However, they were included as part of the Oklahoma City trade territory in order to round out the territory, particularly in regard to the zoning arrangement of counties. All of them lie in Zone 3, their distance from Oklahoma County being greater than one hundred miles. Omitting them from the study leaves Zone 3 closely corresponding in counties to the Direction West, so that the desired variety between zones and directions is lacking. For this reason they were included as part of the territory.

2. Primary Trade Centers Within the Oklahoma City Trade Territory

There are at least fourteen primary trade centers within the Oklahoma City trade territory. These cities, with the exception of Enid, have populations less than twenty-five thousand and more than ten thousand people. Enid, the largest city in the area, had a population of 28,081 in 1940. The primary trade centers in alphabetical order are as follows:

Ada	Lawton
Ardmore	Norman
Chickasha	Ponca City
Duncan	Seminole
El Reno	Shawnee
Enid	Stillwater
Guthrie	Wewoka

These cities not only attract much trade which might find its way to Oklahoma City, but the citizens of these cities contribute copiously to the sales of the Oklahoma City stores. Even as people from the small towns and villages go to the larger towns to trade, so do the people from the larger towns seek still wider selections in the cities.

Oklahoma City doubtless loses much trade in the same way to Kansas City, St. Louis, Chicago, and New York. As previously noted, as a city grows larger, it gains more by "shopping up" and loses less.

CHAPTER III

Selecting Data For Indices

1. Choosing Data for the Retail Sales Indices

The primary object of this dissertation is to make a comparison of ability-to-buy and actual sales. For purposes of comparison, two types of indices are required: one of ability-to-buy, or purchasing power; and the other of retail sales. Chapter IV, Section 1 explains in detail the method by which the retail sales index is formed, and Chapter IV, Section 2 explains the construction of the purchasing power index.

Speaking in general terms, an index may be constructed by one of two methods: by sampling, to obtain an approximation of what the totals will be; or by using totals, if reliable figures concerning them are available. The method employed must be determined by the information desired, and by the availability of reliable data in the form of totals or in the form of scattered data, not embracing the entire situation, but which will form the basis for sampling.

In the problem of forming an index of retail sales for the counties of the Oklahoma City trade territory, no method of sampling is necessary because reliable totals are available. The Department of Commerce, Bureau of the Census furnishes these data by counties and by store classification. It is merely necessary to employ approved statistical procedure in the construction of the index.

2. Choosing Data for the Purchasing Power Indices

No such direct and all-inclusive data are available for the formation of the purchasing power index. This index must be constructed by means of sampling. Judgment must be exercised in the selection of

material which will bring out the various income levels, showing their influence in ability to buy consumers' goods.

Data to be used in the formation of a purchasing power index will depend upon the sources of income of population-groups within the territory under investigation. The ideal index would measure the spendable income of every individual within the area. Such an index would be impossible of attainment due to the great complexity of detail. It is possible, however, to arrive at an approximation of the comparative purchasing power of the major income groups by means of data which are indicative of wealth, payrolls, value of agricultural products, or some such measure of income or standard of living.

The purpose to be accomplished by the purchasing power index is to arrive at comparative, average spendable incomes of county residents. Industrial areas may be measured by payroll figures or perhaps by the value added to goods by manufacture. Rural sections may be measured by the value of agricultural products and the wages of farm workers. Spendable income arrived at in this way will vary greatly from year to year. For accuracy, averages should be taken over a period of several years.

A less direct method of arriving at an approximation of income is the use of some index of wealth rather than direct figures on salaries and the value of products. This method has the advantage of offering a less fluctuating index. Wealth is an accumulation as a result of income for years past, and is in itself a measurement of the average income of previous years. While a single crop failure or factory shut-down could alter direct income measurements for that year by a large percentage,

there could still be considerable spendable funds in the area, such as accumulated savings or ability to borrow money, which would be more accurately measured by material possessions. In this regard, Paul H. Nystrom says

...wealth and income are closely related. The correlation between the amount of wealth owned and the amount of income received is usually very high. There are notable exceptions as in the case of owners whose wealth is for the time being non-productive, as in the ownership of undeveloped natural resources, and in instances when those who have little or no wealth receive fair or even good incomes. There are instances in which wealth may be high but incomes low, where the chief income earner of the family may have died, become disabled or retired so that former income may have been greatly cut down.¹

An important consideration in selecting material for a purchasing power index has to do with the type of store or class of product for which the study is being made. For many staple commodities, mere population figures form a better index of demand than does an index of purchasing power. Necessities, staple groceries, inexpensive clothing, articles low in unit price and generally in demand are usually sold in quantities proportionate to population rather than to wealth or average income.

The same condition is not true of goods of higher unit price, such as luxuries, style merchandise, fancy groceries, radios, refrigerators, furniture, and so on. For example, the vendor of high-priced furniture and rugs will require a rather selective index showing the number of people having large incomes. Material for such an index could be the membership rosters of exclusive country clubs, or the

1. Nystrom, Paul H., Economic Principles of Consumption (Ronald Press, New York, 1931) p. 130.

number of homes valued in excess of \$10,000. Income tax returns can be used to determine the number of people having large incomes, and the city or county in which they live.

Special types of merchandise may require special indices. The manufacturer of swimming suits, desiring to know the extent of his market, may find the per cent of population between certain age limits to be an excellent index of sales possibilities.

Thus it becomes necessary to survey the field of study to determine whether an actual purchasing power index is required or whether some special index will better serve the purpose. The purchasing power index should measure ability-to-buy, and may be used where that ability is consistently translated into actual sales. In the case of special commodities, mere ability-to-buy may give no idea as to the actual sales. Differences in race, religion, age, sex, wealth, and occupation, create differences in demand. Climatic conditions or recreational preferences are important considerations in the demand for certain commodities. The assumption cannot be made, however, that a population is homogeneous in regard to the distribution of purchasing power. Riggleman and Frisbee stress this point as follows:

Obviously, the distribution of purchasing power will often be quite different from the distribution of population. That is, an area which has a small population may have a high purchasing power, while an area that has a large population may have a low purchasing power.²

2. Riggleman, John R. and Ira N. Frisbee, Business Statistics (McGraw Hill, New York, 1938) p. 443-444.

This investigation is a study of purchasing power as it is related to retail sales, which include all types of merchandise usually purchased by the ultimate consumer in the area around Oklahoma City. Merchants within this territory attempt to stock the commodities which best satisfy any demand which may arise among their customers. Enterprising merchants keep in constant touch with the needs and desires of their clients in order that they may derive profit by supplying those needs. Total retail sales are fairly consistent with purchasing power. It is for this reason that the purchasing power index will best serve the purpose of this study.

CHAPTER IV

The Construction of Indices of Retail Sales and Purchasing Power

1. The Retail Sales Indices

Ten separate indices are included in the group which will be referred to as the Retail Sales Indices. One index is based on total retail sales figures, by counties; the other nine are based on the retail sales of nine different types of stores, also by counties. All of them are constructed in a similar manner using data obtained from bulletins of the Department of Commerce, Bureau of the Census of the United States Government. The raw data give the volume of retail sales, by counties and by store classification and also the total sales of all retail stores.

The indices are constructed from the raw data as follows:

1. Retail sales are reduced to a per capita basis by dividing the retail sales figure by the county population .
2. The sum of the per capita sales figures for the entire territory is found by adding the forty-six county figures.
3. The reciprocal of this total is computed by dividing the number one (1) by the total figure.
4. The reciprocal thus computed is multiplied by forty-six (46), which is the number of counties in the Oklahoma City trade territory.
5. The per capita retail sales figure for each of the counties of the territory is then multiplied by the factor thus produced. The decimal point is then moved two places to the right, which

is the equivalent of multiplying by 100, and the result is the index.

A check for accuracy in the above procedure is obtained by adding the indices for the forty-six counties. This total should be 4600. Thus the county average for the territory is 100, and it is possible to tell at a glance whether the per capita retail sales for a county are above or below the average for the territory.

The reduction of retail sales to a per capita basis removes the influence of population. This is recommended to make counties comparable regardless of their differences in volume of retail sales or their populations.

The use of the totals reciprocal multiplied by the number of counties in the study, and again by 100, is merely a mathematical manipulation to form the index, averaging the counties around 100.

Table IV gives the raw data from which the indices are computed. The counties of the Oklahoma City trade territory are listed with their populations and the volume of retail sales by store classification.

Table V lists the counties giving their per capita sales by store classification, and Table VI shows the indices which were computed as explained above.

TABLE IV

Population (1940) and Retail Sales (1939) by Store Classification

Counties of the Oklahoma City Trade Territory

<u>Counties</u>	<u>1940 Population</u> (000)	<u>Total Sales</u> (000,000)	<u>Road Stores</u> (000)	<u>General Mdse.</u> (000)	<u>Apparel Stores</u> (000)	<u>Furniture- Household- Radio</u> (000)
Alfalfa	14.1	2.50	560	198	46	11
Beckham	22.2	5.04	1212	815	46	168
Blaine	18.5	3.58	829	306	19	51
Caddo	41.5	7.00	1862	553	331	156
Canadian	27.3	6.13	1432	573	111	184
Carter	43.2	8.74	2222	1432	357	363
Cleveland	27.7	5.60	1484	522	235	102
Coal	12.5	1.42	356	x	x	20
Comanche	37.6	9.69	1944	1118	618	336
Cotton	12.9	2.59	424	781	21	34
Custer	23.1	5.54	1228	599	187	183
Dewey	12.0	1.67	452	105	x	x
Ellis	8.4	1.68	320	62	55	29
Garfield	45.5	17.00	2994	2902	1249	602
Garvin	31.1	4.45	1242	512	133	70
Grady	41.1	7.85	1657	1315	214	306
Grant	13.1	2.48	673	38	86	89
Greer	14.5	2.71	722	300	60	39
Harmon	10.0	1.21	253	195	x	x
Harper	6.5	1.04	280	36	48	x
Hughes	29.1	3.99	1025	826	102	104
Jackson	22.7	4.31	1040	398	246	125
Jefferson	15.1	2.05	559	191	53	52
Johnston	16.0	1.30	378	167	x	30
Kay	47.0	13.73	3473	1636	779	478

(Continued on next page)

TABLE IV (Continued)

<u>Counties</u>	<u>1940 Population</u> (000)	<u>Total Sales</u> (000,000)	<u>Food Stores</u> (000)	<u>General Mdse.</u> (000)	<u>Apparel Stores</u> (000)	<u>Furniture- Household- Radio</u> (000)
Kingfisher	15.6	3.61	770	183	120	36
Kiowa	22.8	4.49	1135	556	77	110
Lincoln	29.5	3.63	850	314	73	85
Logan	25.2	5.98	1287	603	179	293
Love	11.4	1.00	384	116	x	x
Major	11.9	1.83	401	93	x	x
Marshall	12.4	1.55	377	197	x	x
McClain	19.3	2.06	584	65	89	37
Murray	13.8	2.14	575	163	73	83
Noble	14.8	3.13	701	251	69	39
Oklahoma	244.2	95.64	16076	13931	9242	5072
Payne	35.8	10.21	2396	1246	648	303
Pontotoc	39.7	9.64	2050	1135	594	323
Pottawatomie	66.6	12.84	2517	2232	680	439
Roger Mills	10.7	1.16	293	68	x	x
Seminole	60.5	13.05	3144	962	537	443
Stephens	31.1	6.21	1532	898	329	190
Tillman	20.7	3.21	834	407	54	73
Washita	22.3	3.07	800	396	50	62
Woods	14.9	3.96	919	320	186	131
Woodward	16.2	4.70	1018	328	181	120

(Continued on next page)

NOV 27 1942

 AGRICULTURAL & MECHANICAL COLLEGE
 LIBRARY
 ARKANSAS

TABLE IV (Continued)

<u>Counties</u>	<u>1940 Population</u> (000)	<u>Automotive Group</u> (000)	<u>Filling Stations</u> (000)	<u>Lumber- Building- Hardware</u> (000)	<u>Eating & Drinking Places</u> (000)	<u>Drug Stores</u> (000)
Alfalfa	14.1	356	368	469	164	175
Beckham	22.2	805	625	642	232	289
Blaine	18.5	633	519	634	176	189
Caddo	41.5	1244	966	958	301	305
Canadian	27.3	1111	807	781	370	269
Carter	43.2	1254	779	818	412	476
Cleveland	27.7	712	568	705	377	434
Coal	12.5	265	140	117	40	42
Comanche	37.6	2221	819	1142	509	386
Cotton	12.9	401	310	172	54	65
Custer	23.1	1270	630	730	253	258
Dewey	12.0	292	319	236	64	84
Ellis	8.4	359	218	314	73	65
Garfield	45.5	2968	1331	2554	768	797
Garvin	31.1	708	605	514	186	226
Grady	41.1	1493	771	788	447	347
Grant	13.1	295	274	677	102	126
Greer	14.5	543	339	351	150	109
Harmon	10.0	205	251	142	39	67
Harper	6.5	84	163	184	50	63
Hughes	29.1	593	390	349	191	204
Jackson	22.7	877	600	475	207	189
Jefferson	15.1	361	327	291	104	94
Johnston	16.0	140	189	114	59	58
Kay	47.0	2921	1172	1236	771	786

(Continued on next page)

TABLE IV (Concluded)

<u>Counties</u>	<u>1940 Population</u> (000)	<u>Automotive Group</u> (000)	<u>Filling Stations</u> (000)	<u>Lumber- Building- Hardware</u> (000)	<u>Eating & Drinking Places</u> (000)	<u>Drug Stores</u> (000)
Kingfisher	15.6	831	495	707	163	148
Kiowa	22.8	665	537	684	197	226
Lincoln	29.5	668	384	409	151	149
Logan	25.2	1200	571	934	229	265
Love	11.4	92	112	128	87	53
Major	11.9	352	276	355	82	69
Marshall	12.4	245	143	212	76	76
McClain	19.3	242	287	278	122	135
Murray	13.8	482	244	185	128	129
Noble	14.8	533	382	508	158	123
Oklahoma	244.2	18020	6098	8256	5348	5666
Payne	35.8	1815	950	1118	639	416
Pontotoc	39.7	2604	780	875	383	430
Pottawatomie	66.6	2721	1102	1131	450	674
Roger Mills	10.7	206	172	145	50	32
Seminole	60.5	3650	1364	843	740	576
Stephens	31.1	1195	627	601	298	293
Tillman	20.7	408	458	510	144	179
Washita	22.3	451	551	433	107	117
Woods	14.9	691	509	601	249	193
Woodward	16.2	1277	439	574	248	163

x Information withheld to avoid disclosure
See Bibliography for sources of data

TABLE V

Per Capita Retail Sales (1939) Counties of the
Oklahoma City Trade Territory

<u>Per Capita Retail Sales</u>	Beckham		Caddo			Carter		Coal	
	Alfalfa		Blaine	Canadian		Cleveland		Comanche	
Total Retail Sales	177.3	227.0	193.5	168.7	224.5	202.3	202.2	113.6	257.7
Food Stores	39.7	54.6	44.8	44.9	52.5	51.4	53.6	28.5	51.7
Gen. Mdse. Stores	14.0	36.7	16.5	13.3	21.0	33.1	18.8	x	29.7
Apparel Stores	3.3	2.1	1.0	8.0	4.1	8.3	8.5	x	16.4
Ftr., H.H., & Radio	.8	7.6	2.8	3.8	6.7	8.4	3.7	1.6	8.9
Automotive Group	25.2	36.3	34.2	30.0	40.7	29.0	25.7	21.2	59.1
Filling Stations	16.1	28.2	28.1	23.3	29.6	18.0	20.5	11.2	21.8
Lbr., Bldg., Hdw.	33.3	28.9	34.3	25.1	28.6	18.9	25.5	9.4	30.4
Eating & Drinking Places	11.6	10.4	9.5	7.3	13.6	9.5	13.6	3.2	13.5
Drug Stores	12.4	8.5	10.2	7.3	9.9	11.0	15.7	3.4	10.3

(Continued on next page)

TABLE V (Continued)

<u>Per Capita Retail Sales</u>	<u>Cotton</u>	<u>Custer</u>	<u>Dewey</u>	<u>Ellis</u>	<u>Garfield</u>	<u>Garvin</u>	<u>Grady</u>	<u>Grant</u>	<u>Greer</u>
Total Retail Sales	200.8	239.8	139.2	200.0	373.6	143.1	191.0	189.3	186.9
Food Stores	32.9	53.2	37.7	38.1	65.8	39.9	40.3	51.4	49.8
Gen. Mdse. Stores	60.5	25.9	8.8	7.4	63.8	16.5	32.0	2.9	20.7
Apparel Stores	1.6	8.1	x	6.5	27.5	4.3	5.2	6.6	4.1
Ftr. H.H., & Radio	2.6	7.9	x	3.5	13.2	2.3	7.4	6.8	2.7
Automotive Group	31.1	55.0	24.3	42.7	65.2	22.8	36.3	22.5	37.4
Filling Stations	24.0	27.3	26.6	26.0	29.3	19.5	18.8	20.9	23.4
Lbr., Bldg., Hdw.	13.3	31.6	19.7	37.4	56.1	16.5	19.2	51.7	24.2
Eating & Drinking Places	4.2	11.0	5.3	8.7	16.9	6.0	10.9	7.8	10.3
Drug Stores	5.0	11.2	7.0	7.7	17.5	7.3	8.4	9.6	7.5

(Continued on next page)

TABLE V (Continued)

	Harmon	Harper	Hughes	Jackson	Jefferson	Johnston	Kay	Kingfisher	Kiowa
<u>Per Capita Retail Sales</u>									
Total Retail Sales	121.0	160.0	137.1	189.9	135.8	81.2	292.1	225.0	196.9
Food Stores	25.3	43.1	35.2	45.8	37.0	23.6	73.9	49.4	49.8
Gen. Mdse. Stores	19.5	5.5	28.4	17.5	12.6	10.4	34.8	11.7	24.4
Apparel Stores	x	7.4	3.5	10.8	3.5	x	16.6	7.7	2.5
Ftr., H.H., & Radio	x	x	3.6	5.5	3.4	1.9	10.2	2.3	4.8
Automotive Group	20.5	12.9	20.4	38.6	23.9	8.8	62.1	53.3	29.2
Filling Stations	25.1	25.1	13.4	26.4	21.7	11.8	24.9	31.7	23.6
Lbr., Bldg., Hdw.	14.2	28.3	12.0	20.9	19.3	7.1	26.3	45.3	30.0
Eating & Drinking Places	3.9	7.7	6.6	9.1	6.9	3.7	16.4	10.4	8.6
Drug Stores	6.7	9.7	7.0	8.3	6.2	3.6	16.7	9.5	9.9

(Continued on next page)

TABLE V (Continued)

	Lincoln	Logan	Love	Major	Marshall	McClain	Murray	Noble	Oklahoma
<u>Per Capita Retail Sales</u>									
Total Retail Sales	123.1	237.3	87.7	145.4	125.0	106.7	155.1	211.5	391.7
Food Stores	28.8	51.1	33.7	33.7	38.5	30.3	41.7	47.4	65.8
Gen. Mdse. Stores	10.6	23.9	10.2	7.8	15.9	3.4	11.8	17.0	57.0
Apparel Stores	2.5	7.1	x	x	x	4.6	5.3	4.7	37.8
Ftr., H.H., & Radio	2.9	11.6	x	x	x	1.9	6.0	2.6	20.8
Automotive Group	22.6	47.6	3.7	29.6	19.8	12.5	34.9	36.0	73.8
Filling Stations	13.0	22.7	9.8	23.2	11.5	14.9	17.7	25.8	25.0
Lbr., Bldg., Hdw.	13.9	37.1	11.2	29.8	17.1	14.4	13.4	34.3	33.8
Eating & Drinking Places	5.1	9.1	7.6	6.9	6.1	6.3	9.3	10.7	21.9
Drug Stores	5.1	10.5	4.6	5.8	6.1	7.0	9.3	8.3	23.2

(Continued on next page)

TABLE V (Concluded)

<u>Per Capita Retail Sales</u>	Payne	Pontotoc	Roger Mills		Stephens	Washita		Woodward		
		Pottawatomie	Seminole		Tillman			Woods		
Total Retail Sales	285.2	242.8	236.0	108.4	215.7	119.7	255.1	137.7	265.8	290.0
Food Stores	66.9	51.6	46.3	27.4	52.0	49.3	40.3	35.9	61.7	62.8
Gen. Mdse. Stores	34.8	28.6	35.1	6.4	15.9	28.9	19.7	17.8	21.5	20.2
Apparel Stores	18.1	15.0	12.5	x	8.9	10.6	2.6	2.2	12.5	11.2
Ftr., H.H., & Radio	8.5	8.1	6.6	x	7.3	6.1	3.5	2.8	8.8	7.4
Automotive Group	50.7	65.6	40.9	19.3	60.3	38.4	19.7	20.2	46.4	78.8
Filling Stations	26.5	19.6	16.5	16.1	22.5	20.2	22.1	24.7	34.2	27.1
Lbr., Bldg., Hdw.	31.2	22.0	17.0	13.6	13.9	19.3	24.1	19.4	40.3	35.4
Eating & Drinking Places	17.8	9.6	6.8	4.7	12.2	14.8	7.0	4.8	16.7	15.3
Drug Stores	11.6	10.8	10.1	3.0	9.5	9.4	8.6	5.2	13.0	10.1

TABLE VI

Indices of Retail Sales by Store Classification,
Counties of the Oklahoma City Trade Territory

<u>Store Classification</u>	<u>Alfalfa</u>	<u>Beckham</u>	<u>Blaine</u>	<u>Caddo</u>	<u>Canadian</u>	<u>Carter</u>	<u>Cleveland</u>	<u>Coal</u>	<u>Comanche</u>
Total Retail Sales	92	117	100	87	116	106	104	59	133
Food Stores	88	121	99	99	116	114	119	63	115
Gen. Mdse. Stores	66	174	78	63	99	156	89	x	140
Apparel Stores	47	30	14	114	58	118	121	x	233
Ftr., H.H., & Radio	16	154	57	77	136	170	75	32	180
Automotive Group	71	103	97	85	115	82	73	60	167
Filling Stations	74	128	128	106	135	82	93	51	99
Lbr., Bldg., Hdw.	133	116	137	92	115	76	102	38	122
Eating and Drinking Places	121	109	99	76	143	99	143	34	141
Drug Stores	136	93	112	80	109	121	172	37	113

(Continued on next page)

TABLE VI (Continued)

<u>Store Classification</u>	<u>Cotton</u>	<u>Custer</u>	<u>Dewey</u>	<u>Ellis</u>	<u>Garfield</u>	<u>Garvin</u>	<u>Grady</u>	<u>Grant</u>	<u>Greer</u>
Total Retail Sales	104	124	72	103	193	74	99	98	97
Food Stores	73	118	83	84	145	88	89	114	110
Gen. Mdse. Stores	286	122	41	35	302	78	151	14	98
Apparel Stores	23	116	x	92	391	61	74	94	59
Ftr., H.H., & Radio	52	160	x	71	267	46	150	138	55
Automotive Group	88	155	69	121	184	64	102	63	106
Filling Stations	109	125	121	119	133	89	86	95	107
Lbr., Bldg., Hdw.	53	127	79	150	225	66	77	207	97
Eating and Drinking Places	44	115	56	91	177	63	114	82	108
Drug Stores	55	123	77	85	192	80	92	105	82

(Continued on next page)

TABLE VI (Continued)

<u>Store Classification</u>	Harper		Jackson		Johnston		Kingfisher		
	<u>Harmon</u>	<u>Hughes</u>	<u>Jefferson</u>	<u>Kay</u>	<u>Kiowa</u>				
Total Retail Sales	63	83	71	98	70	42	151	116	102
Food Stores	56	95	78	101	82	52	163	109	110
Gen. Mdse. Stores	92	26	134	83	59	49	165	55	116
Apparel Stores	x	105	50	154	50	x	236	109	36
Ftr., H.H., & Radio	x	x	73	111	69	39	206	46	97
Automotive	58	36	57	109	68	25	175	150	82
Filling Stations	115	115	61	121	99	54	114	144	114
Lbr., Bldg., Hdw.	58	113	48	84	77	29	105	182	105
Eating and Drinking Places	41	81	69	95	72	39	172	109	172
Drug Stores	74	107	77	91	68	40	184	104	184

(Continued on next page)

TABLE VI (Continued)

<u>Store Classification</u>	<u>Lincoln</u>	<u>Logan</u>	<u>Love</u>	<u>Marshall</u>	<u>Major</u>	<u>McClain</u>	<u>Murray</u>	<u>Noble</u>	<u>Oklahoma</u>
Total Retail Sales	63	123	46	65	75	55	80	109	203
Food Stores	64	113	75	85	74	67	92	105	145
Gen. Mdse. Stores	50	113	48	75	37	16	56	81	270
Apparel Stores	35	101	x	x	x	65	75	67	538
Ftr., H.H., & Radio	59	235	x	x	x	39	121	52	421
Automotive	64	134	11	84	56	35	98	102	208
Filling Station	59	103	45	52	106	68	80	117	114
Lbr., Bldg., Hdw.	56	149	45	69	120	57	54	138	136
Eating and Drinking Places	53	95	80	64	72	66	98	112	229
Drug Stores	56	116	51	67	64	77	102	91	255

(Continued on next page)

TABLE VI (Concluded)

<u>Store Classification</u>	<u>Payne</u>	<u>Pontotoc</u>		<u>Roger Mills</u>		<u>Stephens</u>		<u>Washita</u>	<u>Woodward</u>	
		<u>Pottawatomie</u>	<u>Seminole</u>	<u>Tillman</u>	<u>Woods</u>					
Total Retail Sales	148	126	121	56	112	106	80	71	138	150
Food Stores	148	114	103	61	115	109	89	80	138	139
Gen. Mdse. Stores	165	135	166	30	75	137	93	84	102	96
Apparel Stores	258	214	178	x	127	151	37	31	178	160
Ftr., H.H., & Radio	172	164	133	x	148	123	71	57	178	150
Automotive Group	143	185	115	55	170	109	56	57	131	222
Filling Stations	121	89	75	73	103	92	101	112	156	123
Lbr., Bldg., Hdw.	125	88	68	55	56	77	98	78	161	142
Eating and Drinking Places	186	101	71	49	128	155	73	50	175	160
Drug Stores	127	119	111	33	104	104	94	57	143	111

2. Indices of Purchasing Power

In order to demonstrate the construction and use of a purchasing power index, a composite index is formed from four separate purchasing power indices, each of which is selective of certain standard-of-living groups within the population of the territory in question.

A brief explanation of these four indices and the standard-of-living groups which they select will serve to demonstrate the types of data which can be used and the method of forming an index from them.

(a). The Auto Index (Table VII) is based upon the number of passenger automobiles owned per 1000 families. The data, given by counties, were found for the year 1939, in the April 10, 1940 issue of Sales Management magazine. The construction of the index from raw data is accomplished as follows:

1. Figures for the number of passenger automobiles per 1000 families for the 46 counties of the Oklahoma City trade territory are added.
2. The reciprocal of this total is computed by dividing the numeral 1 by the total figure.
3. The reciprocal thus obtained is multiplied by 46, which is the number of counties in the Oklahoma City trade territory.
4. The figure which represents the number of automobiles per 1000 families for each of the counties of the territory is then multiplied by the factor thus produced. The decimal point is moved two places to the right (equivalent to multiplying by 100), the figures are rounded, and the result is the index.

If there are no errors in computation, the sum of the 46 county indices will equal 4600. The county indices for the territory average 100.

Since the raw data are given in terms of number of passenger automobiles per 1000 families, it is not necessary to reduce the data to a per capita basis. While there may be some difference in number of persons per family in the counties of the territory, the number of automobiles in proportion to the number of families will furnish an adequate basis for comparisons between counties.

TABLE VII

Number of Passenger Automobiles per 1000 Families, by Counties,
1939, and the Auto Index of Purchasing Power

<u>County</u>	<u>Number of Passenger Automobiles Per 1000 Families</u>	<u>Index</u>
Alfalfa	896	124
Beckham	552	76
Blaine	786	109
Caddo	658	91
Canadian	877	121
Carter	658	91
Cleveland	864	120
Coal	375	52
Comanche	1001	138
Cotton	580	80
Custer	770	106
Dewey	784	108
Ellis	728	101
Garfield	958	132
Garvin	656	91
Grady	565	78
Grant	949	131
Greer	654	91
Harmon	629	87
Harper	806	111
Hughes	513	71
Jackson	612	85
Jefferson	511	71
Johnston	500	69
Kay	954	132
Kingfisher	837	116
Kiowa	743	103
Lincoln	692	96
Logan	808	112
Love	489	68
Major	935	129
Marshall	537	74
McClain	507	70
Murray	696	96
Noble	880	122
Oklahoma	1029	142
Payne	860	119
Pontotoc	946	131
Pottawatomie	584	81
Roger Mills	566	78
Seminole	551	76
Stephens	748	103
Tillman	643	89
Washita	622	86
Woods	844	117
Woodward	910	126

Data from the April 10, 1940, issue of Sales Management

(b) The Index of \$1,500 Preferred Families (Table VIII)

Data for the construction of this index were taken from the April 10, 1940 issue of the magazine Sales Management. The data are given by counties for the year 1939 and represent the number of families having incomes equivalent in purchasing power to an income of \$1,500 in New York City. Sales Management explains the \$1,500 equivalent income as follows:

Government surveys, particularly those called the Consumer Purchase Surveys, 1935 and 1936, give elaborate information on both incomes and expenditures for more than 300,000 families. They show, among other things, for a big cross-section of the American public, the "break-even" points by city population groups. Above the break-even point families have enough money so that they can make savings and/or indulge in extravagances or make purchases which they do not actually need to maintain decent standards of health. Below that point their incomes permit little more than the absolute necessities (if that) of food, clothing, and shelter.

Fifteen hundred dollars was found to be the break-even point for a decent maintenance for a family of four in New York and a few other large cities and prosperous suburbs. Generally speaking, the break-even point declined in smaller cities. In a city of 250,000 it might be \$1,375--in a city of 10,000 it might be down around \$1,100. Furthermore, there were marked variations by states and sections, and in the South particularly, blessed by plentiful near-at-hand food and a warm climate, one finds counties where no more than 10% of the families seem to have cash incomes of \$1,500 or more, and yet 40% may have incomes which are the equivalent, in power of purchasing manufactured products, of a \$1,500 New York City income.

The Government survey disclosed a close correlation between rents and income, with the break-even family paying \$37.50 a month in the big city, and only \$23.50 in the city of 10,000.

Sales Management's new feature--number of \$1,500 Preferred Families--is based upon a formula which relates rent with incomes, and, specifically, modifies median rents (from 1930 census) adjusted to a 1939 basis, and their known relation to incomes (Consumer Purchase Survey) by taking into consideration the break-even points by city-size and county-size population groups, and by differences in geographic sections.

Readers are urged to remember when using the estimates, that the figures do not purport to be the number of families with incomes of \$1,500 or more--but instead are the number (published in thousands) of families with incomes equivalent to a \$1,500 cash income of families in the biggest cities.

To the manufacturer who makes a low-priced necessity, the column may not be particularly important. He may consider that one family is nearly as good as another, but to the maker of high-priced quality products, luxury products, products whose purchase may be postponed, the new feature should be of great value in determining which are the most lucrative markets, and the ones in which sales resistance and sales cost will be relatively low."

The steps taken in the formation of the index from raw data are as follows:

1. The number of \$1,500 Preferred Families per 1000 inhabitants is found for each county of the territory by dividing the number of \$1,500 Preferred Families by the county population in thousands.
2. The total for the territory is found by adding the 46 county figures computed in Step 1.
3. The reciprocal of this total is determined by dividing it into the numeral 1.
4. The reciprocal is then multiplied by the number 46, which is the number of counties included in the territory.
5. The factor which results from Step 4 is then multiplied in turn by the number of \$1,500 Preferred Families per 1000 inhabitants (found in Step 1) for each county of the territory. The decimal point is moved two places to the right, equivalent to multiplying by 100, the figures are rounded, and the result is the index.

The total of the 46 county indices should be 4600; the county average for the territory, 100.

TABLE VIII

Number of \$1,500 Preferred Families, by Counties, 1939,
and the Preferred Families Index of Purchasing Power

<u>County</u>	<u>No. of Families</u> (000)	<u>Index</u>
Alfalfa	1.2	94
Beckham	2.7	134
Blaine	1.4	84
Caddo	4.1	109
Canadian	3.1	125
Carter	3.1	79
Cleveland	2.9	116
Coal	x	00
Comanche	3.3	97
Cotton	1.1	94
Custer	2.7	129
Dewey	.9	83
Ellis	.8	105
Garfield	5.9	143
Garvin	2.0	71
Grady	4.4	118
Grant	1.2	101
Greer	1.5	114
Harmon	1.1	122
Harper	.6	102
Hughes	2.1	80
Jackson	2.5	122
Jefferson	1.1	80
Johnston	x	00
Kay	5.5	129
Kingfisher	1.4	99
Kiowa	2.6	126
Lincoln	2.2	82
Logan	2.4	105
Love	x	00
Major	1.0	93
Marshall	.6	54
McClain	1.5	86
Murray	1.0	80
Noble	1.4	104
Oklahoma	29.5	133
Payne	4.2	129
Pontotoc	2.7	75
Pottawatomie	8.1	134
Roger Mills	1.2	124
Seminole	10.4	190
Stephens	2.8	99
Tillman	2.0	107
Washita	2.3	114
Woods	1.8	133
Woodward	1.5	102

Raw data from April 10, 1940, issue of Sales Management

(c) The Per Capita Income Tax Liability Index (Table IX)

The data used in the construction of this index were procured from the statistical department of the Oklahoma Tax Commission. In August, 1941, the data were being prepared for publication, which, when published, will carry the title Analysis of Taxable Individual Income Tax Returns Filed in 1938 and 1939 on Previous Years' Incomes. The data give the per capita income tax liability divided by the county population.

The method of constructing the index from raw data is as follows:

1. Figures for the per capita income tax liability for the 46 counties of the Oklahoma City trade territory are added to find the total.
2. The reciprocal of this total is computed by dividing the total into the numeral 1.
3. The reciprocal is multiplied by 46, which is the number of counties in the Oklahoma City trade territory.
4. The raw data figures which represent the per capita tax liability for the separate counties are in turn multiplied by the factor produced in Step 3. The decimal points are moved two places to the right, the figures are rounded, and the result is the index.

The sum of the forty-six indices should equal 4,600; the average of the county indices is 100.

TABLE IX

Per Capita Income Tax Liability, by Counties, 1938, and
Income Tax Index of Purchasing Power

County	Per Capita Income Tax Liability	Index
Alfalfa	\$.11	30
Beckham	.12	32
Blaine	.09	24
Caddo	.14	38
Canadian	.66	178
Carter	1.02	275
Cleveland	.59	159
Coal	.03	8
Comanche	.36	97
Cotton	.04	11
Custer	.23	62
Dewey	.03	8
Ellis	.35	95
Garfield	.98	264
Garvin	.12	32
Grady	.41	111
Grant	.18	49
Greer	.09	24
Harmon	.03	8
Harper	.48	130
Hughes	.39	105
Jackson	.17	46
Jefferson	.29	78
Johnston	.08	22
Kay	1.11	299
Kingfisher	.22	59
Kiowa	.26	70
Lincoln	.22	59
Logan	.52	140
Love	.03	8
Major	.07	19
Marshall	.04	11
McClain	.10	27
Murray	.10	27
Noble	.25	68
Oklahoma	2.11	569
Payne	.84	227
Pontotoc	1.82	491
Pottawatomie	.67	181
Roger Mills	.00	00
Seminole	.46	124
Stephens	.43	116
Tillman	.09	24
Washita	.03	8
Woods	.31	84
Woodward	.58	103

(d) The Average Value of Farm Land and Building Index (Table X)

Data for the average value of farm land and buildings per farm in the year 1940 were procured from the Department of Commerce, Bureau of the Census, Washington, D. C. The bulletin publishes figures gathered in the 16th Census of the United States and is entitled Agriculture-Oklahoma, First Series. The data are found in County Table, No. 1

The index was constructed from raw data as follows:

1. Figures showing the average value of farm land and buildings per farm for the 46 counties of the Oklahoma City trade territory were added to find the total.
2. The reciprocal of this total was computed by dividing the total figure into the numeral 1.
3. The reciprocal was multiplied by 46, the number of counties in the Oklahoma City trade territory.
4. The factor produced by Step 3 was multiplied in turn by the raw data figure for each of the counties of the territory. The decimal point was moved two places to the right, and the rounded figures produce the index.

The total of the 46 county figures should equal 4,600; the county average for the territory is 100.

TABLE X

Average Value of Farm Land and Buildings per Farm, 1940,
and the Farm Index of Purchasing Power

<u>County</u>	<u>Average Value</u>	<u>Index</u>
Alfalfa	12,606	209
Beckham	4,338	72
Blaine	8,302	138
Caddo	5,439	90
Canadian	9,801	163
Carter	3,023	50
Cleveland	4,709	78
Coal	1,711	29
Comanche	5,785	96
Cotton	6,059	101
Custer	7,382	122
Dewey	5,434	90
Ellis	5,855	97
Garfield	12,267	204
Garvin	3,890	64
Grady	4,870	81
Grant	13,559	225
Greer	5,557	92
Harmon	5,404	90
Harper	7,473	124
Hughes	2,270	38
Jackson	7,311	121
Jefferson	5,578	92
Johnston	3,594	60
Kay	9,665	161
Kingfisher	10,092	167
Kiowa	7,480	124
Lincoln	2,876	48
Logan	5,394	89
Love	3,122	52
Major	6,877	114
Marshall	3,348	56
McClain	4,741	79
Murray	3,530	58
Noble	7,813	130
Oklahoma	6,492	108
Payne	3,791	63
Pontotoc	2,646	44
Pottawatomie	2,955	49
Roger Mills	4,554	75
Seminole	2,021	34
Stephens	3,041	51
Tillman	10,993	182
Washita	6,829	113
Woods	9,864	164
Woodward	6,805	113

Data from Agriculture-Oklahoma, Bulletin of the Department
of Commerce, 16th Census of the United States, County Table 1

(e) The Composite Index (Table XI)

The formation of the composite Index is accomplished for each county by adding the four purchasing power indices for that county and dividing the sum by four. The composite Index is thus an average of the four purchasing power indices.

The sum of the Composite Indices for the territory will equal 4,600; the county average, 100.

3. The Selectivity of the Composite Purchasing Power Index

The purpose of the purchasing power index is to show the relative purchasing power of the counties of the Oklahoma City trade territory. Since it is difficult to find a single set of data which will represent all income and occupational groups, four indices were selected, each of which selects a slightly different income, occupational, or standard-of-living group.

The four indices of purchasing power select these groups as follows:

(1) The Number of Passenger Automobiles per 1,000 families forms an excellent basis for a standard-of-living index. Regardless of the industry from which income is derived, and regardless of whether the population is urban, farm, or non-farm rural, the number of passenger automobiles per 1,000 families increases as average income increases. The average family buys an automobile as soon as income becomes sufficiently in excess of necessities to permit such an expenditure. Comparisons between counties, based upon the relative number of automobiles per 1,000 families, clearly indicate the relative number of families having spendable funds beyond the requirements of food and lodging.

The Auto Index gives some quantitative measurement to the middle income group because a large income is not necessary to permit ownership of an automobile. Low income families in a county depress the numerical

TABLE XI

The Composite Index of Purchasing Power Formed from Single Indices

County	\$1500			Income Tax	Total	Composite Index
	Farm L. & B.	Auto	Preferred Families			
Alfalfa	209	124	94	30	457	114
Beckham	72	76	134	32	314	79
Blaine	138	109	84	24	355	89
Caddo	90	91	109	38	328	82
Canadian	163	121	125	178	587	147
Carter	50	91	79	275	495	124
Cleveland	78	120	116	159	473	118
Coal	29	52	00	8	89	22
Comanche	96	138	97	97	428	107
Cotton	101	80	94	11	286	72
Custer	122	106	129	62	419	105
Dewey	90	108	83	8	289	72
Ellis	97	101	105	95	398	100
Garfield	204	132	143	264	743	186
Garvin	64	91	71	32	258	65
Grady	81	78	118	111	388	97
Grant	225	131	101	49	506	126
Greer	92	91	114	24	321	80
Harmon	90	87	122	8	307	77
Harper	124	111	102	130	467	117
Hughes	38	71	80	105	294	76
Jackson	121	86	122	46	374	93
Jefferson	92	71	80	78	321	80
Johnston	60	69	00	22	151	38
Kay	161	132	129	299	721	180
Kingfisher	167	116	99	59	441	110
Kiowa	124	103	126	70	423	106
Lincoln	48	96	82	59	286	71
Logan	89	112	105	140	446	111
Love	52	68	00	8	128	32
Major	114	129	93	19	355	94
Marshall	56	74	54	11	195	67
McClain	79	70	86	27	262	57
Murray	58	96	80	27	261	85
Noble	130	122	104	68	424	121
Oklahoma	108	142	133	569	952	212
Payne	63	119	129	227	538	126
Pontotoc	44	131	75	491	741	131
Pottawatomie	49	81	134	181	445	108
Roger Mills	75	78	124	00	277	59
Seminole	34	76	190	124	424	100
Stephens	51	103	99	116	369	97
Tillman	182	89	107	24	402	90
Washita	113	86	114	8	321	66
Woods	164	117	133	84	498	118
Woodward	<u>113</u>	<u>126</u>	<u>102</u>	<u>103</u>	<u>444</u>	<u>110</u>
	4600	4600	4600	4600	18400	4600

value of the index for that county. High income families elevate the numerical value of the index, but since it does not necessarily follow that the number of automobiles in a family increases as the family income increases, the Auto Index cannot be considered as selective for high income groups.

(2) The Number of \$1,500 Preferred Families Index was taken from data prepared by the magazine Sales Management for the express purpose of measuring the number of families having incomes above the "break even" point. This index is selective of the middle-income group since large incomes count no more in the data than incomes barely above the established level.

This index may be classified as a standard-of-living index, having particular value because of allowances are made for differences in cost of living so that only those families are included whose incomes permit expenditures above the level of necessities.

(3) The Per Capita Income Tax Liability Index is selective of a slightly higher income group than the Auto Index or the Preferred Families Index. Large incomes quantitatively influence this index because it is computed from amount of tax liability rather than from number of returns.

Comparisons between counties on the basis of this index disclose the concentration points of higher income groups. Counties in which cities are located are found to be numerically superior in the index to counties having only small towns. A majority of wealthy people, of course, make their homes in cities.

(4) The Farm Index is based upon the average value of farm land and buildings, per farm, in the counties of the Oklahoma City trade territory.

This index is particularly recommended for use in areas where a substantial portion of income is derived from agriculture. The Oklahoma City territory is such an area.

The Farm Index is selective, not only of farm owners and farm laborers, but also for many groups of people who derive their incomes indirectly from agriculture. For the purpose of comparisons between counties, the value of farms are indicative of their wealth-producing or income-producing potentialities; and the average value of farms within a county is in direct proportion to farm-originated income.

The value of a farm is in itself a sort of an average. The value of land is determined by its productivity in an average year. Farm buildings and improvements represent an accumulation derived from the income of previous years.

Non-farm residents whose incomes are obtained indirectly from agriculture include workers in such industries as banks, brokerage houses, retail stores, creameries, produce houses, grain elevators and mills, cotton gins and compresses, and many more too numerous to mention.

The Farm Index is not selective of high income groups except as such incomes are derived from extremely large or highly improved farms. High incomes are better shown by the Income Tax Index. Incomes produced by industrial concerns must also be discovered by other indices.

(5) The Composite Index, as an average of the four separate indices, unites the influences of all classes selected by the separate indices. It is noticeable that each index samples the middle-income classes while some sample higher income brackets and some the lower. A large proportion of total retail sales from all store classifications are made to customers of the middle income group.

CHAPTER V

Discovering areas of Sales Opportunity and measuring competitive conditions by Comparison of Indices.

1. Comparison of Indices of Purchasing Power and Retail Sales

The construction of a numerical index of Purchasing Power is an attempt to reduce to comparable mathematical terms, the financial ability of certain individuals or groups to purchase merchandise. The Retail Sales Indices endeavor to show what classes of merchandise, in what relative quantities, have been sold by the stores in the areas having the purchasing power indicated by the Purchasing Power Index.

In order to make the two indices comparable, both have been constructed using the same geographical area as a unit, and both have the same numerical average of 100.

Each county's index of Purchasing Power, then, answers the question of how that county compares with the average of the territory in ability-to-buy. If the index is 70, the purchasing power of the average person of the county is 70 per cent of the purchasing power of the average person of the Oklahoma City Trade territory. On the other hand, if the index is 120, we know the average for that county is higher than the territory average by 20 per cent.

It has been shown that purchasing power is translated into retail sales to a very considerable degree. It is also known that residents of a county frequently trade in cities located in other counties. Our effort shall be to determine how much is gained or lost by a county in retail sales, over what would be expected if only the residents of the county purchased there, and all of them purchased goods in no other

county. Our assumption is that a county would have the same index of Purchasing Power and Retail Sales if no trading existed between counties.

The comparison of indices of Purchasing Power and Retail Sales is accomplished by subtracting the latter from the former. A positive result indicates that the county rates higher as compared with other counties of the territory in Purchasing Power than it does in Retail Sales. More of the local purchasing power has been expended in foreign markets than the retail stores have attracted from outside. This county has more ability-to-buy than is reflected in the sales of its stores.

On the other hand, if the result of comparison is negative, then the county rates higher in retail sales, as compared with other counties, than it does in purchasing power. Its retail stores sell larger quantities of goods than would be expected from the buying power of the county's inhabitants. Such stores are effectively supplying the requirements of nearby residents, and are probably attracting trade from other counties. At any rate, the county gains more trade from other counties than it loses to them. Competition is strong in such a county; customers are more easily drawn from areas not so effectively supplied by local stores.

The mere process of subtracting one index from the other, determining the numerical superiority of one index over the other and assigning a positive value to the difference when Purchasing Power exceeds Retail Sales, and a negative value when Retail Sales exceeds Purchasing Power, completes the Comparison of Indices.

2. Discovering Areas of Sales Opportunity

Three devices are employed to locate areas in which sales extension may be accomplished profitably. The first is the selection of individual

counties, the purchasing power indices of which exceed their Retail Sales indices by the greatest amount. For each store classification, the ten highest Plus counties have been selected.

As far as our mathematical computations are concerned, these ten counties comprise the most fertile areas for trade extension for that particular type of store. It must be remembered, however, that economic data frequently require intelligent interpretation, and that results mathematically arrived at may not constitute conclusive proof, requiring no modification.

For example, the comparison of indices for any type of convenience goods store may show a county at a distance of a hundred miles to be favorable. Obviously, customers will not travel such a distance to purchase convenience goods when they are procurable readily at hand. Mathematical computations merely point out where opportunity exists. It is rightfully the field of interpretation to decide whether such opportunity can be translated into profitable business for the Oklahoma City merchant.

Throughout the comparison of indices, as here demonstrated, areas of opportunity and competition are selected without regard to their practicability. In Chapter VI an attempt is made to interpret the results.

The second device is employed to find the most favorable zone in which to seek new customers. The numerical differences derived by comparison of indices are arranged by counties according to zone, as shown in Table I. The average value of the counties for Zone I is found by dividing the sum of these differences by the number of counties in Zone I. A similar procedure discloses the average value of counties in Zones II and III. The Zone having the highest average positive value

should be most susceptible to sales infiltration. It will be recalled that counties are divided into zones according to distance from Oklahoma County.

The third selection is to determine the most favorable Direction, according to the division of counties as listed in Table III. The method employed is similar to that used in locating the most favorable zone.

Thus, the individual counties, the zones, and the directions are surveyed by means of comparing indices of purchasing power and retail sales to locate areas from which sales may be increased.

3. Measuring Relative Conditions of Competition

The same three divisions of counties used in locating areas of sales opportunity are also used to find areas of competition. A county may be considered competitive in regard to a certain type of store, if its Retail Sales Index has a greater numerical value than the county's Purchasing Power Index. The result of index comparison will be negative when the Retail Sales Index is subtracted from the Purchasing Power Index, and by definition, the county becomes a Minus County for that type of store.

Using the results of comparison as shown in Table XII, the ten counties for each store classification having the greatest negative numerical values are chosen to find the individual counties in which competition is most severe. The counties are then divided into zones and directions, and averages are found for each. The one having the greatest negative value may be considered the most competitive.

Table XII gives the ten highest Plus and Minus counties of the territory, the highest Plus and Minus Zones, and the highest Plus and Minus Directions for each store classification. The interpretation of results will be considered in Chapter VI.

TABLE XII

Results of Comparison of Purchasing Power and Retail Sales Indices
by Store Classification

<u>County</u>	<u>Total Retail</u>	<u>Food Stores</u>	<u>Gen. Mdse.</u>	<u>Apparel</u>	<u>Ftr., H.H., & Radio</u>
Alfalfa	22	26	48	67	98
Beckham	-38	-42	-95	49	-75
Blaine	-11	-10	11	75	32
Caddo	- 5	-17	19	-32	5
Canadian	31	31	48	89	11
Carter	19	10	-32	6	-46
Cleveland	14	- 1	-29	- 3	43
Coal	-37	-41	22	22	-10
Comanche	-26	- 8	-33	-126	-73
Cotton	-32	- 1	-214	49	20
Custer	-19	-13	-17	-11	-55
Dewey	0	-11	31	72	72
Ellis	- 3	16	65	8	29
Garfield	- 7	41	-116	-205	-81
Garvin	- 9	-23	-13	4	19
Grady	- 2	8	-54	23	-53
Grant	28	12	112	32	-12
Greer	-17	-30	-18	21	25
Harmon	14	21	-15	77	77
Harper	34	22	91	12	117
Hughes	5	- 2	-58	26	3
Jackson	- 5	- 8	10	-61	18
Jefferson	10	- 2	21	30	11
Johnston	- 4	-14	-11	38	- 1
Kay	29	17	15	-56	-26
Kingfisher	- 6	1	55	1	64
Kiowa	4	- 4	-10	70	9
Lincoln	8	7	21	36	12
Logan	-12	- 2	- 2	10	-124
Love	14	-43	-16	32	32
Major	14	15	52	89	89
Marshall	-16	-36	-26	49	49
McClain	10	- 2	49	0	26
Murray	-15	-27	9	-10	-56
Noble	- 3	1	25	39	54
Oklahoma	35	93	-32	-300	-183
Payne	-12	-12	-29	-122	-36
Pontotoc	59	71	50	-29	21
Pottawatomie	-10	8	-55	-67	-22
Roger Mills	11	6	37	67	67
Seminole	- 6	- 9	31	-21	-42
Stephens	-14	-17	-45	-59	-31
Tillman	20	11	7	63	29
Washita	9	0	- 4	49	23
Woods	-14	-14	22	-54	-54
Woodward	-39	-28	15	-49	-39

(Concluded on next page)

TABLE XII (Concluded)

<u>County</u>	<u>Auto Group</u>	<u>Filling Stations</u>	<u>Lbr. Bhild. Mat. Hdw.</u>	<u>Eating & Drinking Places</u>	<u>Drug Stores</u>
Alfalfa	43	40	-19	- 7	-22
Beckham	-24	-49	-37	-30	-14
Blaine	- 8	-39	-48	-10	-23
Caddo	- 3	-24	-10	6	2
Canadian	32	12	32	4	38
Carter	42	42	48	25	3
Cleveland	45	25	16	-25	-54
Coal	-38	-29	-16	-12	-15
Comanche	-60	8	-15	-34	- 6
Cotton	-16	-37	19	28	17
Custer	-50	-20	-22	-10	-18
Dewey	3	-49	- 7	16	- 5
Ellis	-21	-19	-50	9	15
Garfield	2	53	-39	9	- 6
Garvin	1	-24	- 1	2	-15
Grady	- 5	11	20	-17	5
Grant	63	31	-81	44	21
Greer	-26	-27	-17	-28	- 2
Harmon	19	-38	20	36	3
Harper	81	2	4	36	10
Hughes	19	15	28	7	- 1
Jackson	-16	-28	9	- 2	2
Jefferson	12	-19	3	8	12
Johnston	13	-16	9	- 1	- 2
Kay	5	66	75	8	- 4
Kingfisher	-40	-34	-72	1	6
Kiowa	24	- 2	-15	16	- 3
Lincoln	7	12	15	18	15
Logan	-23	8	-38	16	- 5
Love	21	-13	-13	-48	-19
Major	33	-17	-31	17	85
Marshall	-35	- 3	-20	-15	-18
McClain	30	- 3	8	- 1	-12
Murray	-33	-15	11	-33	-37
Noble	4	-11	-32	- 6	15
Oklahoma	30	124	102	9	-17
Payne	- 7	15	11	-50	9
Pontotoc	0	96	97	84	66
Pottawatomie	- 4	36	43	40	0
Roger Mills	12	- 6	12	18	34
Seminole	-64	3	50	-22	2
Stephens	-17	0	15	-63	-12
Tillman	44	- 1	2	27	6
Washita	23	-32	2	30	23
Woods	- 7	-32	-37	-51	-19
Woodward	-111	-12	-31	-49	0

CHAPTER VI

Interpretation of Results

1. Food Stores

The classification of Food Stores includes grocery stores, combination grocery and meat stores, meat markets, confectioneries, and candy stores. The merchandise sold by these stores is usually of the "convenience" variety, which Brisco defines as follows.

Convenience goods are those customarily purchased at easily accessible stores and at convenient locations in stores. It is not the kind of merchandise for which one makes a shopping trip. The success of the neighborhood store and of the corner cigar store depends directly upon the factor of convenience to customers in buying. The process of buying convenience goods is first the conscious recognition of need for an article, and then, usually, the determination immediately to satisfy that need. The prices are such that usually it does not pay customers to shop elsewhere. Furthermore, convenience goods are usually in constant use, and a frequent replenishment is necessary. Good examples of stores handling convenience goods are grocery, drug, cigar, and hardware.¹

It is evident from the foregoing statement that customers will not travel great distances to make purchases of food. It is futile to investigate the counties far from Oklahoma County to find fruitful areas in which the Oklahoma City retail dealer in foods may extend his sales. The inhabitants of counties near at hand may contribute to sales volume by purchases of wisely-chosen and well-advertised specialty items.

1. Brisco, Norris A., Retailing (Prentice-Hall, New York, 1935) p. 86.

TABLE XIIIa

Results of Index Comparison, Selecting Areas of
Sales Opportunity and Competition

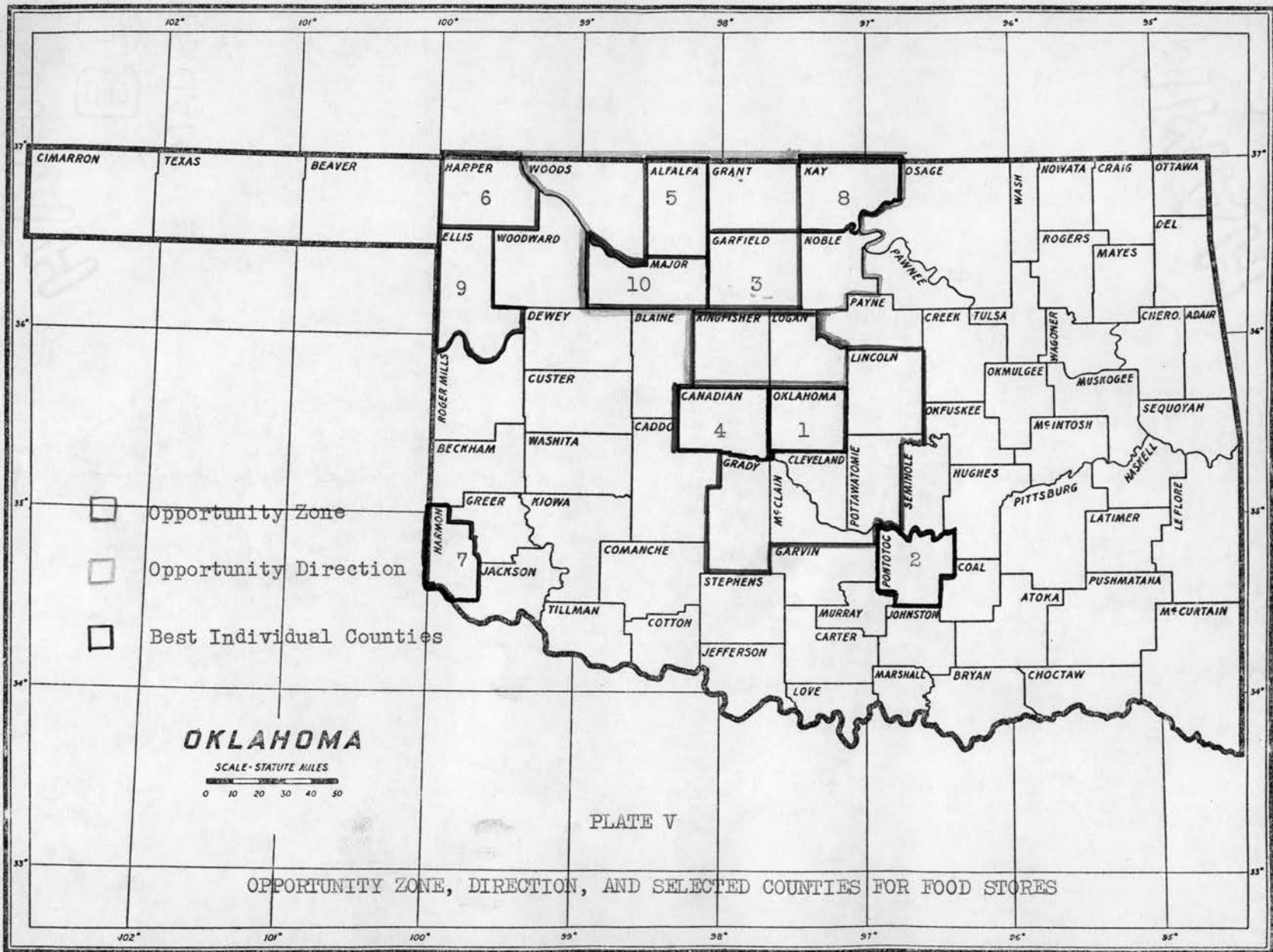
Food Stores

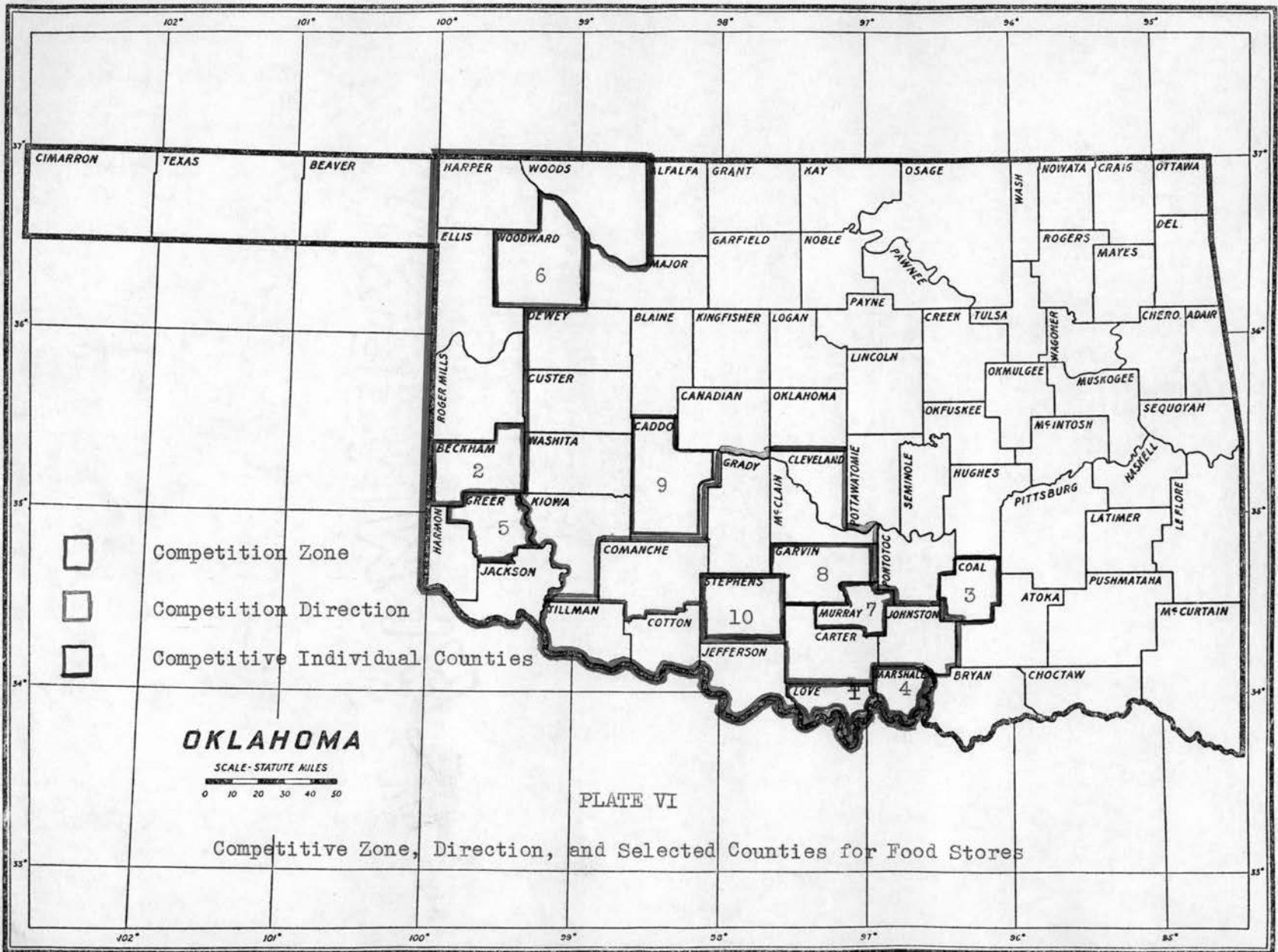
<u>Purchasing Power exceeds Sales</u>		<u>Sales exceed Purchasing Power</u>	
<u>Ten Highest Plus Counties</u>		<u>Ten Highest Minus Counties</u>	
Oklahoma	93	Love	-43
Pontotoc	71	Beckham	-42
Garfield	41	Coal	-41
Canadian	31	Marshall	-36
Alfalfa	26	Greer	-30
Harper	22	Woodward	-28
Harmon	21	Murray	-27
Kay	17	Garvin	-23
Ellis	16	Caddo	-17
Major	15	Stephens	-17
Highest Plus Zone, No. 1.		Highest Minus Zone, No. 3	
Highest Plus Direction, North.		Highest Minus Direction, South	

Table XIIIa lists the individual Opportunity Counties and most likely Zone and Direction. It is noticeable that Oklahoma County is the highest Plus County. The foods dealer will certainly find his most responsive prospects near at hand. Canadian County is the only other county within the highest ten which is near enough to make it practicable to attempt any sort of sales promotion.

According to the results of index comparison, Zone I and the Direction North are better possibilities than the other zones and directions. Advertising material should be concentrated in the counties immediately surrounding Oklahoma County, and, other than Canadian County, the best results may be expected in those counties north of Oklahoma County.

The areas of most intense competition appear to be remote from Oklahoma County. Of the ten most competitive counties, not one is within fifty miles of Oklahoma County. Zone III and the Direction South are the most competitive zone and direction.





2. General Merchandise Stores

This classification includes department stores, dry goods stores, variety stores, and ten cent stores. Not included in this group are the general stores, in which the sale of groceries figures prominently.

TABLE XIIIb

Results of Index Comparison, Selecting Areas of
Sales Opportunity and Competition

General Merchandise Stores

<u>Purchasing Power exceeds Sales</u>		<u>Sales exceed Purchasing Power</u>	
<u>Ten Highest Plus Counties</u>		<u>Ten Highest Minus Counties</u>	
Grant	112	Cotton	-214
Harper	91	Garfield	-116
Ellis	65	Beckham	- 95
Kingfisher	55	Hughes	- 58
Major	52	Pottawatomie	- 55
Pontotoc	50	Grady	- 54
McClain	49	Stephens	- 45
Alfalpa	48	Comanche	- 33
Canadian	48	Oklahoma	- 32
Roger Mills	37	Payne	- 29

Highest Plus Zone, No. 1. Highest Minus Zone, No. 3.
Highest Plus Direction, North. Highest Minus Direction, South.

Table XIIIb shows the results of comparison. Of the ten counties in the Opportunity group, three are in Zone III, four are in Zone II, leaving only Harper, Ellis, and Roger Mills in Zone III.

Grant, Harper, Ellis, Major, and Roger Mills counties have no primary trade centers of their own. These counties show a surplus of purchasing power over retail sales due in part to the deficiency of local stores. Kingfisher, Pontotoc, McClain, Alfalfa, and Canadian all have sizeable cities and still show a surplus of purchasing power, which indicates that local stores insufficiently supply the needs of their customers.

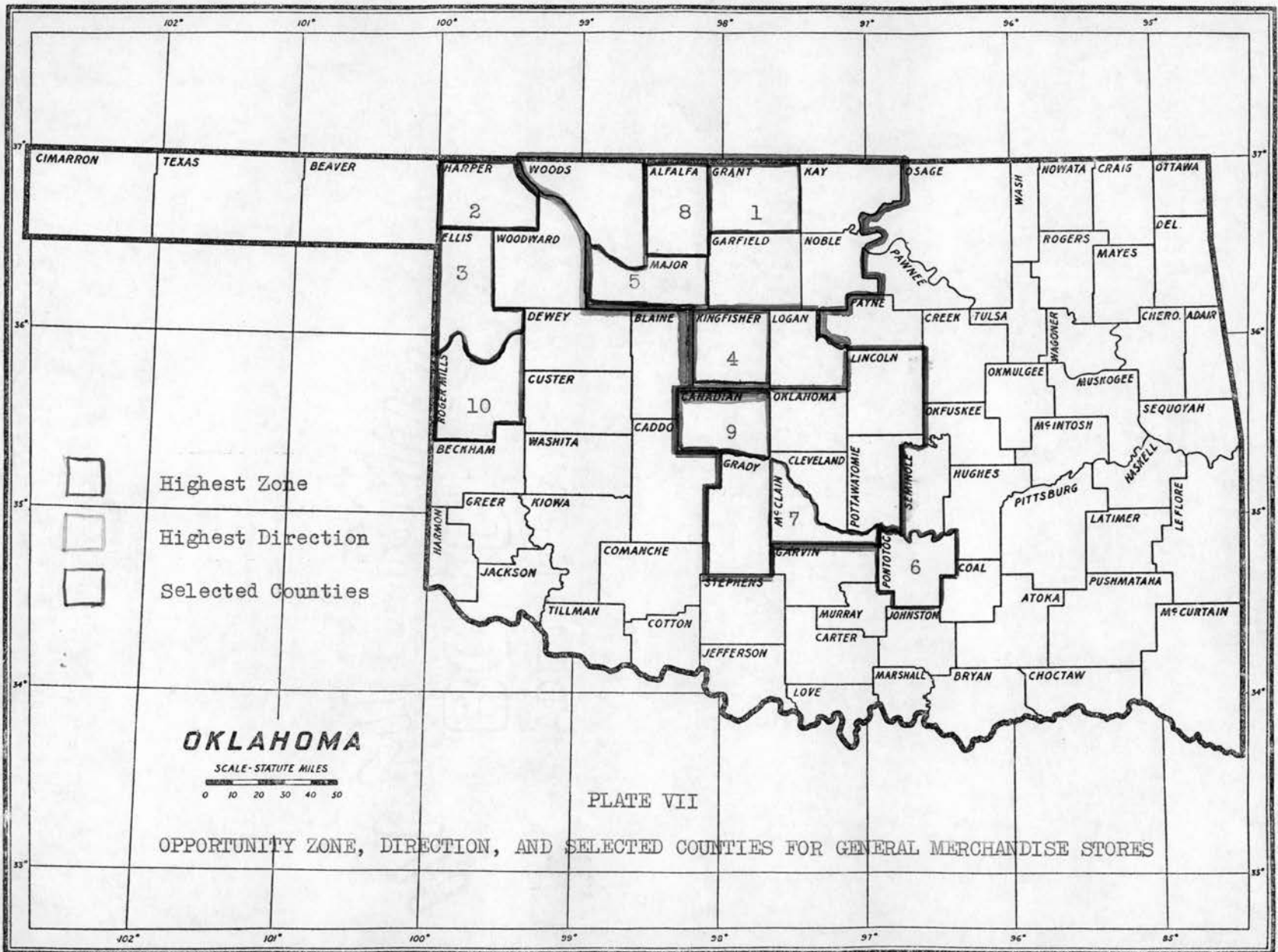
Zone I and the Direction North are favored for sales possibilities. It is not suggested, of course, that other areas should be neglected.

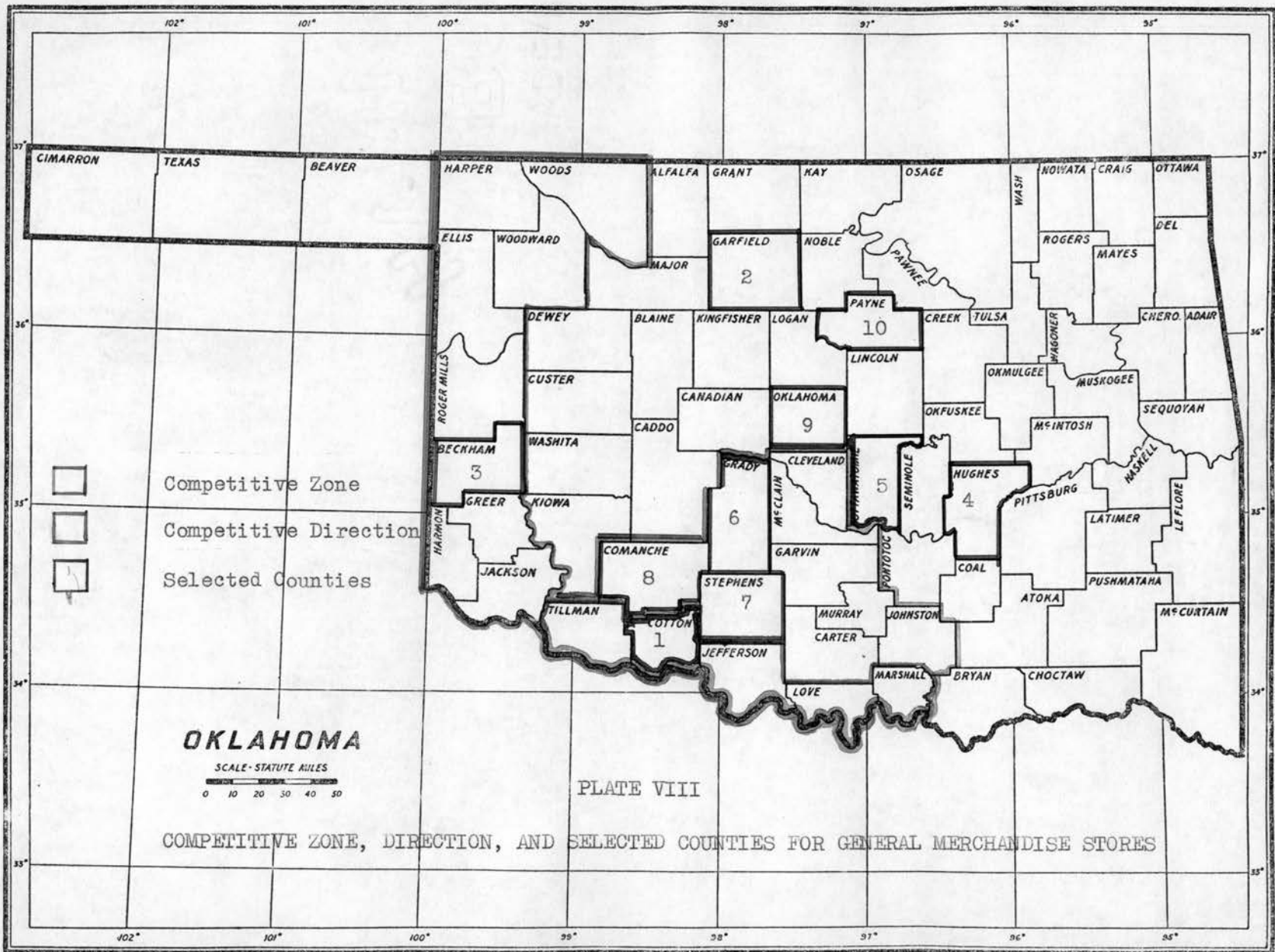
Department stores, with their extensive stocks of seasonable and fashion merchandise, draw customers from great distances. Charge customers from remote districts sometimes visit department stores only two or three times a year, at which times purchases are made of many articles not obtainable at home. These accounts are profitable to the store and are being encouraged by many department stores.

Areas of competition, also listed in Table XIIIb show Cotton County leading, with Garfield, Beckham, Hughes, Pottawatomie, and Grady following. Cotton county has an extremely low purchasing power, and in spite of the fact that it has no primary trade center, sales still surpass purchasing power by a great margin.

Garfield, Beckham, Hughes, Pottawatomie, and Grady counties all have primary trade centers which attract more trade to the county than the county contributes to outside markets.

Stephens, Comanche, Oklahoma, and Payne counties are similarly situated with primary trade centers. Many customers from these areas trade in Oklahoma City, but local stores apparently attract more trade from other counties than is lost to them.





3. Apparel Stores

Included in the apparel stores group are shoe stores, ready-to-wear shops for women, men and boys, and various combinations of the same. The merchandise carried by these stores varies from inexpensive, staple articles to high-priced, style goods. Women customers, especially, will travel a greater distance to shop for clothing than for any type of merchandise, with the possible exception of expensive furniture and rugs.

Style goods, particularly clothing, come under the heading of "shopping goods," of which Brisco says:

Shopping goods are those for which the customer wishes to compare prices, or quality and prices, at the time of purchase. Some writers make a threefold division of this type--necessities, style goods, and luxuries. In buying these goods, the customer usually wishes to shop in several stores for purposes of comparison. Trimmed millinery, shoes, furniture, piece goods, and men's and women's ready-to-wear are good examples.²

TABLE XIIIc

Results of Index Comparison, Selecting Areas of
Sales Opportunity and Competition

Apparel Stores

<u>Purchasing Power exceeds Sales</u>		<u>Sales exceed Purchasing Power</u>	
<u>Ten Highest Plus Counties</u>		<u>Ten Highest Minus Counties</u>	
Canadian	89	Oklahoma	-300
Blaine	75	Garfield	-205
Kiowa	70	Comanche	-126
Alfalfa	67	Payne	-122
Tillman	63	Pottawatomie	- 67
Beckham	49	Jackson	- 61
Cotton	49	Stephens	- 59
Washita	49	Kay	- 56
Noble	39	Woods	- 54
Lincoln	36	Woodward	- 49
Highest Plus Zone, No. 1		Highest Minus Zone, No. 2	
Highest Plus Direction, West		Highest Minus Direction, East	

2. Ibid., p. 86

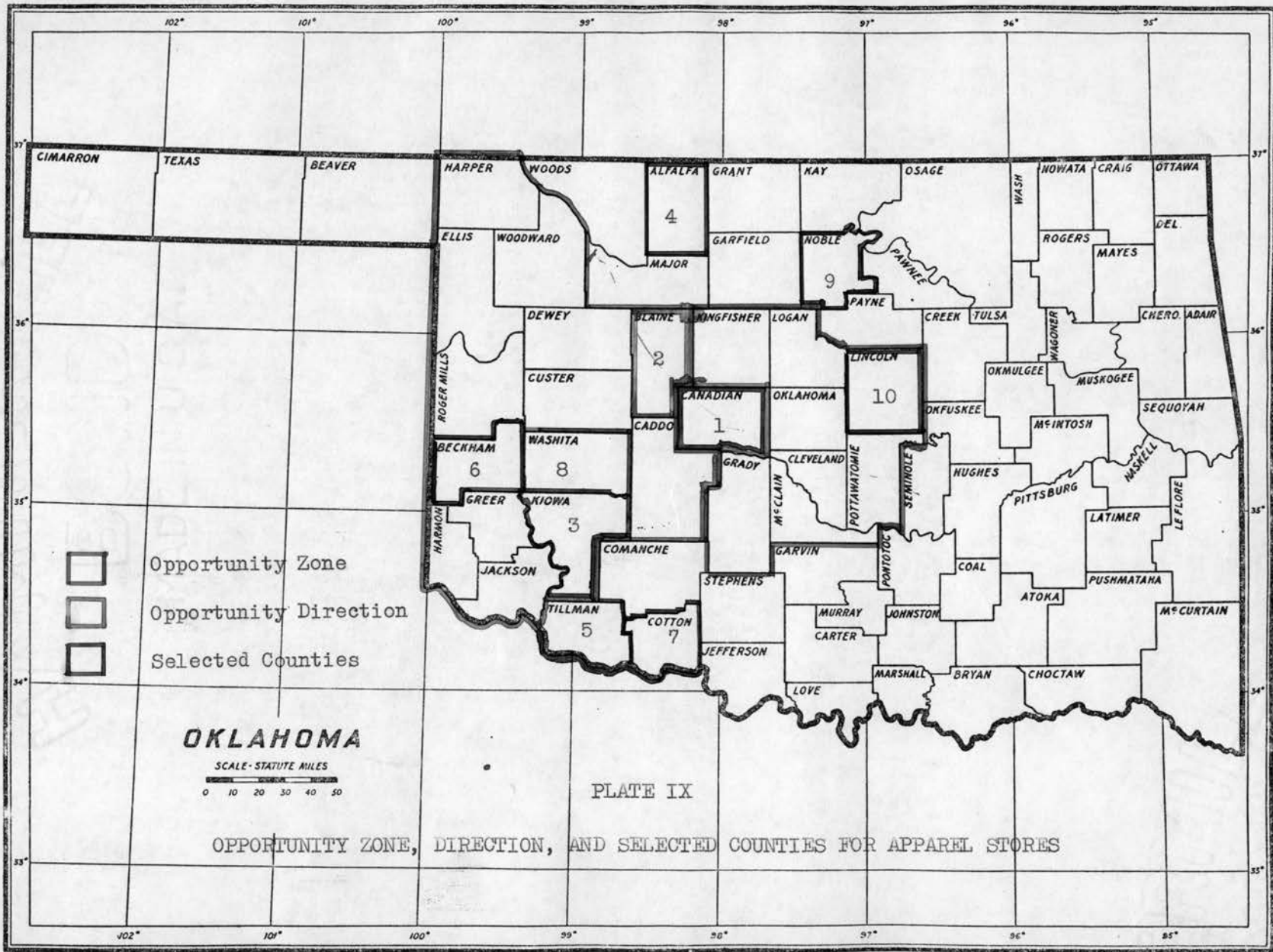
Apparel stores in Oklahoma City attract customers from the most remote parts of the trade territory. It is noticeable from the list of competitive counties shown in Table XIIIc, that the sale of apparel gravitates to cities. A primary trade center is located in each of the ten counties listed here, with Oklahoma City leading the list, Enid second, Lawton third, and Stillwater fourth, as represented by their counties.

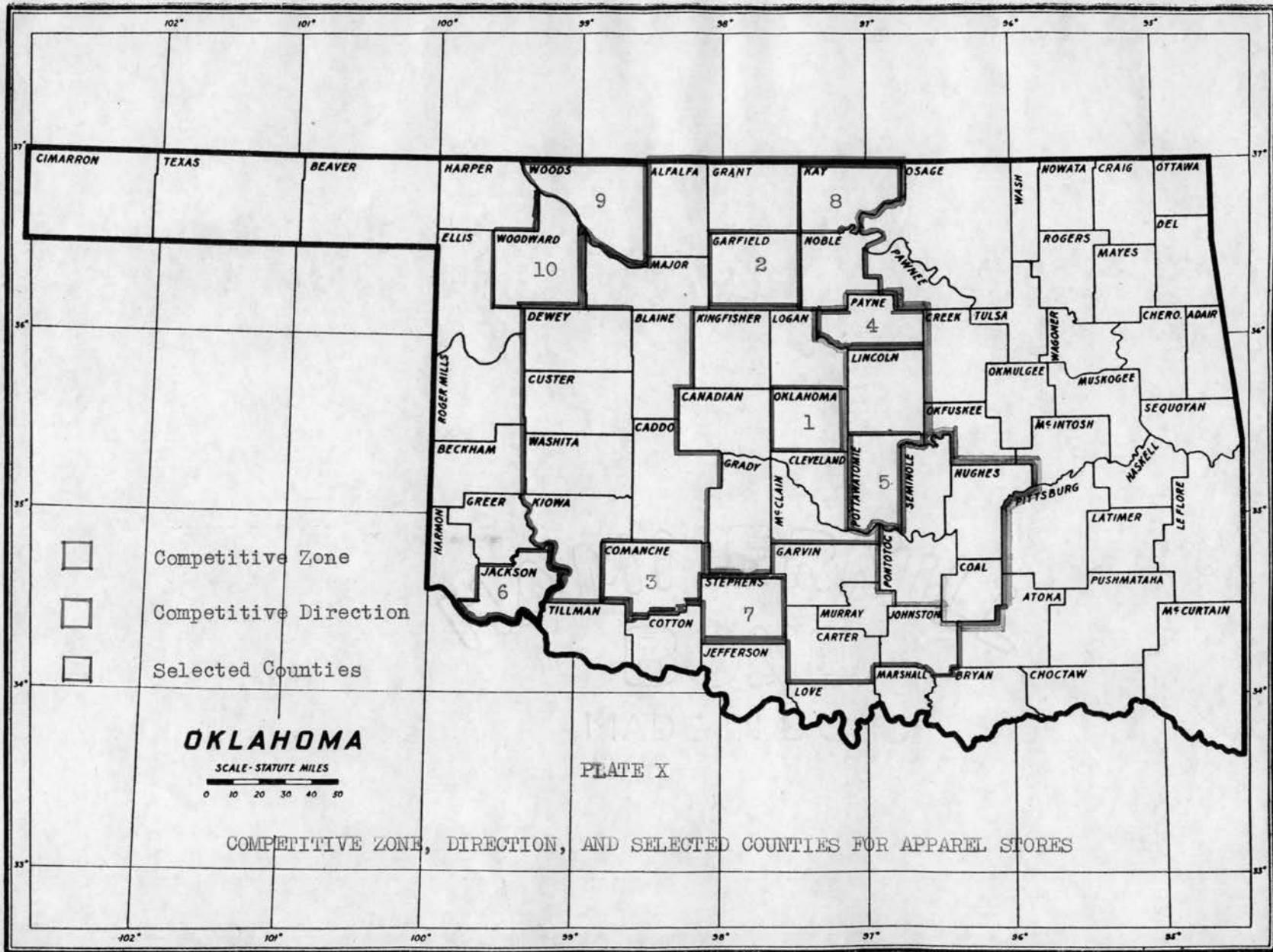
It is also noticeable that the Opportunity counties are not so well supplied with trade centers. This condition leads us to the inevitable conclusion that other studies should supplement our comparison of indices for the Apparel group of stores, especially for higher quality goods sold in exclusive stores.

The Composite Index will serve to point out the counties having greater than average wealth. The Income Tax Index shows the areas in which people of large incomes live. Still other indices may be used, which are particularly selective for special income groups.

The class of customer which a store attracts should govern the choice of areas for sales extension for that store. Price merchandise, which must be sold in quantity, will find population figures indicative of sales possibilities. Apparel particularly suited to city dwellers, college students, farmers, sportsmen, factory workers, or socialites, should be stressed in localities where these classes are known to exist.

According to our computations, Zone I and the Direction West are the best prospects for sales advancement, and Zone II and the Direction East are the most competitive for Apparel Stores.





4. Furniture, Household Appliances, and Radio.

This classification is composed of furniture stores, floor coverings, draperies, curtains, and upholstery stores, household appliance stores, other home furnishings stores, and radio and music stores.

Merchandise carried by these stores falls into three broad classifications: brand merchandise, such as radios, musical instruments, and pianos; staple goods, such as inexpensive furniture, linoleum, curtains and upholstery; and shopping goods, such as expensive furniture, rugs, draperies, and upholstering.

These products are not as homogeneous as might be desired for the formation of a single index based on sales. Brand merchandise may offer little opportunity for advantage in price or assortment to the city dealer over dealers in the territory; in fact, the necessity for service on such items as radios and household appliances works to the advantage of the local dealer in making the original sale.

Staple lines of furniture, floor coverings, upholstery are frequently too low in price to warrant out-of-town shopping trips, and the item of transportation favors local merchants.

Expensive furniture, rugs, upholstery, draperies, etc., offer a real opportunity for the city merchant. Such articles are infrequently stocked in small cities due to the limited market. Of all types of consumers' goods, customers will travel farther and shop longer for this type of merchandise than for perhaps any other. Careful interpretation of results must be made, based upon the class of merchandise to be sold.

TABLE XIIIId

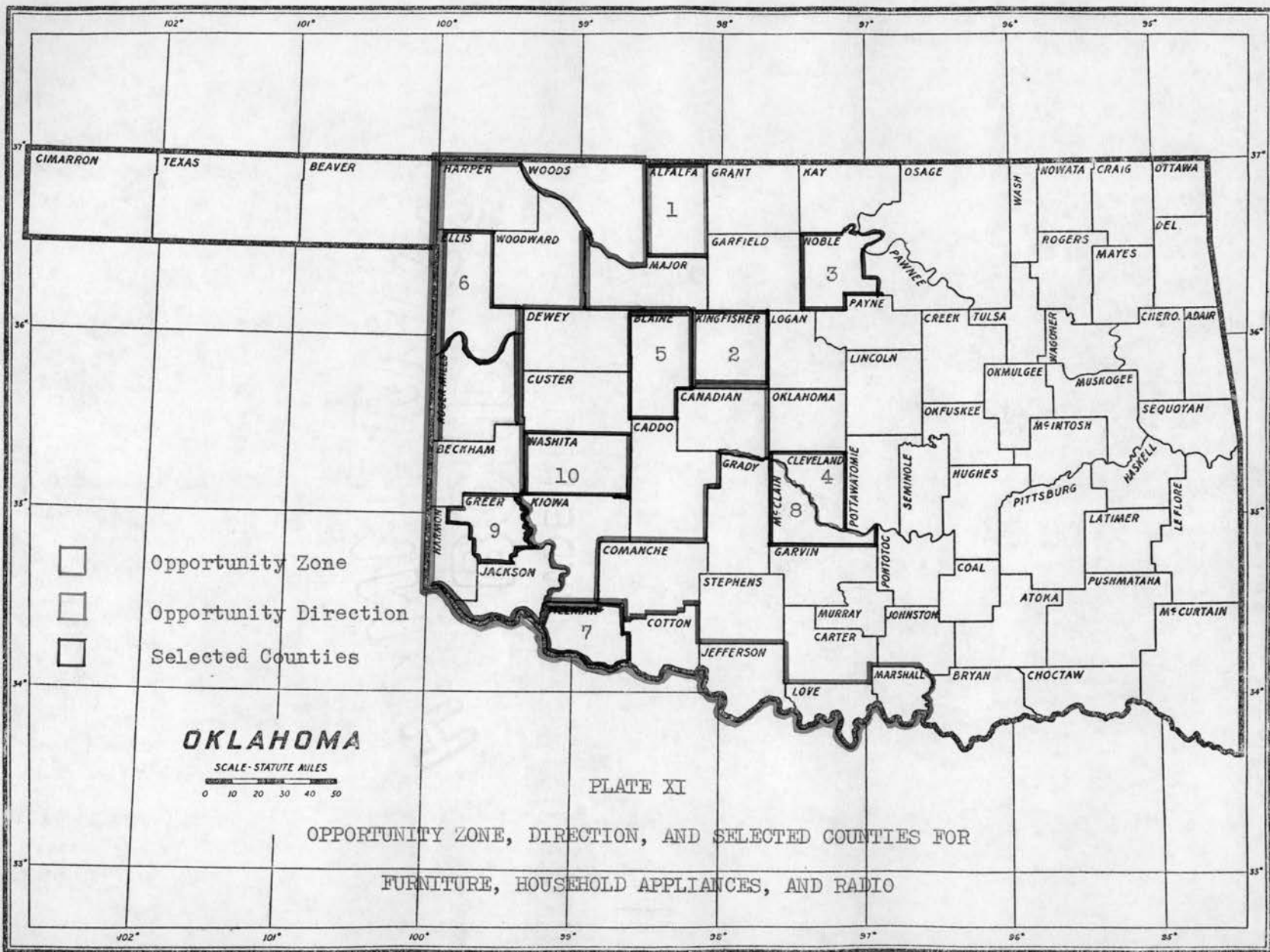
Results of Index Comparison, Selecting Areas of
Sales Opportunity and CompetitionFurniture, Household Appliances, and Radio

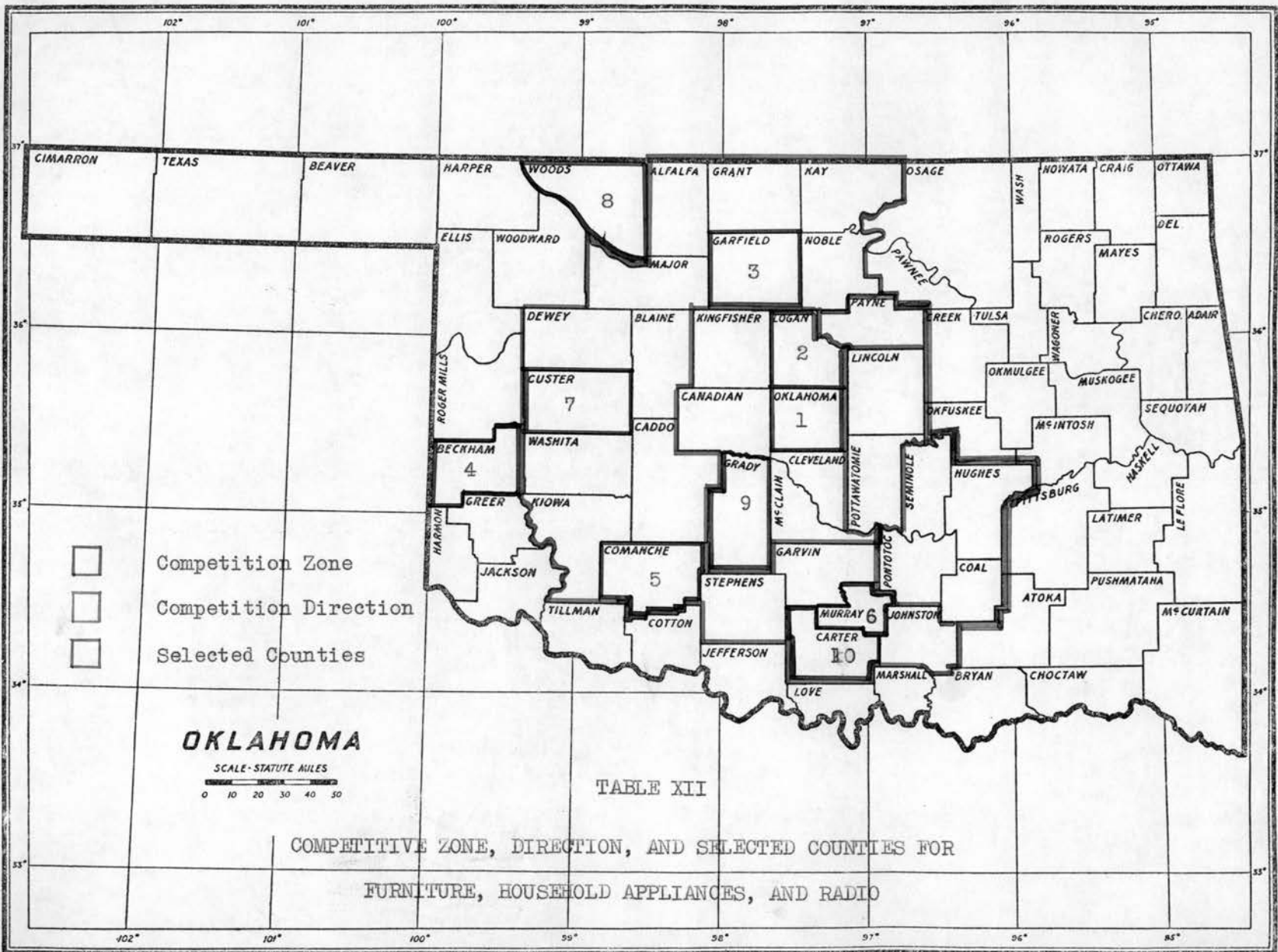
Purchasing Power exceeds Sales <u>Ten Highest Plus Counties</u>		Sales Exceed Purchasing Power <u>Ten Highest Minus Counties</u>	
Alfalpa	98	Oklahoma	-183
Kingfisher	92	Logan	-124
Noble	54	Garfield	- 81
Cleveland	43	Beckham	- 75
Blaine	32	Comanche	- 73
Ellis	29	Murray	- 56
Tillman	29	Custer	- 55
McClain	26	Woods	- 54
Greer	25	Grady	- 53
Washita	23	Carter	- 46

Highest Plus Zone, No. 3. Highest Minus Zone, No. 2.
Highest Plus Direction, West. Highest Minus Direction, East

The results of comparison are listed in Table XIIIId. The leading Opportunity counties, for the most part, have no primary trade centers of their own. Kingfisher, Cleveland, and McClain counties are in Zone I, and Alfalfa, Noble, Blaine, and Washita counties are in Zone II. In spite of this concentration of favored counties in Zones I and II, Zone III is the leading Opportunity Zone; the Direction West leads.

Competitive counties point out the trade centers, with Oklahoma City leading, Guthrie second, and Enid third. The most competitive zone is Zone I, and the Direction, East.





5. The Automotive Group

This classification is composed of new and used car dealers, automotive repair shops, paint and body shops, and auto parts and accessory stores engaged principally in retail trade.

The dealer in new automobiles in Oklahoma City has little advantage over the territory dealer in the product he has to offer. The advantages of buying from the local dealer and profiting by his free service during the break-in period probably outweigh any advantage the city dealer has due to superior stock of body types and color assortments on hand.

In many cases the city dealer does have an advantage in being able to dispose of used cars more quickly. At a time when used cars are moving slowly, city dealers frequently dispose of a large number of cars in a job-lot transaction to organizations whose business it is to transport cars to more favorable markets. Although these sales are usually made at a discount, the dealer profits by turning frozen assets into ready cash. The small dealer is seldom in a position to avail himself of this opportunity.

On the other hand, at a time when the used car market is favorable, the city dealer has the advantage of being able to purchase used cars from other parts of the country to fill his requirements.

The disposition of used cars has become a highly specialized and fast-moving industry. The city dealer who is able to maintain a stock of used cars sufficient to meet the demands of his trade, but who never becomes overstocked, has considerable trading advantage over smaller dealers who must seek local outlets for used cars, and whose sales are limited part of the time by insufficient stock, and part of the time by insufficient liquid assets.

Automotive repair shops, and paint and body shops have little attracting power in price, workmanship, or convenience which will attract customers

from outside their immediate vicinities.

Auto parts and accessory stores are frequently able to attract trade by advertising extensive stocks of novelty merchandist, such as seat covers, ornamental trinkets, and travel equipment. Radios, sporting goods, tires, and heaters have attracting power when sold at reduced prices on deferred payment plans.

TABLE XIIIe

Results of Index Comparison, Selecting Areas of
Sales Opportunity and Competition

Automotive Group

<u>Purchasing Power exceeds Sales</u>		<u>Sales exceed Purchasing Power</u>	
<u>Ten Highest Plus Counties</u>		<u>Ten Highest Minus Counties</u>	
Harper	81	Woodward	-111
Grant	63	Seminole	- 64
Cleveland	45	Comanche	- 60
Tillman	44	Custer	- 50
Alfalfa	43	Kingfisher	- 40
Carter	42	Coal	- 38
Major	33	Marshall	- 35
Canadian	32	Murray	- 33
McClain	30	Greer	- 26
Oklahoma	30	Beckham	- 24

Highest Plus Zone, No. 1. Highest Minus Zone, No. 3.
Highest Plus Direction, North. Highest Minus Direction, East.

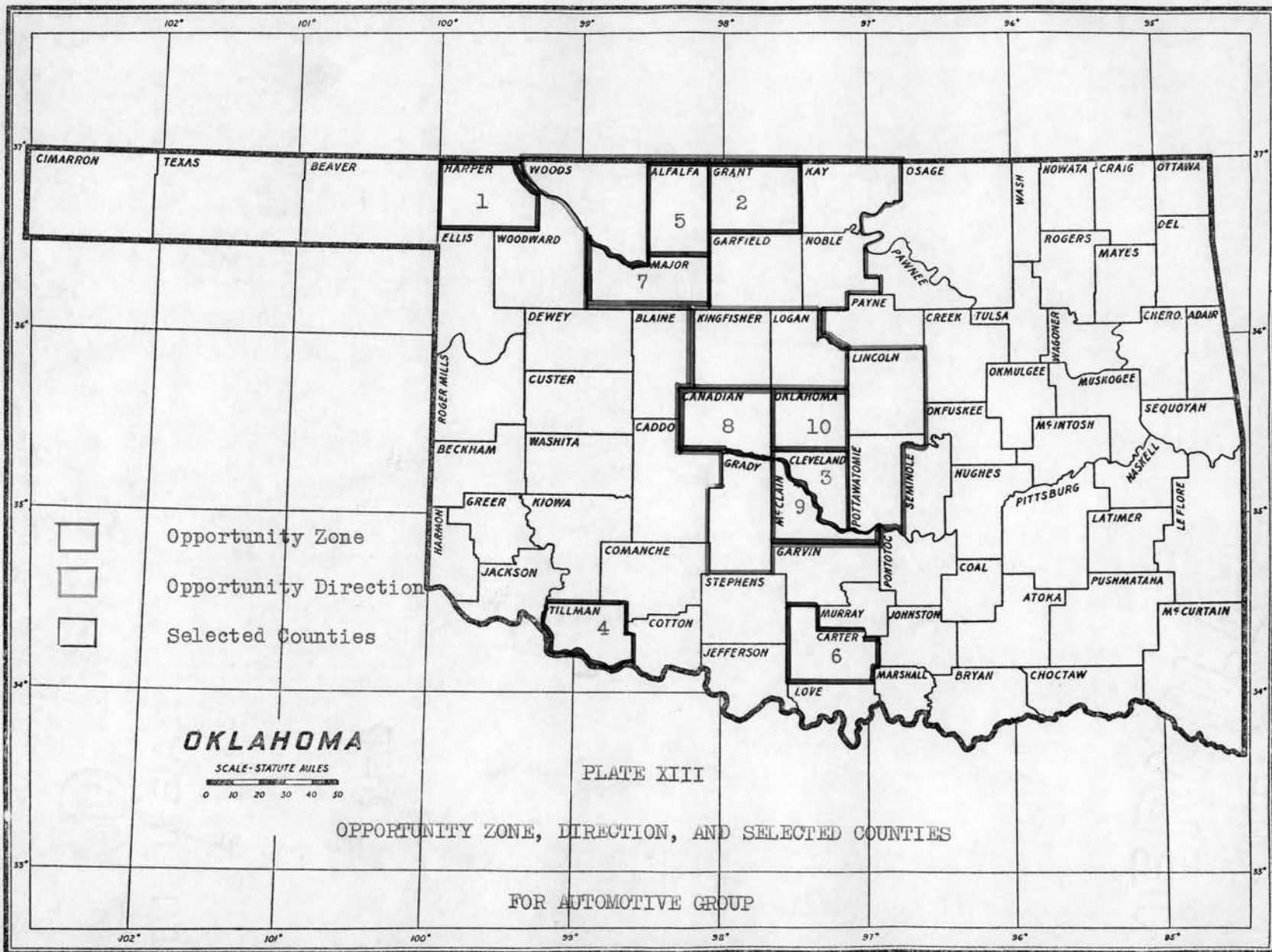
The results of index comparison are shown in Table XIIIe. Three of the Opportunity counties are in Zone I, four in Zone II, and two in Zone III. Zone I, nearest to Oklahoma County, is the leading Opportunity zone, and North is the favored Direction.

Zone III and the Direction East appear to be the most competitive as compared with purchasing power.

Eight of the ten Opportunity counties have purchasing power indices above the territory average, in the following order: Oklahoma,

Canadian, Grant, Carter, Cleveland, Harper, Alfalfa, and Tillman. These counties are choice areas for trade extension.

Only five of the competitive counties are above the territory average in purchasing power. The average purchasing power of the group is considerably below that of the Opportunity counties.



6. Filling Stations

Products and services commonly sold by filling stations, i.e., gasoline, oil, and maintenance service, belong definitely to the "convenience" classification. Convenience of location is a matter of primary importance to the filling station. Customers may be drawn not more than a few blocks from their customary paths to trade at one filling station in preference to another. Due to the excessive number of filling stations and the narrow margin between cost price and selling price of gasoline, no one dealer may hope to gain a price advantage over competitors which will draw trade from a distance.

TABLE XIII f

Results of Index Comparison, Selecting Areas of
Sales Opportunity and Competition

Filling Stations

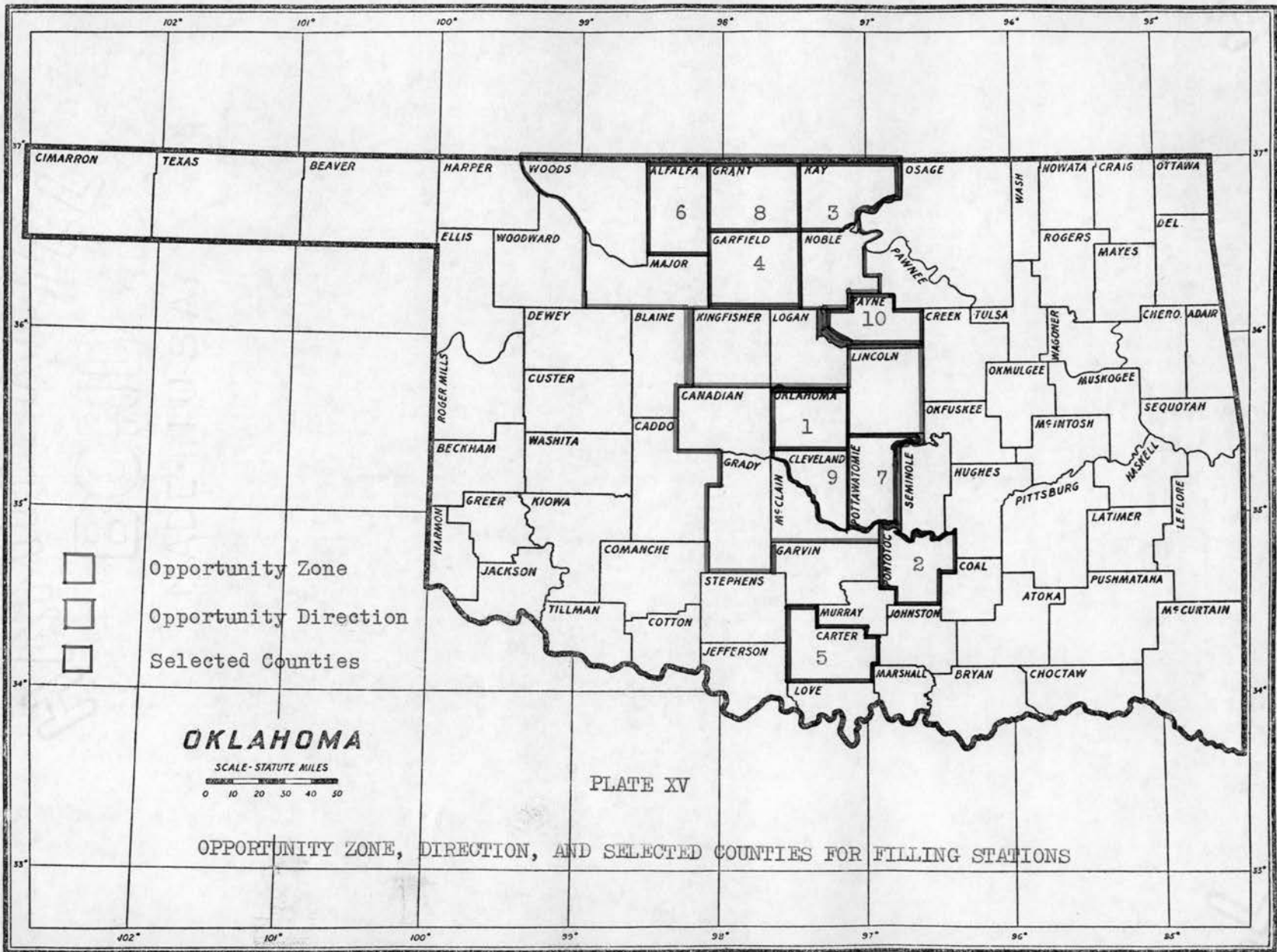
<u>Purchasing Power exceeds Sales</u>		<u>Sales exceed Purchasing Power</u>	
<u>Ten Highest Plus Counties</u>		<u>Ten Highest Minus Counties</u>	
Oklahoma	124	Beckham	-49
Pontotoc	96	Dewey	-49
Kay	66	Blaine	-39
Garfield	53	Harmon	-38
Carter	42	Cotton	-37
Alfalfa	40	Kingfisher	-34
Pottawatomie	36	Washita	-32
Grant	31	Woods	-32
Cleveland	25	Coal	-29
Payne	15	Jackson	-28

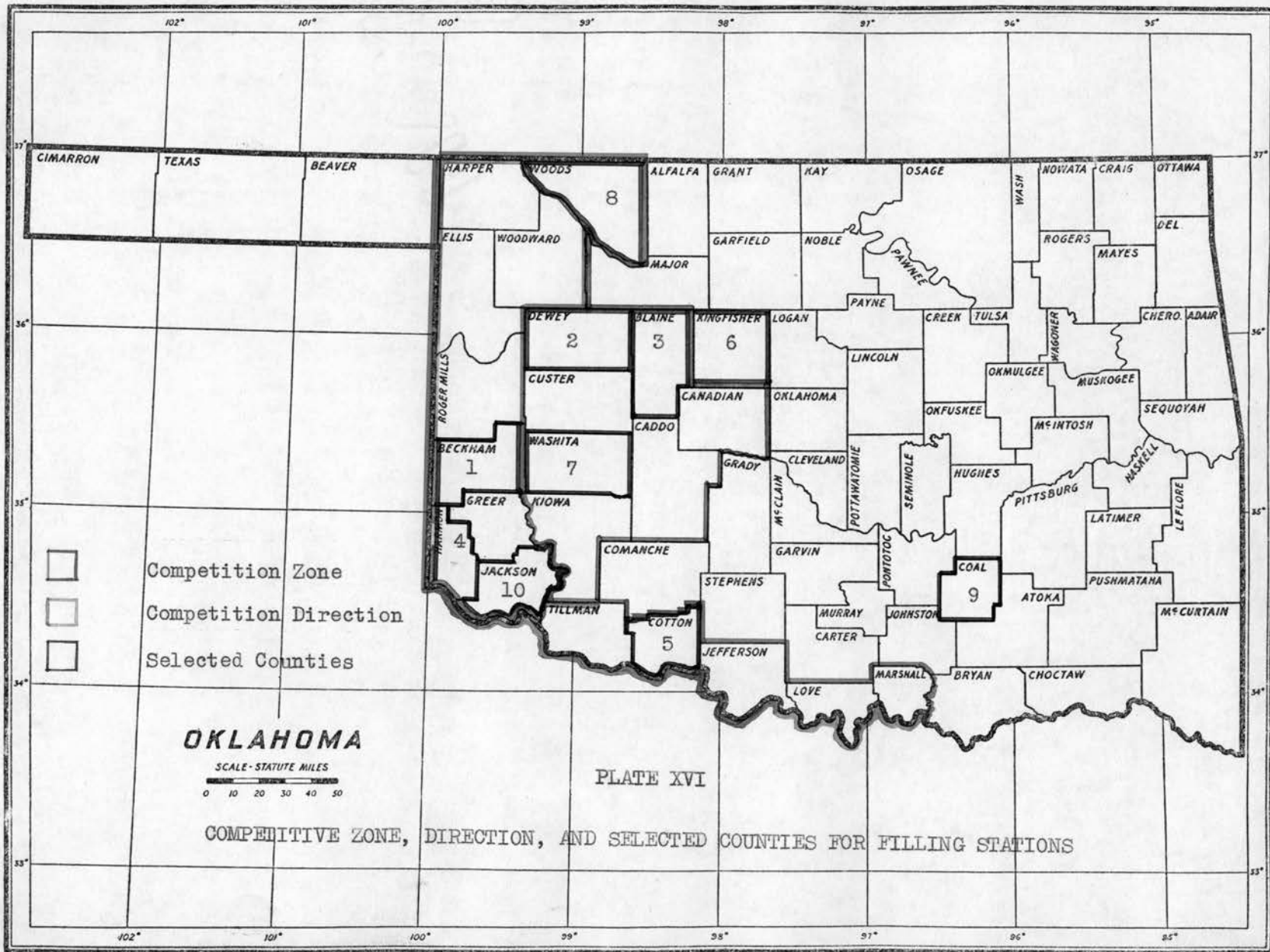
Highest Plus Zone, No. 1. Highest Minus Zone, No. 3
Highest Plus Direction, North. Highest Minus Direction, West.

Obviously, from the results of index comparison as listed in Table XIII f, it is futile for the Oklahoma City filling station operator to attempt to attract other than passing trade from any but Oklahoma county. The figures

presented here, showing areas of opportunity and competition, might be of value to wholesale concerns--or possibly to the prospective entrepreneur seeking a location.

It is interesting to note that all ten Opportunity counties are above the territory average in purchasing power, while only two of the Competitive group are above the average. The Opportunity counties are, for the most part, more densely populated areas, and most of them contain a primary trade center, while the opposite is true for the Competitive counties.





7. Lumber, Building Materials, and Hardware Stores

Along with lumber, building materials, and hardware stores, in this classification are included paint, glass, and wall paper stores, heating and plumbing concerns, electrical supply stores, and implement dealers.

The variety of merchandise carried by dealers in this classification is so great that total sales for the group may have little value for a dealer in any one branch. Data based upon sales figures for window glass and farm tractors may be of questionable importance to the dealer in floor furnaces. A further break-down of sales figures into more homogeneous groups of stores is desirable in this case.

Considering the lack of detailed information on individual store-types, results obtained by comparison of indices should be verified by other means. The dealer in lumber and building materials may obtain data on the number of building permits issued in selected cities, and thus be able to judge the extent of building activity there. Business conditions within a certain area are frequently indicative of accelerated building. For instance, the enlargement of Fort Sill was followed by a building boom in Lawton in order to accommodate the attendant workers and the families of many new officers stationed there; the location of a powder plant at Choteau was followed by similar building activity in Pryor and adjacent towns; the establishment of an air school and the construction of a veteran's hospital in Chickasha has caused a building boom in that city. These areas are self-selective for building industries with equal importance to dealers in affiliated products.

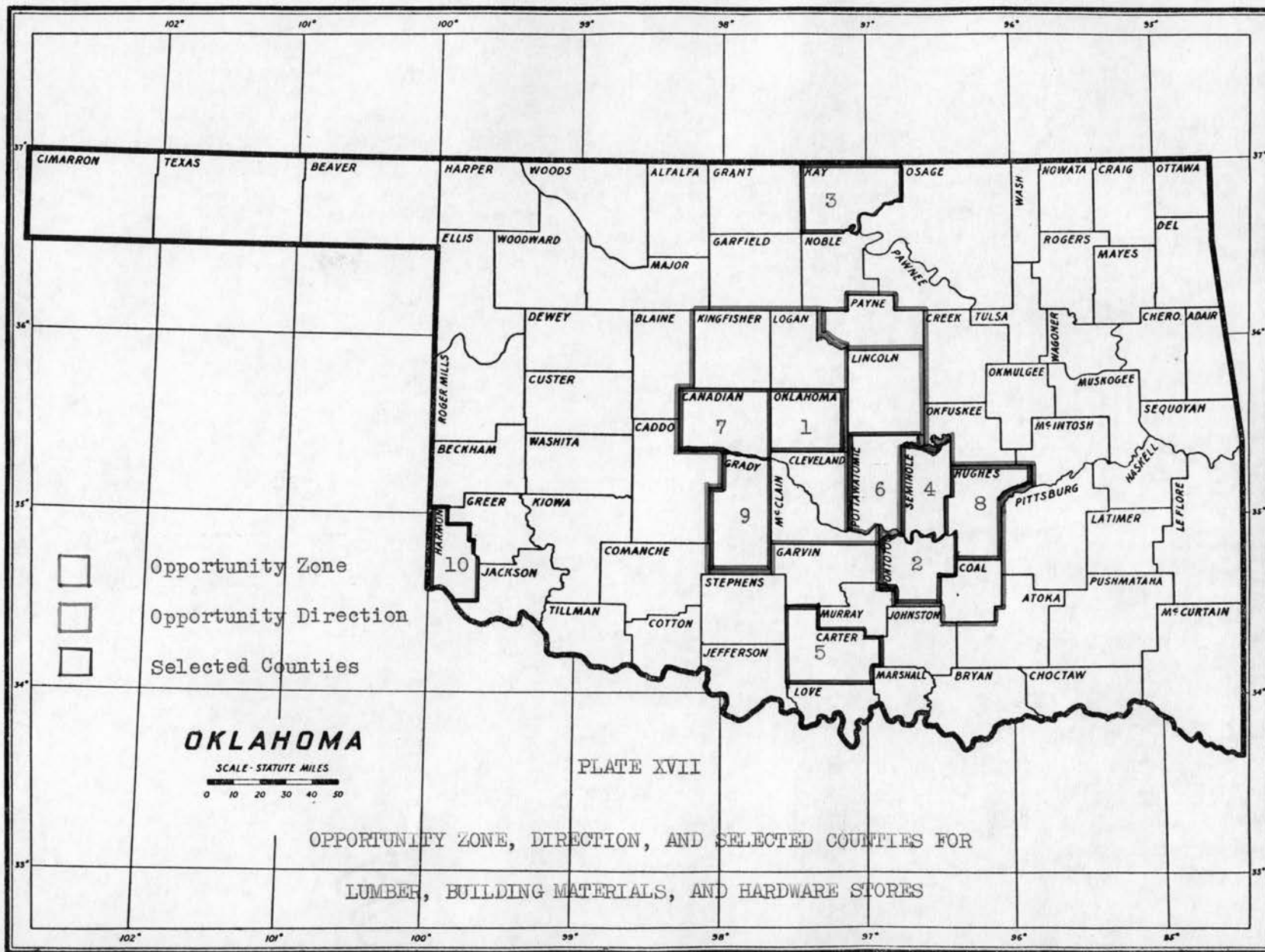
TABLE XIIIg

Results of Index Comparison, Selecting Areas of
Sales Opportunity and CompetitionLumber, Building Materials, and Hardware

<u>Purchasing Power exceeds Sales</u> <u>Ten Highest Plus Counties</u>		<u>Sales exceed Purchasing Power</u> <u>Ten Highest Minus Counties</u>	
Oklahoma	102	Grant	-81
Pontotoc	97	Kingfisher	-72
Key	75	Ellis	-50
Seminole	50	Blaine	-48
Carter	48	Garfield	-39
Pottawatomie	43	Logan	-38
Canadian	32	Beckham	-37
Hughes	28	Woods	-37
Grady	20	Noble	-32
Harmon	20	Woodward	-31

Highest Plus Zone, No. 1. Highest Minus Zone, No. 3.
Highest Plus Direction, East. Highest Minus Direction, North.

The Oklahoma City retail dealer in building materials may hardly expect to attract customers from remote parts of the Oklahoma City trade territory. The inconvenience and expense of transportation are usually sufficient to influence contractors to make arrangements with local dealers for bulk materials. Independent judgment, following careful investigation, would have to be exercised regarding building hardware and household appliances, heating and ventilating equipment, etc.



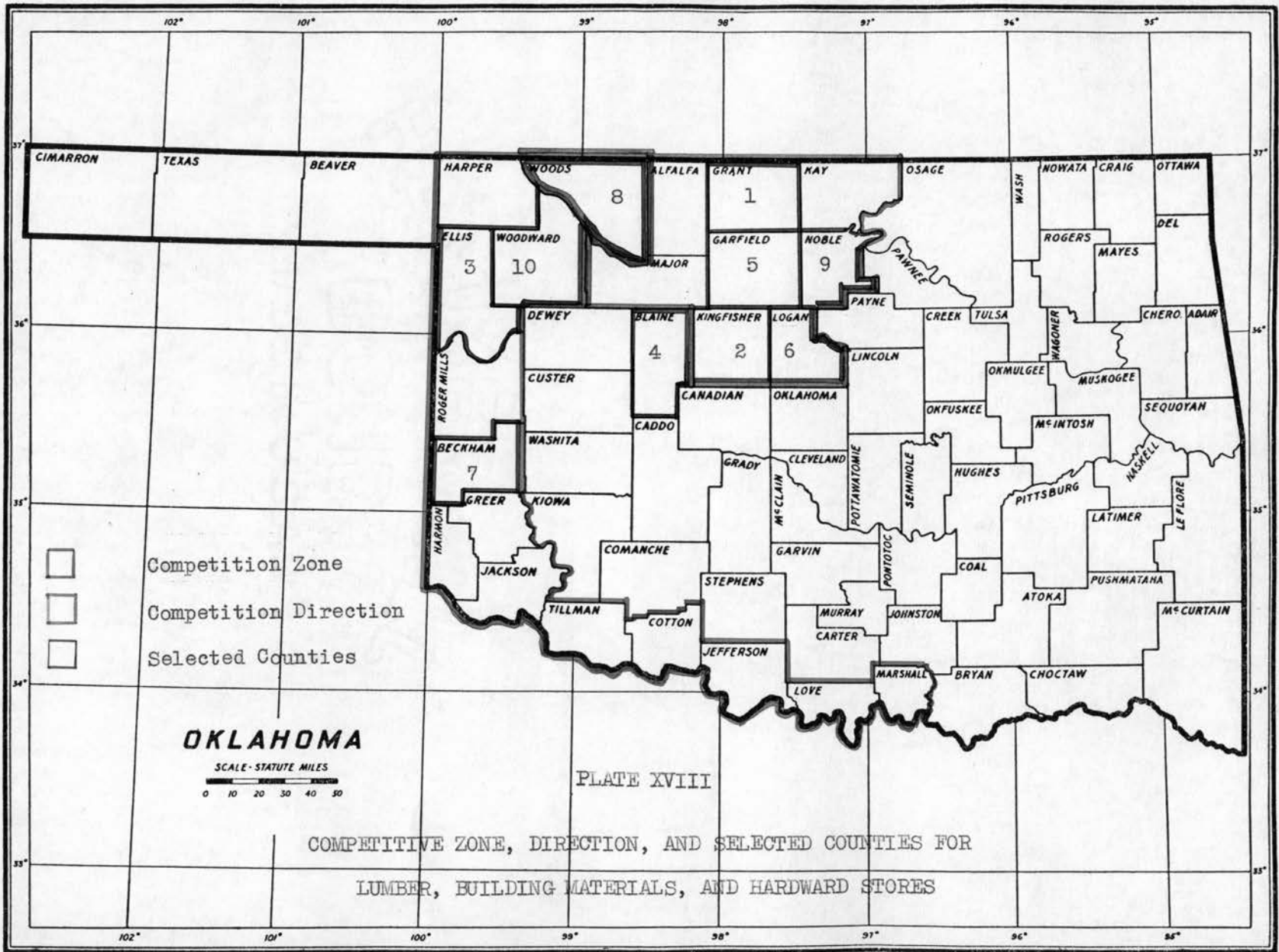


TABLE XIIIh

Results of Index Comparison, Selecting Areas of
Sales Opportunity and Competition

Eating and Drinking Places

Purchasing Power exceeds Sales <u>Ten Highest Plus Counties</u>		Sales exceed Purchasing Power <u>Ten Highest Minus Counties</u>	
Pontotoc	84	Stephens	-63
Grant	44	Woods	-51
Pottawatomie	40	Payne	-50
Harmon	36	Woodward	-49
Harper	36	Love	-48
Washita	30	Comanche	-34
Cotton	28	Murray	-33
Tillman	27	Beckham	-30
Carter	25	Greer	-28
Lincoln	18	Cleveland	-25

Highest Plus Zone, No. 1. Highest Minus Zone, No. 3.
Highest Plus Direction, East. Highest Minus Direction, South.

8. Eating and Drinking Places.

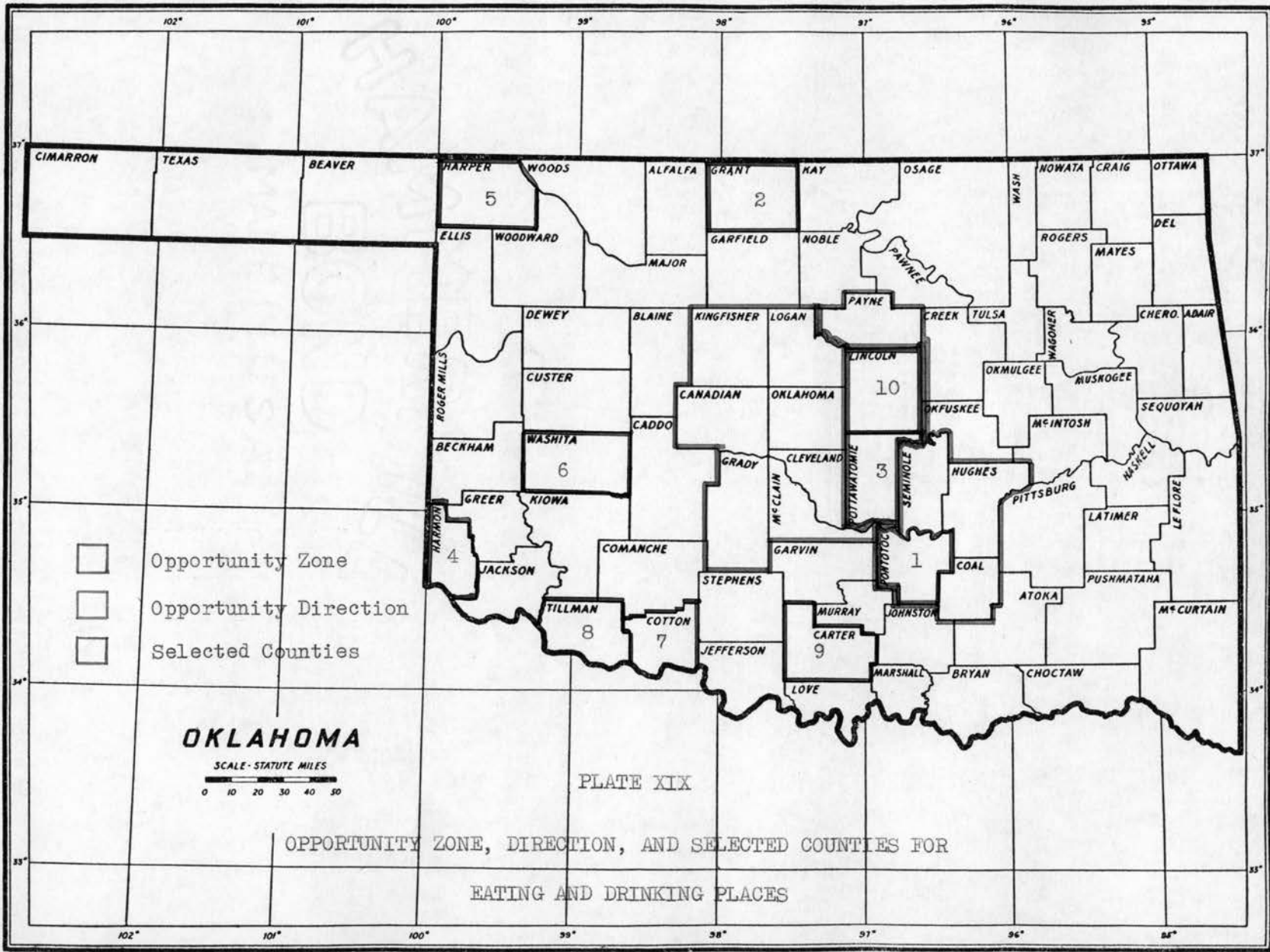
Restaurants, cafeterias, lunch-rooms, and drinking places are included under the caption of Eating and Drinking Places. With no material changes in the number of establishments since 1935, the sales of this group have increased 19 per cent in the state of Oklahoma. Drinking Places have increased 334 per cent in number, and 277 per cent in sales in the same period.

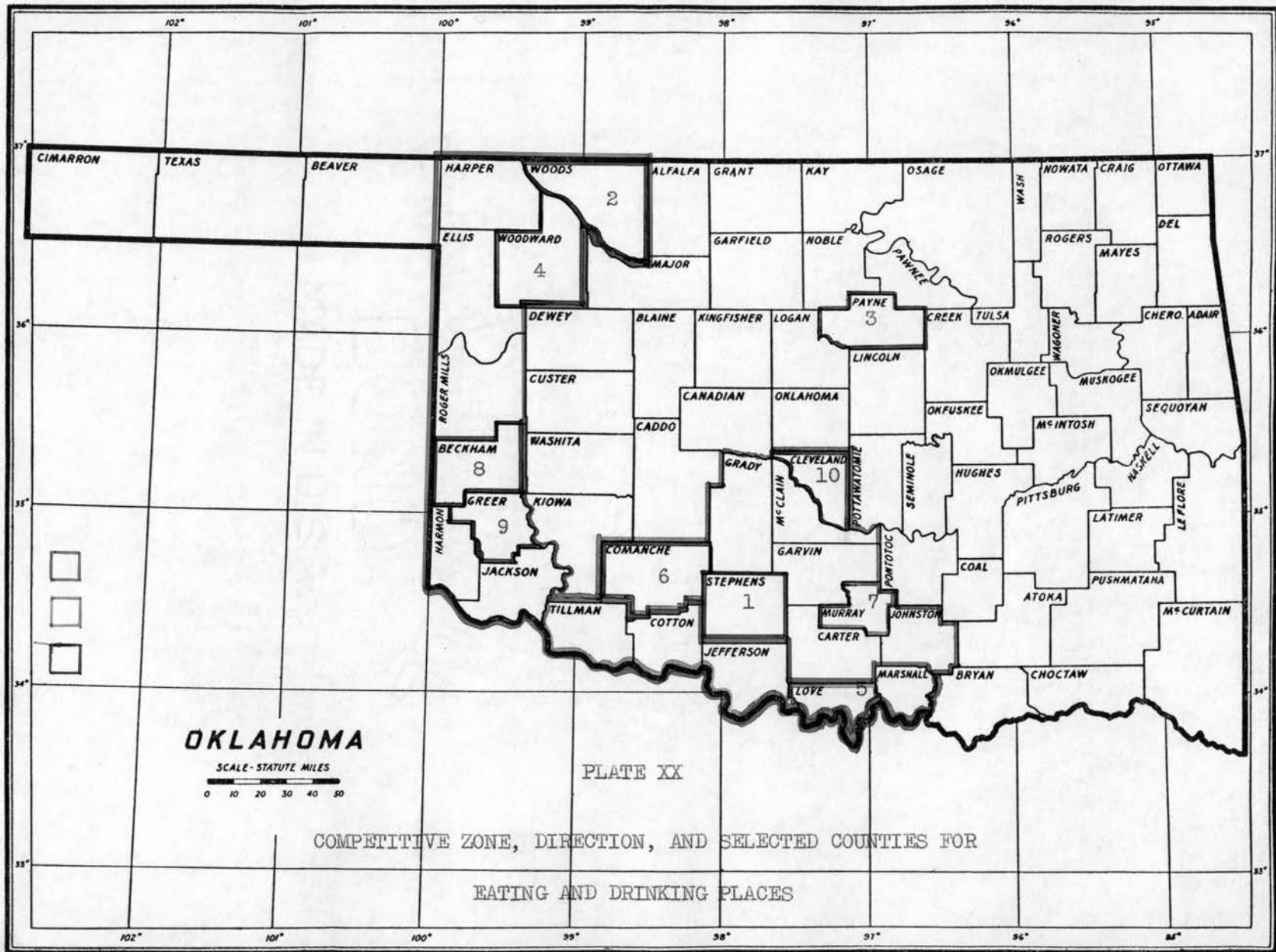
The products of eating and drinking places are definitely of the "convenience" variety. Customers usually purchase meals and drinks at a place, conveniently located in respect to other interests. Convenient location is an important factor in the success of such an establishment.

Out-of-town trade may be attracted to the Eating and Drinking place with the use of road signs on principal highways. Shoppers from neighboring towns frequently combine business and pleasure in their trips to the metropolis, shopping in the afternoon and extending their visit to include dinner and entertainment in the evening. It is difficult, of course, to attract business in volume from a distance for the sole purpose of eating a meal.

The areas of Opportunity and Competition for Eating and Drinking Places are given in Table XIIIh, and shown in Plates XIX and XX. Of the individual Opportunity counties, Lincoln and Pottawatomie counties are in Zone I, and Grant, Pontotoc, Washita, and Carter counties are in Zone II, with the others in Zone III. Zone I and the Direction East are the leading zone and direction.

It is probable that population figures, highway maps, and data on number of establishments and their sales will be of greater value to wholesale concerns than a comparison of indices of purchasing power and retail sales.





9. Drug Stores

Within the past fifteen years, drug stores have adopted variety-store methods of merchandising to the extent that the sales of stores in this classification far surpass their volume of sales in drugs, medicines, lotions, cosmetics, cigars, cigarettes, candy, etc., which formerly comprised the bulk of their sales. The classification includes stores with and without fountain service.

TABLE XIIIi

Results of Index Comparison, Selecting Areas of
Sales Opportunity and Competition

Drug Stores

<u>Purchasing Power exceeds Sales</u>		<u>Sales exceed Purchasing Power</u>	
<u>Ten Highest Plus Counties</u>		<u>Ten Highest Minus Counties</u>	
Pontotoc	66	Cleveland	-54
Canadian	38	Murray	-37
Roger Mills	34	Blaine	-23
Major	25	Alfalfa	-22
Washita	23	Love	-19
Grant	21	Woods	-19
Cotton	17	Custer	-18
Ellis	15	Marshall	-18
Lincoln	15	Oklahoma	-17
Noble	15	Garfield	-15

Highest Plus Zone, No. 3.
Highest Plus Direction, East.

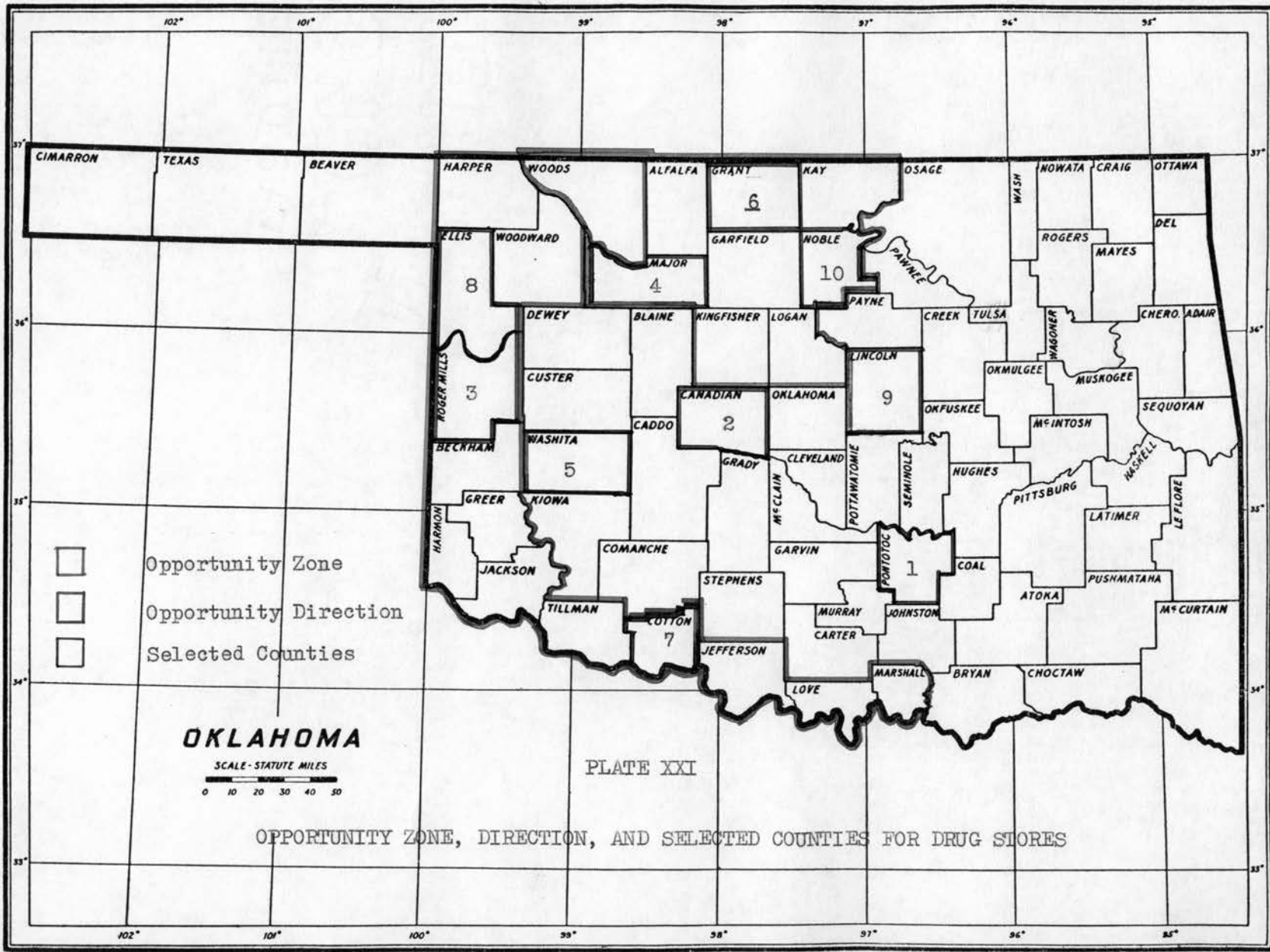
Highest Minus Zone, No. 2.
Highest Minus Direction, South.

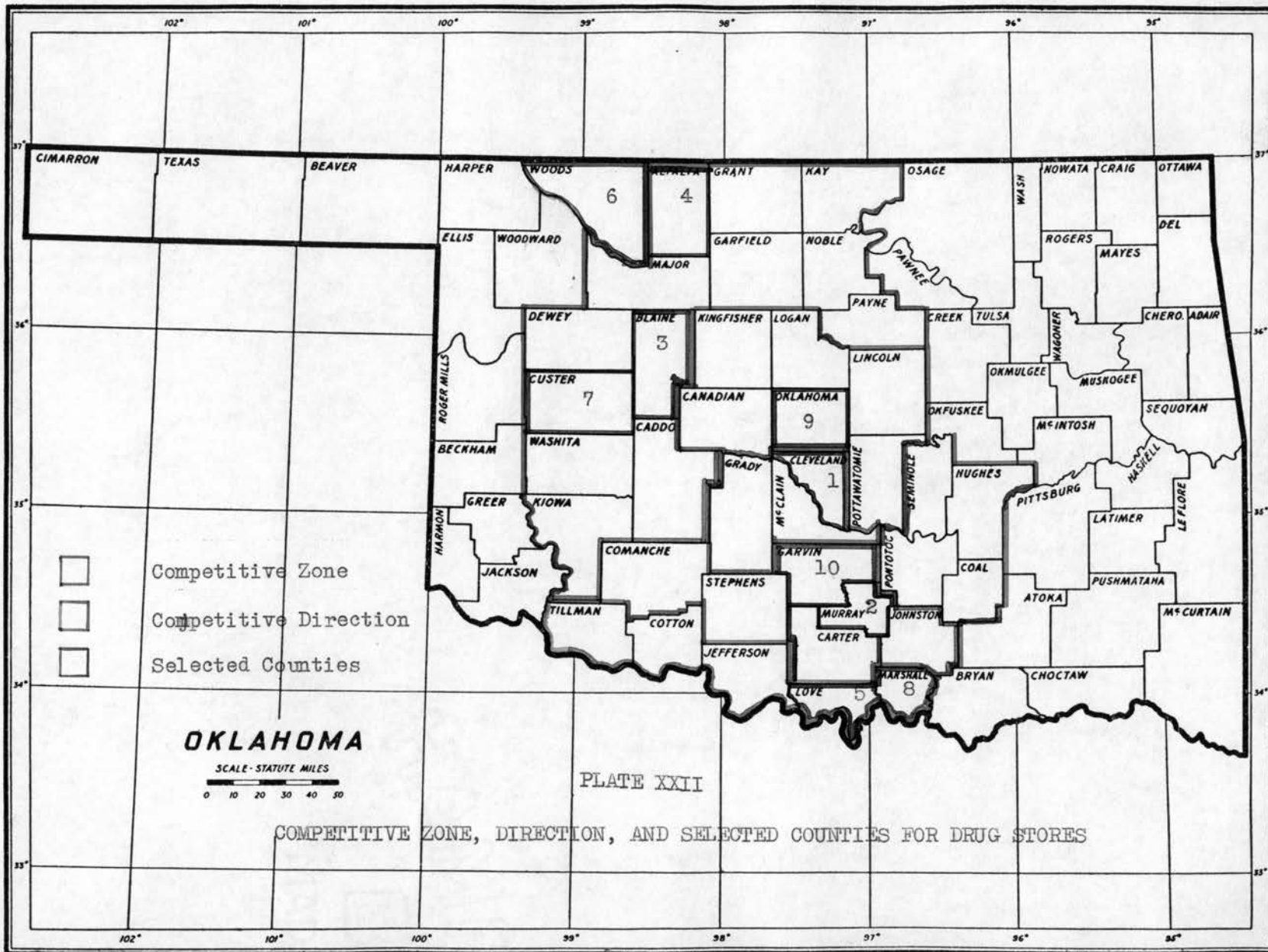
Drug stores are not lacking in competition. Oklahoma City alone has 132 drug stores. Many of them are located in suburban districts, and, like those of the shopping district, stock many of the low priced, fast moving items of convenience and specialty goods which are usually associated with some type of specialty store.

Convenience of location is essential to the success of a drug store. In shopping districts, drug stores are frequently found in or near the 100 per cent locations. Such expensive locations are profitable, not because of the increased sale of drugs and fountain products, but because of the heavy pedestrian traffic which makes it possible to attract large numbers of people to their specialty goods counters.

Table XIIIi gives the counties which are apparently under-sold by drug stores. It is noticeable that Zone III and the Direction East are the Opportunity zone and direction. Neither in Zone III nor in the leading Opportunity counties are there many primary trade centers, which condition probably accounts for the limited sales of drug stores. Ada and El Reno are the only primary trade centers in the ten leading counties, while Cordell, Chandler, and Perry are the only other towns having a population of more than 2,500.

The Competition counties are better supplied with trade centers. Norman, Oklahoma City, and Enid are the primary trade centers, and Sulphur, Cherokee, Alva, Clinton, and Madill are represented by their counties, each having a population of 2,500 or more.





General Conclusions

The formation of an index from economic data is a simple mathematical or statistical process. The question arises whether such complex forces as are usually encountered in economic data can ever be reduced satisfactorily to simple mathematical terms. At best, indices are comparative approximations, the value of which depends upon the fidelity with which they interpret economic conditions. Great care should be exercised in the selection of material to be used as the base for such indices.

As previously mentioned, results obtained by mathematical calculations should be scrutinized in the light of results obtained from other studies. Such studies may disclose the distance a customer will travel to purchase a certain type of product, or whether an article is in demand in certain geographical areas. The interpretation of results plays an important part, and upon the interpretations will depend the success of the index method of territory analysis. Indices may be used to supplement other studies, or as a preliminary analysis to be substantiated by other means.

Finally, the results of sales extension activities may be checked with the indices to determine whether they are sufficiently accurate in their predictions. Other indices should be tested to see if their predictions are more accurate and dependable than the one used. Tests of this kind should soon lead to a knowledge of the best material to use for the type of business for which the study is being made.

BIBLIOGRAPHY

Source of Materials

A. Books

- Brisco, Norris A., Retailing (Prentice-Hall, New York, 1937).
- Converse, Paul D., Elements of Marketing (Prentice-Hall, New York, 1937).
- Nystrom, Paul H., Economic Principles of Consumption (Ronald Press, New York, 1931).
- Riggleman, John R., and Ira N. Frisbee, Business Statistics (McGraw Hill, New York, 1938).

B. Bulletins

- Bureau of the Census, United States Department of Commerce, Sixteenth Census of the United States, First Series, "Agriculture--Oklahoma."
- Bureau of the Census, United States Department of Commerce, Series P-3, No. 1, "Oklahoma Population, 1940."
- Bureau of the Census, United States Department of Commerce, Series P-5, No. 5, "Oklahoma Population--1940."
- Bureau of the Census, United States Department of Commerce, Sixteenth Census of the United States (1940) "Retail Trade--Oklahoma, 1939."
- Market Data Handbook of the United States, Supplement No. 1, Domestic Commerce Series No. 56, "General Consumer Market Statistics."
- Oklahoma Tax Commission, Income Tax Division, "Analysis of Taxable Individual Income Tax Returns Filed in 1938 and 1939 on Previous Years' Incomes."
- United States Department of Foreign and Domestic Commerce, Market Research Series No. 10.3 (October, 1936) "The Food Industry."

C. Periodicals

- Business Week, March 20, 1937, pages 46-47,
"Who Buys What in 18 Cities,"
- Business Week, April 14, 1937, pages 31-33,
"Market Statistics."
- Business Week, April 9, 1938, pages 42-48,
"Market Surveys."

Labor Review, Vol. 46, February 1938, pages 455-456.
"Changes in Buying Habits"

Nation's Business, Vol. 27, February 1939, pages 27-28.
"Trade Surveys"

Sales Management, Vol. 46, No. 8, April 10, 1940, pages 201-202
"Sales Management Survey of Buying Power"

D. Miscellaneous

"A Method of Delineating Retail Trade Zones," Austin S. Bratcher,
University of Arizona Publication (1939) pages 1-2.

"Trading Area Map of the United States," Batten, Barton, Durstine,
and Osborn, Incorporated, Map No. 2319. (New York)