



Kansas Public Finance Center
Hugo Wall School of Urban and Public Affairs
Wichita State University

Kansas Tax Incidence Study: Who Pays Kansas Individual Income, Residential Property, and Retail Sales Taxes

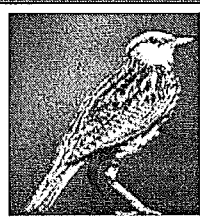
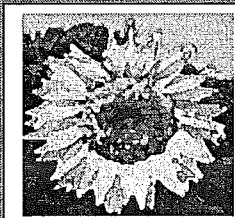
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Executive Summary

Tax Incidence

- Tax incidence analysis is the study of who ultimately bears the economic burden of a tax.
- The effective tax rate is the tax rate paid as a percentage of income.
- A progressive tax is a tax for which the effective tax rate rises as income rises.
- A proportional tax is a tax for which the effective tax rate does not change with income.
- A regressive tax is a tax for which the effective tax rate falls as income rises.
- Individual income, residential property, and retail sales taxes accounted for \$6.4 billion or 83.0 percent of all Kansas state and local government taxes in 2003.

Individual Income Tax

- Because of its graduated tax rate structure and allowance of personal exemptions and deductions, the individual income tax is, by design, progressive. The average effective tax rate for individual income taxes for the state as a whole is 3.2 percent. Effective tax rates rise significantly with increases in household income. At the low end, the ETR for the income tax is -7.4 percent for the lowest income group. It rises steadily to 4.7 percent for the highest income group. Lower income households can receive refundable tax credits, which can more than offset any income tax liabilities. Based on household composition single households without children and non-family households have the highest ETR at 4.1 percent, while married couples with children have the lowest ETR at 2.0 percent.
- The Kansas individual income tax is modestly progressive. Although the Kansas individual income tax is only modestly progressive, it tends to be more progressive than many other states because it is comprised of only three brackets, with some taxpayers subject to the highest rate with taxable income as low as \$30,000. The progressivity of the individual income tax nearly offsets the regressivity of the other taxes.
- The counties with the highest average ETRs are in the Wichita area, the Lawrence area, and in western Kansas, while the counties with the lowest rates tend to be in the north and southeast areas of the state. Taxpayers in more densely populated counties areas are paying higher effective tax rates than those living in less densely populated areas.
- Kansas individual income tax is less progressively distributed in the state's urban areas than in other areas, meaning that lower income households bear a larger share of the burden in these areas.

Residential Property Tax

- The average effective tax rate for the state as a whole is 2.3 percent, with the lowest income population group paying an effective tax rate of 23.6 percent,

while the highest income population group paying an effective tax rate of 0.6 percent. This result derives because lower income households tend to spend a higher proportion of income on housing than higher income households. In some cases, effective tax rates of over 100 percent may be reported in cases where the taxpayer may be occupying a high value residence, while receiving a low level of Kansas adjusted gross income.

- The Kansas residential property tax is significantly regressive. Property taxes were regressive across all household groups. Overall, households paid 2.3 percent of their income in property taxes. The lowest income group (under \$10,000) paid 23.6 percent of their income in property taxes. In contrast, the highest-income households (\$200,000 and over) spent an average of 0.6 percent of their income on property taxes.
- The counties with the highest ETRs are concentrated in the northeast, while the counties with the lowest rates tend to be in the southwest. However, taxpayers in less densely populated areas are paying higher effective tax rates than those living in more densely populated areas. This may be due in part to the presence of economies of scale in service provision that may be present in more densely populated areas, but less pervasive in less densely populated areas.
- The Kansas residential property tax is less regressively distributed in the state's urban and suburban areas where higher value residences are more likely to be located, while the tax tends to be more regressively distributed in the state's rural areas where there is less likely to be higher value residences.
- Since the residential property tax includes both a uniform state component and non-uniform local government components, regional variations are the result of the distribution of wealth and income in the respective regions, the composition of that income, and local discretionary tax policy decisions.

Retail Sales Tax

- Average Kansas household pays \$1,595 in retail sales taxes annually. The largest amount goes to housing (\$416), food (\$395), and transportation (\$352). The average effective tax rate for the state as a whole is 3.7 percent. For 2003, the effective consumer sales tax rate for the lowest income group was 16.5 percent, compared to the rate for the highest income group of 2.3 percent.
- Taxpayers in moderately populated areas are paying higher ETRs than those living in more or less densely populated areas.
- The Kansas retail sales tax is moderately regressive. Retail sales taxes in Kansas tend to be more regressive than many states because of the base of the tax is relatively broad and has relatively few major exemptions for such as for food and clothing.
- The Kansas retail sales tax is less regressively distributed in the state's suburban areas. This may be due to the presence of a greater proportion of higher income households and the location of regional shopping malls in suburban areas.

Combined Taxes

- Combined state and local taxes are proportional to slightly regressive. However, combined taxes in several counties are slightly progressive. The lowest income group (under \$10,000) paid 32.7 percent of income in taxes. The effective tax rates decreased slightly for the middle-range of households, ranging from 14.6 percent to 7.6 percent. These households had income between \$10,000 and \$199,000. The highest income group (\$200,000 and over), paid 7.7 percent of income in taxes. The combined average effective tax rate for the state as a whole is 9.2 percent. Taxpayers in moderately populated areas tend to pay higher ETRs than those living in less densely populated areas. Combined taxes are less regressively distributed in less populated areas than in more populated areas.
- On average the sales tax (3.7 percent) accounted for the largest burden most households. The second largest tax was the sales tax (3.2 percent). Although the property tax is the most regressive of the three taxes, it accounted for the smallest burden (2.3 percent)
- Refundable tax credits increase the progressivity of the Kansas tax structure. The earned income tax credit makes the individual income tax increases progressive at low-income levels. The Homestead credit sharply reduces, though it does not eliminate, the regressivity of the property tax for low-income homeowners and renters. While refundable credits significantly reduced the burden of the poorest households, they did not completely eliminate the regressivity of the property tax.

Introduction

Former Senator Russell Long of Louisiana had a succinct definition of tax reform: "Tax reform means 'don't tax you, don't tax me, tax that fellow behind the tree.'" While states tinker with their tax systems every year, most have tended to overlook the need for more fundamental tax reform to reflect structural economic change. Reform, according to University of Tennessee professor William Fox, "would seem to achieve more goals than just revenue chasing. Other goals might include better revenue elasticity, improved fairness, reduced efficiency costs, easier administration and compliance."

Reconfiguring a tax system is a daunting task and broad tax reform efforts are not undertaken lightly. Yet most states have at least considered it at one time or another, usually through commissioning a tax study or appointing a blue ribbon panel.

At least 37 states have conducted tax studies since 2000 (State Tax Study Commissions, 2004).

The benefits to a state and its residents of developing the capacity to determine the incidence of its tax structure are many (Mazerov, 2002):

- Making information about the distribution of tax liabilities across different income groups available to policymakers and to the public at large ensures that discussion about "who pays?" and "who should pay?" state and local taxes can be included in the debate that accompanies the formulation of tax policy.
- The availability of such information makes it much more possible for lawmakers to formulate tax change proposals that affect tax burdens in the way they intend.
- States can use information about how tax proposals affect the distribution of their tax systems to ensure that tax changes complement rather than work against the priorities that have shaped spending decisions.
- Moreover, it is important to prepare distributional analyses periodically and not just when major tax changes are being considered. A comprehensive study of the overall distribution of state and local tax burdens by income at regular intervals allows elected officials and the residents of a state to step back from time to time and assess the implications of changes in tax policy that may have been made piecemeal over the course of years. Regular tax incidence studies also allow policymakers and the public to determine whether changes in a state's economy have resulted in an unintended shift in tax burdens among people in different economic circumstances. This knowledge can lead to initiatives to change the resulting distribution. In addition, developing the capacity to do regular tax incidence studies usually means that the capacity exists to study tax changes when they are proposed.

Exhibit 1: State Tax Incidence Models

States with Multi-tax Economic Incidence Models		
<u>Latest periodic "snapshot" report</u>		
Colorado		1994
Maine		2000
Minnesota		2001
Missouri		None
Nebraska		None
Oregon		2001
Texas		2001
Washington		None
States Developing Multi-tax Economic Incidence Models		
Alabama New Hampshire		
States with Multi-tax Initial Tax Impact-Type Models		
<u>Latest periodic "snapshot" report</u>		
Utah		2001
States with Personal Income Tax Microsimulation Models		
Arizona	Massachusetts	Ohio
California	Michigan	Pennsylvania
Delaware	Mississippi	Rhode Island
Illinois	Montana	Vermont
Iowa	New Jersey	Virginia
Kansas	New Mexico	Wisconsin
Kentucky	New York	
Maryland	North Carolina	
States Lacking a Significant Tax Incidence Analysis Capacity		
Alaska*	Hawaii	Oklahoma
Arkansas	Idaho	South Carolina
Connecticut	Indiana	South Dakota*
Dist. of Columbia	Louisiana	Tennessee*
Florida*	Nevada*	West Virginia
Georgia	North Dakota	Wyoming*
*States without personal income taxes		

Source: Mazerov, 2002.

According to Mazerov (2002) three states, Maine, Minnesota, and Texas, have enacted laws mandating that the state conduct both periodic studies of the incidence of the overall state tax system and analyses of the distributional impact of proposed tax legislation. Exhibit 1 presents the tax incidence analysis capacity of the various states.

This study measures how the burden of Kansas state and local taxes individual income, residential property, and retail sales taxes were distributed across Kansas households in tax year 2003. The study analyzes the distribution of \$6.4 billion state and local taxes across 2.6 million Kansas households. The taxes include state individual income taxes (27.7% of the total), and state and local property taxes, and state and local sales taxes (34.2%).

Definitions

Tax Incidence

Tax incidence is the study of who ultimately bears the economic burden of a tax. Broadly speaking, tax incidence analysis examines the impact of taxes on the distribution of income within a society. To compare the tax burden of one set of the population to another, it is useful to measure the tax burden as a percentage of household income: $\text{Tax Incidence} = \text{Tax Burden} / \text{Household Income}$. Thus, the task of a tax incidence study is to estimate: (1) the tax burden for a particular household or group of households; and (2) household income for that household or group (*Wisconsin Tax Incidence Study, 2004*).

Tax incidence analysis begins with the basic premise that the party with the legal responsibility to pay a tax may not be the party whose economic wellbeing is ultimately impaired by the imposition of the tax (Fullerton and Metcalf, 2002). The legal incidence of a tax concerns who has the legal obligation to remit a tax. The economic incidence of a tax concerns whose economic wellbeing is ultimately negatively affected due to the tax. The economic incidence and the legal incidence is usually the same for taxes imposed on households. However, for taxes imposed on businesses this may not be the case. The economic incidence of a tax may differ from the legal incidence of a tax due to tax shifting. Tax shifting occurs when one party is able to shift the economic burden of a tax onto another party by engaging in avoidance behavior. The *Minnesota Tax Incidence Study* (2005) defines tax shifting as the process by which the incidence of a tax is transferred from the entity legally obligated to pay the tax to entity ultimately bearing the economic impact of the tax.

However, tax avoidance should be distinguished from tax evasion. On the one hand, tax evasion is illegally failing to pay a tax that is legally owed. On the other hand, tax avoidance involves changing one's behavior to legally limit tax liability. A tax may be forward shifted onto a party downstream in the course of commerce or backward shifted onto a party upstream in the course of commerce. For example, in most cases retailers have the legal obligation to collect and remit sales taxes, however, they may avoid the economic burden by shifting the burden of the tax forward onto consumers in the form of higher prices. Some business taxes may also be backward shifted onto workers and suppliers in the form of lower wages and payments.

Effective Tax Rate

One basic measure of tax incidence is to compare effective tax rates (ETR) across income classes. The effective tax rate is the tax rate paid as a percentage of gross income. The measure of income used in this study is Kansas adjusted gross income. However, when using the ETR as a measure of tax incidence it should be noted that effective tax rates for low income groups are unreliable for several reasons. Lower income groups include households with temporarily low incomes or who consume based on wealth rather than current income (retirees, for example).

Tax Equity

Tax equity has two primary components. Horizontal equity concerns whether taxpayers with comparable abilities to pay, owe comparable amounts of tax. Vertical equity concerns the rationality of the tax structure. A tax is regarded as being progressive if the proportion of income paid as tax increases as income increases, a tax is proportional if the proportion of income paid as tax remains constant regardless of income, and a tax is considered to be regressive if the proportion of income paid as tax decreases as income increases. The *Minnesota Tax Incidence Study* (2005) uses the following definitions:

- Progressive tax—A tax for which the effective tax rate rises as income rises.
- Proportional tax—A tax for which the effective tax rate does not change with income.
- Regressive tax—A tax for which the effective tax rate falls as income rises.

According to the ability-to-pay principle a taxation scheme is equitable if taxpayers are charged according to their ability to pay. Based on the ability-to-pay principle a progressive tax would be regarded as being equitable because those with a greater ability to pay would pay a higher proportion of their income in the form of taxation. A proportional tax may be regarded as equitable to the extent that all taxpayers would pay the same proportion of their income as tax. Thus, higher income taxpayers would be paying a higher absolute dollar amount of taxes than lower income taxpayers. Alternatively, according to the benefit principle, a taxation scheme is fair if taxpayers are charged according to the benefit they receive from government services. Even a regressive tax may be regarded as being fair to the extent that the distribution of the benefit of government services may accrue more to lower income taxpayers than to higher income taxpayers. In many cases even for regressive taxes, although lower income taxpayers pay a higher proportion of their income as tax, higher income taxpayers still actually pay a higher absolute dollar value of taxes.

Tax Incidence Models

Theoretical Models

Partial-Equilibrium Analysis

The most basic type of theoretical tax incidence analysis is partial-equilibrium analysis. This approach focuses on the context of a single market, ignoring any tax-induced effects on other markets. Even if only one party is legally responsible for paying the tax, the burden may be borne both by consumers and producers. Keeping in

mind, however, that the burden on producers is a burden on people, things do not pay taxes; the producers' burden may result in lower profits to the owners, lower wages to employees, or lower prices for other factors of production. How the sellers' burden is divided among factors of production cannot be determined in single-market analysis. Generally, the party who is less able to change their behavior will bear the larger share of the burden. Willingness to change behavior as a tax alters prices is characterized by the price elasticity. If consumers are more able to change behavior than producers, then demand will be relatively more price elastic than supply, and producers will bear the greater burden of any tax. If producers are more able to change behavior, then supply will be more price elastic than demand, and consumers will bear the greater share of the burden. If supply is perfectly inelastic, reflecting that the same quantity will be supplied regardless of price, producers bear the full burden of the tax. If demand is perfectly inelastic, then consumers will not change their behavior as a tax alters price, so that the consumers' price rises by the full amount of the tax, and thus consumers bear the full burden of the tax. A tax also imposes an efficiency cost as consumers and producers are induced to switch to less desirable alternatives. The efficiency cost is the difference between the benefit to consumers and opportunity cost to society of each unit of the product foregone. That is, the difference between marginal social benefit and marginal social cost. Two limitations of single-market analysis are that: the effects in other markets, whether for other goods or for the same good in a different location, are not considered and the manner in which any producers' burden gets distributed among the various factors of production is not explicitly analyzed (Zodrow, 1999). Examples of studies that use this approach include the Texas' Comptroller's annual *Tax Exemptions and Tax Incidence* (2005) study and the Utah State Tax Commission's *Western States' Tax Burdens Fiscal Year 2002-2003: Initial State and Local Tax Burdens for Selected Western States, Revised* (MacDonald, 2004). Texas law requires the Comptroller to provide these estimates to the Governor and Legislature prior to each regular legislative session. The Utah model uses a sample of individual income tax returns for over 34,000 full year resident taxpayers, and takes all necessary data from their state returns and, where possible, federal tax returns.

General-Equilibrium Analysis

However, partial-equilibrium analysis is limited because most taxes have important effects on markets other than the one in which they are assessed. The imposition of a tax may have an effect in parallel markets and factor markets. The primary insight obtained from such models is that effects in markets other than that in which a tax is introduced are often very important (Zodrow, 1999). Two examples of studies that use this approach are the *Nebraska Tax Burden Study* (2002) and the Oregon Tax Incidence Model (2001).

The Nebraska model is based upon a series of data sets constructed from tax files developed by the Nebraska Department of Revenue and the U.S. Department of the Treasury Internal Revenue Service. These files contain information on Nebraska resident taxpayers and businesses. The four tax files used in this study are the 1999 Federal Information Return Master File (IRMF), the Nebraska Business Master File (NBMF), and the 1999 Nebraska Individual Income Tax Form 1040N. In addition, wage and salary information for the State of Nebraska developed by the U.S. Department of

Commerce Bureau of Economic Analysis (BEA) is used in this study for comparison purposes.

The federal IRMF is initially used to develop a data set detailing wage and employment information for Nebraska residents. This file contains information regarding the number of employees, number of jobs, total wages, and the amounts of deferred compensation and dependent care benefits. The IRMF data is used to study employment and compensation summarized by the size of the employer and by the location of employees.

In order to obtain employment and compensation information, the IRMF data is merged with the NBMF data summarized by business sector of the employer. This merged IRMF and NBMF data is merged again with information from the Nebraska Individual Income Tax Form 1040N in order to develop adjusted gross income (AGI) information for each Nebraska household. The AGI data is used to calculate imputed Nebraska income and sales taxes. The results of the calculated taxes can be summarized to study Nebraska taxes by location, employer size, or industrial sector. Finally, the study uses BEA data on wages by industrial sector to compare the results of the study data.

The foundation of the Oregon Tax Incidence Model is a computable general equilibrium model of the Oregon economy. The model specifies a description of the relationships among state households, businesses, and governments and the rest of the world. The Oregon economy is divided into 110 distinct sectors: 29 industrial sectors, two factor sectors (labor and capital), eight household sectors, one investment sector, 69 government sectors, and one sector which represents the rest of the world. The government sector is the most detailed sector in the model because of its focus on the impact of state government policy.

Empirical Models

Representative Taxpayer Model

The representative taxpayer approach to analyzing tax incidence compares tax liabilities at different income levels by calculating state and local taxes that would be paid by predefined "representative" taxpayers. Because taxpayer profiles are constructed hypothetically, the results are only an extrapolation of how tax liabilities would be distributed under the given assumptions. A representative taxpayer model calculates the state and local taxes that would be paid by hypothetical taxpayers based on income, consumption, homeownership, and demographic characteristics. A predefined number of taxpayer profiles are created. Varying levels of income are assigned to the profiles, and then additional characteristics affecting tax liability that would be typical for taxpayers of each income level are assigned. Other variables potentially affecting state and local tax liabilities are also assigned to each profile. For example, profiles are assumed to be renters or homeowners, and data from the Census Bureau are used to assign typical home values for families at each income level. Data from the U.S. Labor Department's Consumer Expenditure Survey may be used to estimate the share of income for each profile devoted to purchasing different types of goods and services, which determines the families' sales tax liabilities. Family sizes and ages of household members are assigned, which affect the number (and in many

states the magnitude) of personal exemptions subtracted on state income tax returns. Finally, assumptions are made concerning the location of the profiled families within the state, since property tax rates usually vary widely among different local jurisdictions (Mazerov, 2002)

An example of a study that uses this approach is the District of Columbia's annual *Tax Rates and Tax Burdens* (2005) study. The Office of the Chief Financial Officer for Washington, DC produces an annual report that compares the rates and burdens of major taxes in the District of Columbia with states and other large cities in the United States. This study compares tax burdens in 51 different locations for a hypothetical family of four. The major state and local tax burdens for the family in the District of Columbia are compared with those in the largest city in each state.

In addition, the office also analyzes the relative tax position of the District compared to surrounding jurisdictions. This study compares the state and local tax burdens on a hypothetical family of four in six major metropolitan Washington area jurisdictions: the District of Columbia; the Maryland counties of Montgomery and Prince George's; the Virginia counties of Arlington and Fairfax; and the City of Alexandria in Virginia.

The hypothetical family in this study consists of two wage-earning spouses and two school-age children. Families with annual gross income levels of \$25,000, \$50,000, \$75,000, \$100,000, and \$150,000 for each jurisdiction are analyzed. Families at the \$25,000 and \$50,000 income levels are assumed to own their own home and one automobile. Families with annual incomes of \$75,000, \$100,000 and \$150,000 are assumed to own their own home and two automobiles. This study compares the tax burden in each jurisdiction for the hypothetical family for four major tax categories: individual income tax, sales tax, real estate tax and the automobile-related taxes.

Initial Impact Model

The initial tax impact approach is equivalent to the economic incidence approach in terms of analyzing the distribution among income groups of taxes directly imposed on households. Both approaches are based on taxpayer profiles constructed from sampled income tax returns and third-party data using statistical sampling and matching methods. The major difference between the two approaches is that the initial impact approach attempts to analyze only those taxes with an initial impact on households themselves while the economic incidence approach includes the impact of business taxes, which may be shifted onto other parties such as consumers and/or workers in the form of higher prices and/or lower wages. Initial tax impact models avoid some of the resource demands and economic theory disputes that are entailed in integrating taxes imposed on business into a tax distribution model (Mazerov, 2002).

Economic Incidence Model

The economic incidence approach is the most comprehensive method of determining how tax obligations are distributed among income groups. The economic incidence approach incorporates the impact both of taxes imposed directly on households and of taxes that are imposed initially on businesses and then passed through to households. The model is based on a representative sample of all taxpayers, and the model's results therefore can be generalized to the entire population

of a state. The economic incidence model requires more preparation and data collection than the initial tax impact model or the representative taxpayer model (Mazerov, 2002).

The core of an economic incidence model is a statistical sample of state income tax returns. Information from the tax returns is supplemented with information about sources of income not reported on the return, such as home values, monthly rent payments, and similar variables that may affect income tax or property tax liabilities. Such information may come from the U.S. Census Bureau, state or local property tax office, or other agency that collects relevant data. The information may be integrated with each taxpayer profile in one of two ways. If the actual data can be obtained for the precise taxpayer—a so-called “hard match”—the information may be combined directly. If this cannot be done, then a “statistical match” may be done. Statistical matching involves imputing a value for an unknown variable by using a sample of households with similar characteristics. Estimates of household expenditure patterns generally are taken from Consumer Expenditure Survey, compiled by the U.S. Bureau of Labor Statistics, and are added to all of the household profiles. This information is used most often to analyze the distribution of sales and excise tax liabilities. Expenditure information must be added from a third-party source because very little relevant information of this kind can be gleaned from income tax returns. The taxpayer profile data are used to calculate tax liability for whatever household-level taxes are included in the economic incidence model. Economic incidence models may also estimate the amount of business taxes that should be assigned to each household profile. The models incorporate assumptions concerning the extent to which business taxes paid by businesses are passed on to individuals through higher prices for consumers, lower wages for workers, or lower returns to shareholders (Mazerov, 2002).

Three examples that use this approach include the Institute on Taxation and Economic Policy’s (ITEP) study, *Who Pays?: A Distributional Analysis of the Tax Systems in all 50 States, 2nd Edition* (McIntyre, et al.), the *Minnesota Tax Incidence Study* (2005), and the *Wisconsin Tax Incidence Study* (2004). The ITEP model uses one of the largest databases of tax returns and supplementary data in existence, with nearly three quarters of a million records. The ITEP model’s approach is very similar to that used by the congressional Joint Committee on Taxation, the U.S. Treasury Department and the Congressional Budget Office.

The Minnesota model includes detailed information on income and taxes for a stratified random sample of 63,808 Minnesota households. This sample is then extrapolated to represent over 2.3 million Minnesota households. Individual income tax returns and property tax refund returns filed with the Department of Revenue were the primary sources of information and were supplemented with data on nontaxable income obtained from various sources. The use of social security numbers to merge income data from different sources for specific individuals is a unique and important aspect of this study. Income data was matched, for example, with property tax and market value information for individual homeowners. Information obtained from the American Community Survey of the United States Bureau of the Census was used to calibrate a number of items, notably nontaxable income and property tax-related variables. American Community Survey data were also used to estimate annual rent expenditures

for renter households. Finally, estimates of household spending patterns were obtained from United States Department of Labor Consumer Expenditure Survey data.

The Wisconsin study employs data gathered from individual income tax returns and Homestead Credit returns. This information is collected on a stratified random sample of income tax returns, homestead tax relief credit claims and farmland preservation credit claims weighted to reflect a population of 2.55 million tax filers/credit claimants. Because not all people are required to file income tax returns, the Tax Model does not cover the entire income-receiving population. As such, data for low-income households that are not in the tax-filing population and that do not file a homestead credit return are obtained from non-Department of Revenue sources. Data from the Department of Workforce Development (DWD) allow nontaxable income from Wisconsin Works (W-2) payments and child-care subsidies to be included. The DWD data also allow for additional sample members who did not file either a Wisconsin income tax return or a homestead or farmland preservation credit claim. Non-filer households that received social security benefits were also added to the Tax Model data. A one-in-ten sample was drawn from the 174,000 non-filer social security recipients using Internal Revenue Service (IRS) informational return data. The IRS data are also used to identify other income sources for non-filers and for nontaxable income of tax filers.

Exhibit 2 identifies principal differences among the types of empirical tax incidence models.

Exhibit 2: Principal Differences among Empirical Tax Incidence Models

	Taxes Included	Selection Method for Taxpayer Data
“Economic” Incidence Model	Household taxes and Business taxes passed-through to households	Statistics-based sample of actual taxpayers
Initial Tax Impact Model	Household taxes only*	Statistics-based sample of actual taxpayers
Representative Taxpayer Model	Household taxes only*	Subjective construction of hypothetical taxpayers
*Both models sometimes include estimates of property taxes on rental properties owned by businesses that are passed-through into rent payments of households.		

Source: Mazerov, 2002.

Incidence Measures

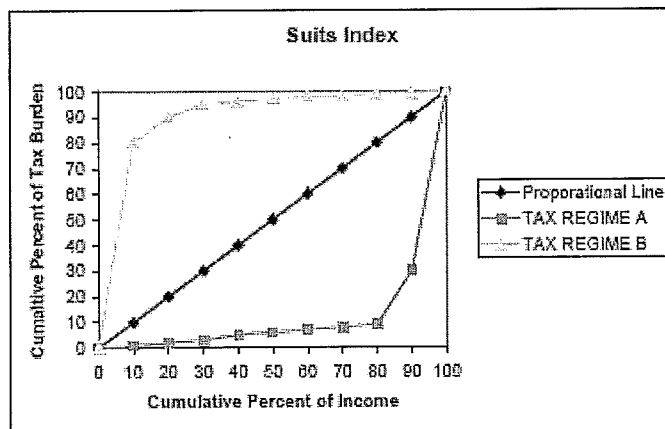
Measuring the tax burden as a percentage of household income allows a comparison of incidence across household groups. However, this does not provide a measure of the overall progressivity of a tax (Wisconsin, 2004). Although the definition of tax progressivity is generally agreed upon, there is not specific agreement on how it

should be measured. There have been many alternative means proposed for measuring tax progressivity. These measures may be categorized two ways: based on what the measure purports to measure and what affects the actual value of the measure. Within the category of measures of what affects the value of the measure, the measures may be further divided into two subcategories: structural measures and distributional measures. Structural measures are determined by the relationship between the amount of income and the amount of tax imposed on that income. Distributional measures are determined by both the tax structure and the distribution of income. Distributional measures may be further divided based on the measure of dispersion used: a measure of concentration or a measure of income equality. Some of the more commonly used distributional measures based on concentration include: effective progression, the Pechman-Okner Index, the Reynolds-Smolensky Index, the Khetan-Poddar Index, the Kakwani Index, and the Khetan-Poddar-Suits Index (Kiefer, 1986). Most of these indices are adaptations of the Lorenz Curve and the Gini Coefficient of income equality. Indices based on income equality are derived from social welfare functions and assumptions about society's preference for income equity. For computational purposes this study will employ the Suits Index and the Kakwani Index as alternative measures of tax progressivity.

Suits Index

The Suits Index was developed to measure and compare different degrees of progressivity of taxes. The Suits Index is based on a comparison of the cumulative proportion of income and the cumulative proportion of taxes. The Suits Index is a measure of the progressivity of a tax or tax system. The value of the index can vary between -1 and +1. Positive values reflect progressivity; negative values show regressivity, and values around zero indicate proportionality (Suits, 1977). Exhibit 3 depicts a hypothetical Suits Index. Graphically, the value of the Suits Index equals $[1 - (\text{Area below Incidence Curve} / \text{Area below Proportional Line})]$. Tax regime A would be illustrative of a tax that is extremely progressive, while tax regime B would be indicative of a tax structure that is extremely regressive. The Minnesota, Oregon, Texas, and Wisconsin incidence studies use the Suits Index as their measures of tax incidence.

Exhibit 3: Suits Index

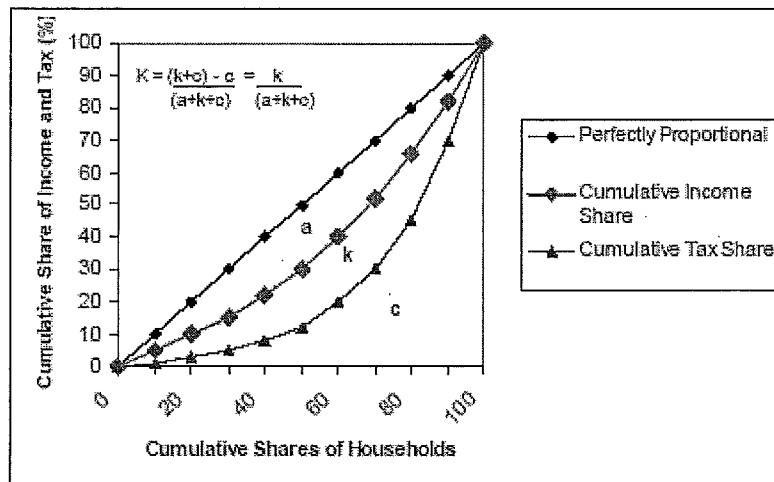


Source: Wisconsin Tax Incidence Study, 2004.

Kakwani Index

The Kakwani Index was developed to analyze the effect of taxation on income distribution and *vice versa*. The Kakwani Index is based on a measure of tax concentration (Kakwani, 1977). The Kakwani Index is determined by the distribution of taxes across households as well as the distribution of pre-tax income. The Kakwani Index compares the distribution of taxes to the pre-tax income distribution. If the share of taxes borne by higher-income households exceeds their share of total income, then the tax is considered progressive. If the share of total taxes borne by these households is less than their share of total income, then the tax is considered regressive. Exhibit 4 depicts a hypothetical Kakwani Index by plotting the cumulative proportion of income and cumulative tax share (vertical axis) against the cumulative percent of households (horizontal axis).

Exhibit 4: Kakwani Index



Source: *Wisconsin Tax Study, 2004*.

With respect to income, the 45-degree line represents a perfectly equal income distribution, whereby each household quintile receives exactly 20 percent of total income. The thick line represents the pre-tax income concentration curve, often referred to as the Lorenz curve. The extent to which this curve sags below the 45-degree line represents the degree of inequity in the distribution of income before taxes. In this example, the poorest 20 percent of households receive only 15 percent of total before-tax income. On the other hand, the highest-income quintile received 34 percent of total income.

The thin line represents the tax concentration curve. A tax curve that is identical to the 45-degree line implies that each population group pays the same share of taxes. A tax concentration curve that sags below the 45-degree line reflects a tax system where the population groups with the lowest income pay a smaller share of taxes than their share of the population and the higher income groups pay a larger share of taxes than their population shares. In both cases, the further the curves are below the diagonal line, income and taxes are more concentrated in the higher income groups.

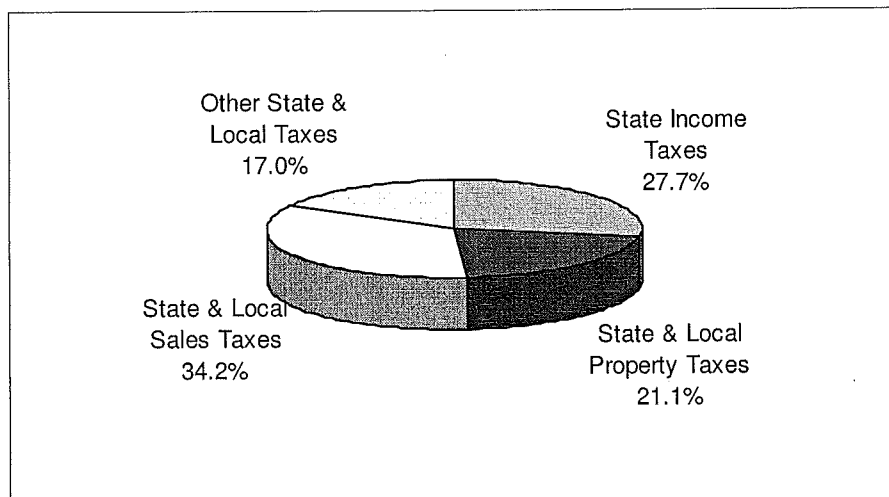
An indication of progressivity is obtained by comparing the tax concentration curve to the income concentration curve. As seen in Exhibit 4, the Kakwani Index, (K), measures the area below the income concentration curve (k+c) minus the area below the tax curve (c).

Thus, the area denoted as (k) measures the area between the income concentration curve and the tax concentration curve. It is measured as a percent of the total area below the 45-degree line (a+k+c). A tax is progressive if the tax concentration curve lies below the income curve, in which case (K) would be positive. A negative value for K occurs when the tax curve lies above the pre-tax income concentration curve and reflects a regressive tax. If the tax and income curves coincide, (K) will be zero and reflect a proportional tax. The value of the Kakwani index ranges from -2 to +2; the closer it is to those extremes, the more regressive or progressive a tax or tax structure is judged to be. *The Wisconsin Tax Study (2004)* uses the Kakwani Index as its measure of tax progressivity.

Kansas Tax Incidence Model

The underlying structure of the model developed for this study is based upon a methodology established for a study for the *Report of the Governor's Tax Equity Task Force* (Wong and Snyder, 1995). The taxes included in the Kansas tax incidence model are the state individual income tax, state and local residential property taxes, and state and local retail sales taxes. According to the Kansas Legislative Research Department, state individual income taxes accounted for 27.7 percent of total Kansas state and local taxes, while state and local residential property taxes accounted for 21.1 percent, and state and local retail sales taxes accounted for 34.2 percent. Collectively, the three tax sources accounted for \$6.4 billion or 83.0 percent of total 2003 state and local taxes collected in Kansas. Exhibit 5 shows the break down of combined state and local tax revenue in 2003 by tax source. Appendix A presents various state tax collections and per capita tax collections by county.

Exhibit 5: Percentage of Combined State and Local Tax Revenue, 2003



Source: Tax Facts, 2005

Individual Income Taxes

Estimation of Kansas Individual Income Tax Liability

The individual income tax accounted for \$1.8 billion of revenue in fiscal year 2003. Income tax rates range from 3.5 percent to 6.45 percent on a tax base that conforms closely to the base for the federal individual income tax (Kansas Tax Facts, 2000, 2005).

For the purposes of this study, hypothetical individual income tax liabilities were computed for five household characteristics and 10 income groupings for each of the 105 Kansas counties and five county groupings. The county groupings used were:

- Region,
- Location: Border or non-border,
- Concentration: Metropolitan, micropolitan, or rural,
- Population, and
- Income.

Appendix B presents a detailed listing of the counties comprising the respective groupings.

Data on household characteristics for each county were obtained from the 2000 U.S. Census, Profile of General Demographic Characteristics (DP-1). The household characteristics used were:

- Married with children,
- Married without children,
- Single with children,
- Single without children, and
- Nonfamily households.

Data on income groupings for each county were obtained from the 2000 U.S. Census, Profile of Selected Economic Characteristics (DP-3). The income groupings used were:

- <\$10,000,
- \$10,000-\$14,999,
- \$15,000-\$24,999,
- \$25,000-\$34,999,
- \$35,000-\$49,999,
- \$50,000-\$74,999,
- \$75,000-\$99,999,
- \$100,000-\$149,999,

- \$150,000-\$199,999, and
- ≥\$200,000.

From the household characteristics and income grouping data for each county, a matrix was constructed to estimate the number and percentage of taxpayers with each combination of characteristics in each county. Data for the county groupings were obtained by tabulating across the constituent counties. Exhibit 6 shows the estimated number and percentage of taxpayers with each combination of characteristics for the state of Kansas as a whole.

Exhibit 6: Characteristics of Individual Income Taxpayers

2003 INCOME TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
NUMBER OF HOUSEHOLDS										
Married with children	22,333	16,642	35,948	36,524	47,177	52,995	25,098	15,803	4,045	4,358
Married without children	26,277	19,581	42,296	42,974	55,509	62,353	29,530	18,594	4,759	5,127
Single with children	7,204	5,368	11,596	11,782	15,218	17,095	8,096	5,098	1,305	1,406
Single without children	4,233	3,154	6,814	6,923	8,942	10,045	4,757	2,995	767	826
Nonfamily households	28,789	21,452	46,339	47,081	60,814	68,313	32,352	20,372	5,214	5,617
Total	88,836	66,197	142,993	145,284	187,660	210,801	99,832	62,862	16,090	17,334
PERCENTAGE OF HOUSEHOLDS										
Married with children	2.2%	1.6%	3.5%	3.5%	4.5%	5.1%	2.4%	1.5%	0.4%	0.4%
Married without children	2.5%	1.9%	4.1%	4.1%	5.3%	6.0%	2.8%	1.8%	0.5%	0.5%
Single with children	0.7%	0.5%	1.1%	1.1%	1.5%	1.6%	0.8%	0.5%	0.1%	0.1%
Single without children	0.4%	0.3%	0.7%	0.7%	0.9%	1.0%	0.5%	0.3%	0.1%	0.1%
Nonfamily households	2.8%	2.1%	4.5%	4.5%	5.9%	6.6%	3.1%	2.0%	0.5%	0.5%
Total	8.6%	6.4%	13.8%	14.0%	18.1%	20.3%	9.6%	6.1%	1.6%	1.7%

Next the total value of income for each combination of characteristics was estimated based on the midpoint of each income grouping. From this, the proportion of income for each combination of characteristics was derived. Finally, the total value of income attributed to each combination of characteristics was adjusted based on the total value of 2003 Kansas Adjusted Gross Income obtained from the *Annual Statistical Report (2005)* of the Kansas Department of Revenue. Exhibit 7 shows the estimated distribution of income for each combination of characteristics for the state of Kansas as a whole.

Exhibit 7: Distribution of Income by Household Type

2003 INCOME TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
PERCENTAGE OF INCOME										
Married with children	0.2%	0.4%	1.4%	2.1%	3.8%	6.3%	4.2%	3.8%	1.3%	1.7%
Married without children	0.3%	0.5%	1.6%	2.5%	4.5%	7.4%	4.9%	4.4%	1.6%	2.0%
Single with children	0.1%	0.1%	0.4%	0.7%	1.2%	2.0%	1.3%	1.2%	0.4%	0.5%
Single without children	0.0%	0.1%	0.3%	0.4%	0.7%	1.2%	0.8%	0.7%	0.3%	0.3%
Nonfamily households	0.3%	0.5%	1.8%	2.7%	4.9%	8.1%	5.4%	4.8%	1.7%	2.1%
Total	0.8%	1.6%	5.4%	8.3%	15.2%	25.1%	16.6%	15.0%	5.4%	6.6%

The base of the Kansas individual income tax is comprised of Federal adjusted gross income, adjusted, less deductions and exemptions. Kansas Adjusted Gross Income is defined as the Federal Adjusted Gross Income after certain additions and subtractions. The additions include income that is taxable under state law but exempt under federal law, e.g., state and local government bond interest, contributions to public employees' retirement systems, federal net operating loss carry forward. The subtractions remove income that is exempt under state law but taxable under federal law. The subtractions include income that is exempt under state law but is taxable

under federal law, e.g., interest on U.S. government obligations, state or local income tax refunds, Kansas net operating loss carry forward, and exempt retirement benefits.


Individual income tax liability per household was estimated in a similar fashion. First, taxable income was estimated for each combination of characteristics based on 2003 Kansas Individual Income Tax and Sales Refund, Form K-40. Kansas Adjusted Gross Income was taken from the above computations. A standard deduction and personal exemptions were also subtracted from the Kansas adjusted gross income to arrive at taxable income. The standard deduction is \$3,000 for single filers and married filers filing separately, \$4,500 for heads of households, and \$6,000 for married filers filing jointly. The standard deduction is higher for filers who are age 65 or older and/or blind. Kansas adjusted gross income was also reduced by personal exemptions equal to \$2,250 for each tax filer, spouse and dependent. For taxpayers with children, it was assumed that such taxpayers had two children. Exhibit 8 shows taxable income imputed to each combination of household and income characteristics.

Exhibit 8: Imputed Taxable Income

2003 INCOME TAXES	\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999 >\$200,000
TAXABLE INCOME									
Married with children	(10,000)	(2,500)	5,000	15,000	27,500	47,500	72,500	110,000	160,000 185,000
Married without children	(5,500)	2,000	9,500	19,500	32,000	52,000	77,000	114,500	164,500 189,500
Single with children	(8,500)	(1,000)	6,500	16,500	29,000	49,000	74,000	111,500	161,500 186,500
Single without children	(250)	7,250	14,750	24,750	37,250	57,250	82,250	119,750	169,750 194,750
Nonfamily households	(250)	7,250	14,750	24,750	37,250	57,250	82,250	119,750	169,750 194,750

Exhibit 9 shows 2003 Kansas Individual Income Tax computation schedules.

Exhibit 9: 2003 Individual Income Tax Computation Schedules

 Be sure to use the proper schedule when computing tax.

SCHEDULE I—MARRIED FILING JOINT

If amount on line 7, Form K-40 is: Enter on line 8, Form K-40:

	Over	But Not Over	
\$ 0	\$30,000		3.50% of line 7, Form K-40
\$30,000	\$60,000		\$1,050 plus 8.25% of excess over \$30,000
\$60,000			\$2,925 plus 8.45% of excess over \$60,000

SCHEDULE II—SINGLE, HEAD OF HOUSEHOLD, OR MARRIED FILING SEPARATE

If amount on line 7, Form K-40 is: Enter on line 8, Form K-40:

	Over	But Not Over	
\$ 0	\$15,000		3.50% of line 7, Form K-40
\$15,000	\$30,000		\$525 plus 8.25% of excess over \$15,000
\$30,000			\$1,482.50 plus 8.45% of excess over \$30,000

Source: 2003 Kansas Individual Income Tax, Form K-40

Gross taxes per household were computed for each combination of characteristics based on 2003 Kansas Individual Income Tax and Sales Refund Tax,

Form K-40, Schedules I and II. Kansas' tax rates are graduated, ranging from 3.5 percent to 6.45 percent. The top rate applies to those with income exceeding \$30,000 for single filers and \$60,000 for married joint filers.

Exhibit 10 shows gross taxes per household before credits for each combination of taxpayer characteristics.

Exhibit 10: Imputed Gross Taxes per Household before Credits

2003 INCOME TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
GROSS TAXES PER HOUSEHOLD										
Married with children	-	-	176	526	963	2,185	3,731	6,150	9,375	10,988
Married without children	-	71	333	683	1,177	2,425	4,022	6,440	9,665	11,278
Single with children	-	-	228	620	1,402	2,690	4,301	6,719	9,944	11,557
Single without children	-	255	517	1,136	1,932	3,220	4,833	7,251	10,476	12,089
Nonfamily households	-	255	517	1,136	1,932	3,220	4,833	7,251	10,476	12,089

In addition, gross taxes were reduced by nonrefundable credits. These credits are nonrefundable to the extent that they cannot reduce the total tax liability less than \$0. A nonrefundable credit is available for child and dependent care expenses. The value of the credit is equal to 25 percent of the federal child and dependent care expenses credit from Internal Revenue Service Form 2441. The federal credit is a percentage, based on adjusted gross income, of the amount of work-related child and dependent care expenses paid to a care provider. The maximum dollar limit of dependent care expenses that can be claimed is \$3,000 for one qualifying person or \$6,000 for two or more persons. Exhibit 11 shows the percentage that applies to the federal credit based on adjusted gross income.

Exhibit 11: Federal Child and Dependent Care Expenses Credit Schedule

If line 7 is:			If line 7 is:		
Over	But not over	Decimal amount is	Over	But not over	Decimal amount is
\$0	—15,000	.35	\$29,000	—31,000	.27
15,000	—17,000	.34	31,000	—33,000	.26
17,000	—19,000	.33	33,000	—35,000	.25
19,000	—21,000	.32	35,000	—37,000	.24
21,000	—23,000	.31	37,000	—39,000	.23
23,000	—25,000	.30	39,000	—41,000	.22
25,000	—27,000	.29	41,000	—43,000	.21
27,000	—29,000	.28	43,000	—No limit	.20

Source: 2003 Internal Revenue Service Form 2441.

Exhibit 12 shows the imputed value of child/dependent care credits. Again, it was assumed that taxpayers qualifying for the credit had two qualifying children.

Exhibit 12: Imputed Child and Dependent Care Credits

2003 INCOME TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
CHILD/DEPENDENT CARE CREDIT										
Married with children	438	525	480	405	300	300	300	300	300	300
Married without children	-	-	-	-	-	-	-	-	-	-
Single with children	438	525	480	405	300	300	300	300	300	300
Single without children	-	-	-	-	-	-	-	-	-	-
Nonfamily households	-	-	-	-	-	-	-	-	-	-

Exhibit 13 shows taxes per household after nonrefundable credits.

Exhibit 13: Imputed Taxes less Refundable Credits

2003 INCOME TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
TAXES LESS NONREFUNDABLE CREDITS										
Married with children	-	-	-	121	663	1,885	3,431	5,850	9,075	10,688
Married without children	-	71	333	683	1,177	2,425	4,022	6,440	9,665	11,278
Single with children	-	-	-	215	1,102	2,390	4,001	6,419	9,644	11,257
Single without children	-	255	517	1,136	1,932	3,220	4,833	7,251	10,476	12,089
Nonfamily households	-	255	517	1,136	1,932	3,220	4,833	7,251	10,476	12,089

In addition to nonrefundable credits, there are several refundable credits provided to particular types of claimants. These include the earned income tax credit, the homestead refund, and the food sales tax refund. A refundable credit may exceed the value of the taxpayer's tax liability.

The earned income tax credit (EIC) is designed to provide tax relief to low-income earners for excess income taxes. To qualify, a taxpayer must work and have earned income. Earned income includes taxable wages, salaries and tips; net earnings from self-employment; and gross income received as a statutory employee. To claim the credit using a child, the child must be a "qualifying child" by meeting all relationship, age and residency tests. Income and family size determine the amount of the EITC. However, taxpayers without children also may qualify for the credit. Each year, the limits on income and credit amount changes with the cost of living. The credit begins to phase out at certain income levels. For a taxpayer with two or more children in 2003 the maximum federal credit was \$4,204, for one child the maximum credit was \$2,547, and for no children the maximum credit is \$382. To have been eligible for a full or partial credit in 2003, a taxpayer must have had an adjusted gross income of less than:

- \$33,692 (\$34,692 married filing jointly) and two or more children;
- \$29,666 (\$30,666 MFJ) and one child; or
- \$11,230 (\$12,230 MFJ) with no children.

The Kansas earned income credit is a percentage of the federal earned income tax credit. The state EIC is equal to 15 percent of the federal credit. Again, it was assumed that taxpayers qualifying for the credit had two qualifying children. Exhibit 14 shows the imputed value of the earned income credit.

Exhibit 14: Imputed Earned Income Credits

2003 INCOME TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
EARNED INCOME CREDIT										
Married with children	302	631	463	147	-	-	-	-	-	-
Married without children	57	-	-	-	-	-	-	-	-	-
Single with children	302	631	432	116	-	-	-	-	-	-
Single without children	57	-	-	-	-	-	-	-	-	-
Nonfamily households	57	-	-	-	-	-	-	-	-	-

In 1970, a system of income tax credits or refunds was established for low-income homeowners who were age 65 or older or disabled (KSA Ch. 79, Art. 45). The current program authorizes direct refunds of or credits against property tax for low-income homeowners or renters who are age 55 or older, disabled, or who have

dependent children under age 18. Renters may claim as property tax paid 20 percent of rent paid for occupancy.

The homestead refund is designed to provide tax relief for property taxes; the credit is based on property taxes or its rent equivalent and household income. The credit is available to households with income less than \$25,000. In addition, the claimant must be over 55 years old, or is blind or disabled, or has a dependent child under 18 who lived with the claimant all year. "Household income" is generally the total of all taxable and nontaxable income received by all household members. The amount of the refund is based on a sliding percentage based on income. The maximum homestead refund is \$600. Exhibit 15 shows the relationship between household income and the percentage of the refund.

Exhibit 15: Homestead Refund Schedule

If the amount on line 10, Form K-40H is between:	Enter this percentage on line 14, Form K-40H:
\$ 0 and \$ 3,000	100%
\$ 3,001 and \$ 4,000	98%
\$ 4,001 and \$ 5,000	94%
\$ 5,001 and \$ 6,000	80%
\$ 6,001 and \$ 7,000	76%
\$ 7,001 and \$ 8,000	72%
\$ 8,001 and \$ 9,000	68%
\$ 9,001 and \$ 10,000	64%
\$10,001 and \$ 11,000	60%
\$11,001 and \$ 12,000	56%
\$12,001 and \$ 13,000	52%
\$13,001 and \$ 14,000	48%
\$14,001 and \$ 15,000	44%
\$15,001 and \$ 16,000	40%
\$16,001 and \$ 17,000	36%
\$17,001 and \$ 18,000	32%
\$18,001 and \$ 19,000	28%
\$19,001 and \$ 20,000	24%
\$20,001 and \$ 21,000	20%
\$21,001 and \$ 22,000	16%
\$22,001 and \$ 23,000	12%
\$23,001 and \$ 24,000	8%
\$24,001 and \$ 25,000	4%
\$25,001 and over	0%

Source: 2003 Kansas Homestead Claim, Form K-40H

Exhibit 16 shows the imputed value of the Kansas Homestead Refund.

Exhibit 16: Imputed Homestead Refund

2003 INCOME TAXES	\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-		
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
HOMESTEAD REFUND										
Married with children	504	324	144	-	-	-	-	-	-	-
Married without children	-	-	-	-	-	-	-	-	-	-
Single with children	504	324	144	-	-	-	-	-	-	-
Single without children	-	-	-	-	-	-	-	-	-	-
Nonfamily households	-	-	-	-	-	-	-	-	-	-

The food sales tax refund offers a refund of the sales tax paid on food. To qualify, the claimant must be 55 years of age or older, or be blind or disabled, or have a dependent child under 18 who lived with the claimant all year whom the claimant claimed as a personal exemption, and have qualifying income of \$26,300 or less. For claimants with less than \$13,150 of qualifying income, the amount of the refund is equal to the number of exemptions times \$72. For claimants with qualifying income between \$13,150 and \$26,300, the amount of the refund is equal to the number of exemptions times \$36. The refunds may be claimed as refundable income tax credits. Exhibit 17 shows the imputed value of the food sales tax refund. Again, it was assumed that taxpayers qualifying for the credit had two qualifying children.

Exhibit 17: Imputed Food Sales Tax Refund

2003 INCOME TAXES	\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-		
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
FOOD SALES TAX REFUND										
Married with children	288	288	144	-	-	-	-	-	-	-
Married without children	144	144	72	-	-	-	-	-	-	-
Single with children	288	288	144	-	-	-	-	-	-	-
Single without children	-	-	-	-	-	-	-	-	-	-
Nonfamily households	-	-	-	-	-	-	-	-	-	-

Exhibit 18 shows estimated individual income tax liability by household composition and income class after refundable credits.

Exhibit 18: Imputed Income Tax Liability

2003 INCOME TAXES	\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-		
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000
TAXES LESS REFUNDABLE CREDITS										
Married with children	(1,094)	(1,243)	(751)	(26)	663	1,885	3,431	5,850	9,075	10,688
Married without children	(201)	(73)	261	683	1,177	2,425	4,022	6,440	9,665	11,278
Single with children	(1,094)	(1,243)	(720)	99	1,102	2,390	4,001	6,419	9,644	11,257
Single without children	(57)	255	517	1,136	1,932	3,220	4,833	7,251	10,476	12,089
Nonfamily households	(57)	255	517	1,136	1,932	3,220	4,833	7,251	10,476	12,089

It was assumed that all taxpayers that qualify for the listed deductions and credits use them. Because of the limitations of the data used in this model, it was not possible to include all deductions and credits which taxpayers may be eligible. However, the listed deductions and credits are the most common and significant ones used by taxpayers to reduce individual income tax liability in Kansas. Appendix C presents Kansas individual income tax receipts for tax year 2003 by county.

Once average tax liabilities per household were estimated for each combination of taxpayer characteristics, total taxes were estimated based on the number of taxpayers with the respective combinations of characteristics. From this, the percentage of taxes paid by taxpayers with each of the combinations of characteristics was determined. Total individual income tax liabilities obtained from the Kansas

Department of Revenue *Annual Statistical Report* (2005) were then allocated based on household composition and income class. Exhibit 19 shows the percentage of taxes paid by taxpayers with each of the combinations of characteristics.

Exhibit 19: Percentage of Individual Income Taxes Paid

2003 INCOME TAXES	<\$10,000	\$10,000- \$14,999	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	>\$200,000	Total
KANSAS											
PERCENTAGE OF TAXES											
Married with children	-1.2%	-1.0%	-1.3%	0.0%	1.6%	5.0%	4.3%	4.6%	1.8%	2.3%	15.9%
Married without children	-0.3%	-0.1%	0.5%	1.5%	3.2%	7.5%	5.9%	6.0%	2.3%	2.9%	29.5%
Single with children	-0.4%	-0.3%	-0.4%	0.1%	0.8%	2.0%	1.6%	1.6%	0.6%	0.8%	6.4%
Single without children	0.0%	0.0%	0.2%	0.4%	0.9%	1.6%	1.1%	1.1%	0.4%	0.5%	6.2%
Nonfamily households	-0.1%	0.3%	1.2%	2.7%	5.8%	10.9%	7.8%	7.3%	2.7%	3.4%	42.0%
Total	-2.0%	-1.1%	0.2%	4.5%	12.3%	27.1%	20.7%	20.6%	7.9%	9.8%	100.0%

Incidence of Kansas Individual Income Taxes

Exhibit 20 presents Kansas individual income tax incidence by household composition and income class. The first section of the table shows the percentage of Kansas households with the respective combinations of household and income characteristics. Out of the ten income groupings, the highest percentage of households (20.3 percent) earn between \$50,000 and \$74,999. Based on household composition, the highest percentage of households are composed of non-family members (32.4 percent), followed by married couples without children (29.6 percent), and married couples with children (25.1 percent).

The second section of the table shows the percentage of income received by households with the respective combinations of household and income characteristics. Again, out of the ten income groupings, the highest percentage of income is received by households (25.1 percent) earning between \$50,000 and \$74,999.

The third section of the table shows the percentage of Kansas individual income taxes paid by households with the respective combinations of household and income characteristics. Again, out of the ten income groupings, the highest percentage of individual income tax paid is by households (27.1 percent) that earn between \$50,000 and \$74,999. Based on household composition, the highest percentage of individual income tax paid is by households comprised of non-family members (42.0 percent), followed by married couples without children (29.5 percent), and married couples with children (15.9 percent). Notice that some combinations of household and income characteristics show negative percentages of taxes. This is because some households may actually have a negative tax liability because of refundable credits.

The fourth section of the table shows the average effective tax rates paid by Kansas households with the respective combinations of household and income characteristics. The average ETRs are computed as a percentage of Kansas adjusted gross income. Because of its graduated tax rate structure and allowance of personal exemptions and deductions, the individual income tax is, by design, progressive. The average ETR for the state as a whole is 3.2 percent. As seen in Exhibit 20, effective tax rates rise significantly with increases in household income. At the low end, the effective tax rate for the income tax is -7.4 percent for the lowest income group. It rises steadily to 4.7 percent for the highest income group. Lower income households can receive refundable tax credits, which can more than offset any income tax liabilities. Based on household composition single households without children and non-family households

have the highest ETR at 4.1 percent, while married couples with children have the lowest ETR at 2.0 percent.

As a basis of comparison the *Minnesota Tax Incidence Study* (2005) found an average effective individual income tax rate of 4.1 percent, with the lowest income group (\$8,354 and under) paying an effective tax rate of -1.1 percent and the highest income group (\$102,427 and over) paying an ETR of 5.5 percent. However, it should be kept in mind that finding from different studies may not be directly compared because of differences in study methodologies, tax structures, and income definitions, and economic conditions. Similarly, the *Wisconsin Tax Incidence Study* (2004) found an effective income tax rate for all households averaged of 3.6 percent. The effective individual income tax rate was 0.32 percent for the lowest income group and rose steadily for higher-income households. The highest income group paid 5.3 percent of their income in individual income taxes.

The last section of the table shows information used to assess the overall incidence of the individual income tax. The data for this section are derived from the above sections. Both the Suits Index (0.2284) and the Kakwani Index (0.2397) indicate the Kansas individual income tax is modestly progressive. Accordingly, the *Minnesota Tax Incidence Study* (2005) found a Suits Index of 0.199 for that state's personal income tax and the *Wisconsin Tax Incidence Study* (2004) reported a Suits Index of 0.185 and a Kakwani Index of 0.167 for individual income taxes. The Kansas individual income tax may be more progressive than many other states because it is comprised of only three brackets, with some taxpayers subject to the highest rate with taxable income as low as \$30,000. Note that there is a detailed companion table for each of the 105 counties and five county groupings contained in the Detailed Appendix.

Exhibit 20: Individual Income Tax Incidence

2003 INCOME TAXES	\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-			
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000	Total
PERCENTAGE OF HOUSEHOLDS											
Married with children	2.2%	1.6%	3.5%	3.5%	4.5%	5.1%	2.4%	1.5%	0.4%	0.4%	25.1%
Married without children	2.5%	1.9%	4.1%	4.1%	5.3%	6.0%	2.8%	1.8%	0.5%	0.5%	29.6%
Single with children	0.7%	0.5%	1.1%	1.1%	1.5%	1.6%	0.8%	0.5%	0.1%	0.1%	8.1%
Single without children	0.4%	0.3%	0.7%	0.7%	0.9%	1.0%	0.5%	0.3%	0.1%	0.1%	4.8%
Nonfamily households	2.8%	2.1%	4.5%	4.5%	5.9%	6.6%	3.1%	2.0%	0.5%	0.5%	32.4%
Total	8.6%	6.4%	13.8%	14.0%	18.1%	20.3%	9.6%	6.1%	1.6%	1.7%	100.0%
PERCENTAGE OF INCOME											
Married with children	0.2%	0.4%	1.4%	2.1%	3.8%	6.3%	4.2%	3.8%	1.3%	1.7%	25.1%
Married without children	0.3%	0.5%	1.6%	2.5%	4.5%	7.4%	4.9%	4.4%	1.6%	2.0%	29.6%
Single with children	0.1%	0.1%	0.4%	0.7%	1.2%	2.0%	1.3%	1.2%	0.4%	0.5%	8.1%
Single without children	0.0%	0.1%	0.3%	0.4%	0.7%	1.2%	0.8%	0.7%	0.3%	0.3%	4.8%
Nonfamily households	0.3%	0.5%	1.8%	2.7%	4.9%	8.1%	5.4%	4.8%	1.7%	2.1%	32.4%
Total	0.8%	1.6%	5.4%	8.3%	15.2%	25.1%	16.6%	15.0%	5.4%	6.6%	100.0%
PERCENTAGE OF TAXES											
Married with children	-1.2%	-1.0%	-1.3%	0.0%	1.6%	5.0%	4.3%	4.6%	1.8%	2.3%	15.9%
Married without children	-0.3%	-0.1%	0.5%	1.5%	3.2%	7.5%	5.9%	6.0%	2.3%	2.9%	29.5%
Single with children	-0.4%	-0.3%	-0.4%	0.1%	0.8%	2.0%	1.6%	1.6%	0.6%	0.8%	6.4%
Single without children	0.0%	0.0%	0.2%	0.4%	0.9%	1.6%	1.1%	1.1%	0.4%	0.5%	6.2%
Nonfamily households	-0.1%	0.3%	1.2%	2.7%	5.8%	10.9%	7.8%	7.3%	2.7%	3.4%	42.0%
Total	-2.0%	-1.1%	0.2%	4.5%	12.3%	27.1%	20.7%	20.6%	7.9%	9.8%	100.0%
AVERAGE TAX RATES											
Married with children	-18.2%	-8.3%	-3.1%	-0.1%	1.3%	2.5%	3.3%	3.9%	4.3%	4.4%	2.0%
Married without children	-3.3%	-0.5%	1.1%	1.9%	2.3%	3.2%	3.8%	4.3%	4.6%	4.7%	3.2%
Single with children	-18.2%	-8.3%	-3.0%	0.3%	2.2%	3.2%	3.8%	4.3%	4.6%	4.7%	2.5%
Single without children	-1.0%	1.7%	2.1%	3.1%	3.8%	4.3%	4.6%	4.8%	5.0%	5.0%	4.1%
Nonfamily households	-1.0%	1.7%	2.1%	3.1%	3.8%	4.3%	4.6%	4.8%	5.0%	5.0%	4.1%
Total	-7.4%	-2.3%	0.1%	1.7%	2.6%	3.4%	4.0%	4.4%	4.7%	4.7%	3.2%
CUMULATIVE % OF HOUSEHOLDS	0.0856	0.1494	0.2871	0.4271	0.6079	0.8110	0.9072	0.9678	0.9833	1.0000	
CUMULATIVE % OF INCOME	0.0085	0.0242	0.0787	0.1617	0.3135	0.5644	0.7307	0.8804	0.9340	1.0000	
CUMULATIVE % OF TAX	(0.0196)	(0.0308)	(0.0292)	0.0159	0.1393	0.4099	0.6170	0.8230	0.9015	1.0000	
KAKWANI INDEX	0.0012	0.0027	0.0112	0.0178	0.0289	0.0334	0.0129	0.0052	0.0007	0.0003	0.2284
SUITS INDEX	0.0001	0.0007	0.0044	0.0105	0.0243	0.0412	0.0223	0.0128	0.0024	0.0011	0.2397

County

Exhibit 21 shows average effective individual income tax rates by county for 2003. The counties with the highest average ETRs are Greeley (3.83 percent), Haskell (3.78 percent), Sedgwick (3.58 percent), Hamilton (3.51 percent), and Sheridan (3.49 percent). The counties with the lowest ETRs are Cherokee (2.21 percent), Doniphan (2.26 percent), Wyandotte (2.34 percent), Republic (2.47 percent), and Elk (2.47 percent). Exhibit 22 maps geographic variations in average effective individual income tax rates. The counties with the highest average individual income tax rates are indicated by the darkest shading, the counties with the lowest average ETRs are indicated by the lightest shading. The remaining counties are indicated by transitional shading. As can be seen from the map, the counties with the highest average ETRs are in the Wichita area, the Lawrence area, and in western Kansas, while the counties with the lowest rates tend to be in the north and southeast areas of the state.

Exhibit 21: Average Effective Individual Income Tax Rates by County

County	Percentage	County	Percentage	County	Percentage
Allen	2.81%	Greeley	3.83%	Osborne	2.67%
Anderson	2.68%	Greenwood	2.97%	Ottawa	2.95%
Atchison	2.68%	Hamilton	3.51%	Pawnee	2.86%
Barber	2.89%	Harper	2.99%	Phillips	2.84%
Barton	3.01%	Harvey	2.99%	Pottawatomie	3.16%
Bourbon	2.57%	Haskell	3.78%	Pratt	3.16%
Brown	2.59%	Hodgeman	2.82%	Rawlins	2.77%
Butler	3.49%	Jackson	2.93%	Reno	3.08%
Chase	2.94%	Jefferson	3.05%	Republic	2.47%
Chautauqua	2.52%	Jewell	2.53%	Rice	2.80%
Cherokee	2.21%	Johnson	3.22%	Riley	3.37%
Cheyenne	2.89%	Kearny	3.07%	Rooks	2.78%
Clark	3.01%	Kingman	3.23%	Rush	2.87%
Clay	2.80%	Kiowa	2.97%	Russell	2.84%
Cloud	2.76%	Labette	2.68%	Saline	3.22%
Coffey	3.20%	Lane	2.96%	Scott	3.38%
Comanche	3.00%	Leavenworth	2.93%	Sedgwick	3.58%
Cowley	2.94%	Lincoln	2.49%	Seward	2.81%
Crawford	2.85%	Linn	2.72%	Shawnee	3.34%
Decatur	2.74%	Logan	3.05%	Sheridan	3.49%
Dickinson	2.95%	Lyon	2.81%	Sherman	2.59%
Doniphan	2.26%	Marion	3.00%	Smith	2.88%
Douglas	3.42%	Marshall	2.92%	Stafford	2.81%
Edwards	3.00%	McPherson	3.30%	Stanton	3.23%
Elk	2.47%	Meade	3.07%	Stevens	3.26%
Ellis	3.29%	Miami	3.26%	Sumner	3.04%
Ellsworth	3.01%	Mitchell	3.00%	Thomas	3.16%
Finney	3.03%	Montgomery	2.73%	Trego	2.71%
Ford	2.93%	Morris	3.16%	Wabaunsee	3.00%
Franklin	2.95%	Morton	3.20%	Wallace	2.76%
Geary	2.72%	Nemaha	2.78%	Washington	2.82%
Gove	3.09%	Neosho	2.84%	Wichita	3.17%
Graham	2.97%	Ness	2.99%	Wilson	2.85%
Grant	3.29%	Norton	2.96%	Woodson	2.59%
Gray	3.33%	Osage	2.98%	Wyandotte	2.34%
				Total	3.18%

Exhibit 22: Variations in Effective Income Tax Rates

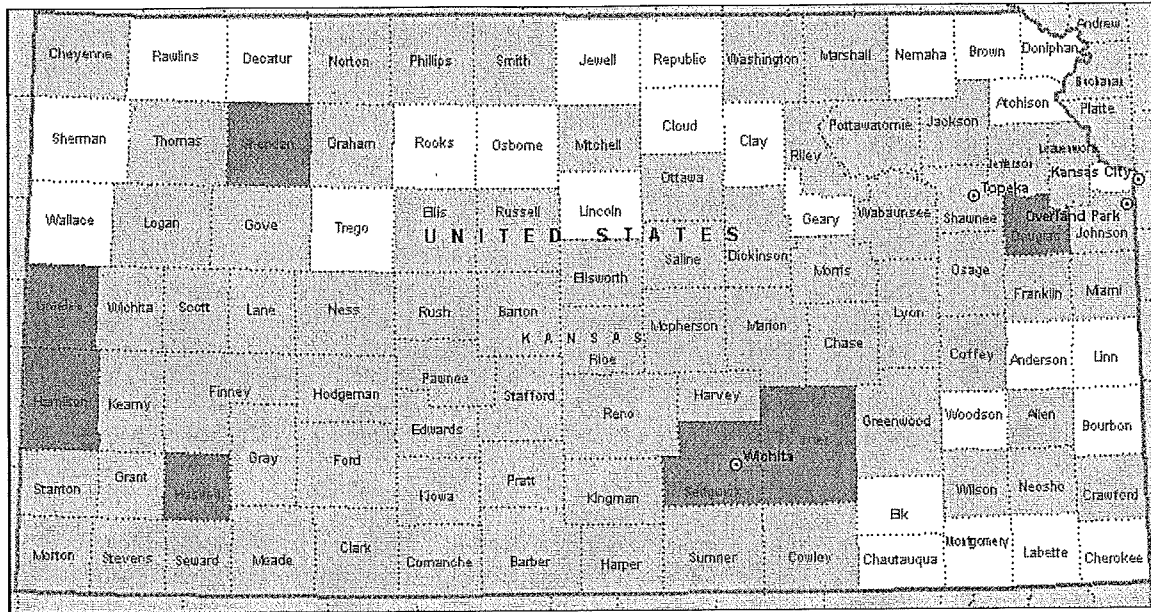


Exhibit 23 shows Suits and Kakwani Indices by county for 2003. Keep in mind that a higher index value indicates a more progressively distributed tax, while a lower index value indicates a less progressively distributed tax. The counties with the highest Suits Indices are Woodson (0.4089), Cherokee (0.3765), Chautauqua (0.3672), Wilson (0.3665), and Smith (0.3647). The counties with the highest Kakwani Indices are Woodson (0.3831), Cherokee (0.3551), Wilson (0.3456), Chautauqua (0.3447), and Smith (0.3432). The counties with the lowest Suits Indices are Johnson (0.1427), Leavenworth (0.2094), Miami (0.2136), Shawnee (0.2251), and Sedgwick (0.2252). The counties with the lowest Kakwani Indices are Johnson (0.1386), Leavenworth (0.2020), Miami (0.2048), Douglas (0.2144), and Shawnee (0.2148). Exhibits 24 and 25 map geographic variations in Suits and Kakwani Indices, respectively. The counties with the highest indices are indicated by the darkest shading, the counties the lowest indices are indicated by the lightest shading. The remaining counties are indicated by transitional shading. As can be seen from the map, the counties with the highest indices are concentrated in southeast Kansas as well as northern and western Kansas, while the counties with the lowest indices are concentrated along the Topeka, Lawrence, Kansas City corridor and in the Wichita area. This is an indication the Kansas individual income tax is less progressively distributed in the state's urban areas, meaning that lower income households bear a larger proportion of the burden in these areas.

Exhibit 23: Individual Income Tax Incidence by County

County	Suits	Kakwani	County	Suits	Kakwani	County	Suits	Kakwani
Allen	0.3454	0.3259	Greeley	0.2872	0.2732	Osborne	0.3492	0.3283
Anderson	0.3232	0.3059	Greenwood	0.3425	0.3215	Ottawa	0.2690	0.2558
Atchison	0.3167	0.3009	Hamilton	0.3331	0.3164	Pawnee	0.2717	0.2594
Barber	0.3090	0.2930	Harper	0.3410	0.3213	Phillips	0.2985	0.2821
Barton	0.3289	0.3121	Harvey	0.2434	0.2327	Pottawatomie	0.2648	0.2536
Bourbon	0.3448	0.3247	Haskell	0.2991	0.2874	Pratt	0.2868	0.2709
Brown	0.3477	0.3286	Hodgeman	0.3207	0.3028	Rawlins	0.3211	0.3017
Butler	0.2300	0.2208	Jackson	0.2610	0.2495	Reno	0.2805	0.2658
Chase	0.3035	0.2882	Jefferson	0.2314	0.2217	Republic	0.3346	0.3156
Chautauqua	0.3672	0.3447	Jewell	0.3262	0.3040	Rice	0.2978	0.2829
Cherokee	0.3765	0.3551	Johnson	0.1427	0.1386	Riley	0.2799	0.2627
Cheyenne	0.3389	0.3203	Kearny	0.3042	0.2924	Rooks	0.3494	0.3305
Clark	0.3026	0.2869	Kingman	0.2728	0.2595	Rush	0.3173	0.2987
Clay	0.3109	0.2950	Kiowa	0.3074	0.2903	Russell	0.3239	0.3027
Cloud	0.3131	0.2961	Labette	0.3517	0.3335	Saline	0.2625	0.2506
Coffey	0.2743	0.2609	Lane	0.2773	0.2638	Scott	0.2567	0.2457
Comanche	0.3195	0.3006	Leavenworth	0.2094	0.2020	Sedgwick	0.2252	0.2156
Cowley	0.3066	0.2910	Lincoln	0.3385	0.3203	Seward	0.3289	0.3144
Crawford	0.3320	0.3109	Linn	0.2936	0.2770	Shawnee	0.2251	0.2148
Decatur	0.3417	0.3242	Logan	0.3011	0.2853	Sheridan	0.3287	0.3108
Dickinson	0.2850	0.2714	Lyon	0.3133	0.2964	Sherman	0.2975	0.2827
Doniphan	0.3412	0.3237	Marion	0.3094	0.2946	Smith	0.3647	0.3432
Douglas	0.2274	0.2144	Marshall	0.3146	0.2982	Stafford	0.3322	0.3155
Edwards	0.3379	0.3194	McPherson	0.2530	0.2417	Stanton	0.2802	0.2670
Elk	0.3527	0.3289	Meade	0.3038	0.2893	Stevens	0.2592	0.2496
Ellis	0.2865	0.2695	Miami	0.2136	0.2048	Sumner	0.2696	0.2573
Ellsworth	0.2751	0.2610	Mitchell	0.2855	0.2711	Thomas	0.2671	0.2527
Finney	0.3176	0.3065	Montgomery	0.3421	0.3229	Trego	0.3331	0.3124
Ford	0.3012	0.2886	Morris	0.3281	0.3104	Wabaunsee	0.2507	0.2409
Franklin	0.2699	0.2575	Morton	0.2915	0.2792	Wallace	0.3414	0.3229
Geary	0.3580	0.3431	Nemaha	0.3348	0.3177	Washington	0.3554	0.3341
Gove	0.3017	0.2847	Neosho	0.3342	0.3164	Wichita	0.3313	0.3148
Graham	0.3346	0.3135	Ness	0.2901	0.2729	Wilson	0.3665	0.3456
Grant	0.2723	0.2620	Norton	0.3374	0.3197	Woodson	0.4089	0.3831
Gray	0.2823	0.2718	Osage	0.2743	0.2617	Wyandotte	0.2928	0.2778
						Total	0.2397	0.2284

Exhibit 24: Variations in Income Tax Suits Indices

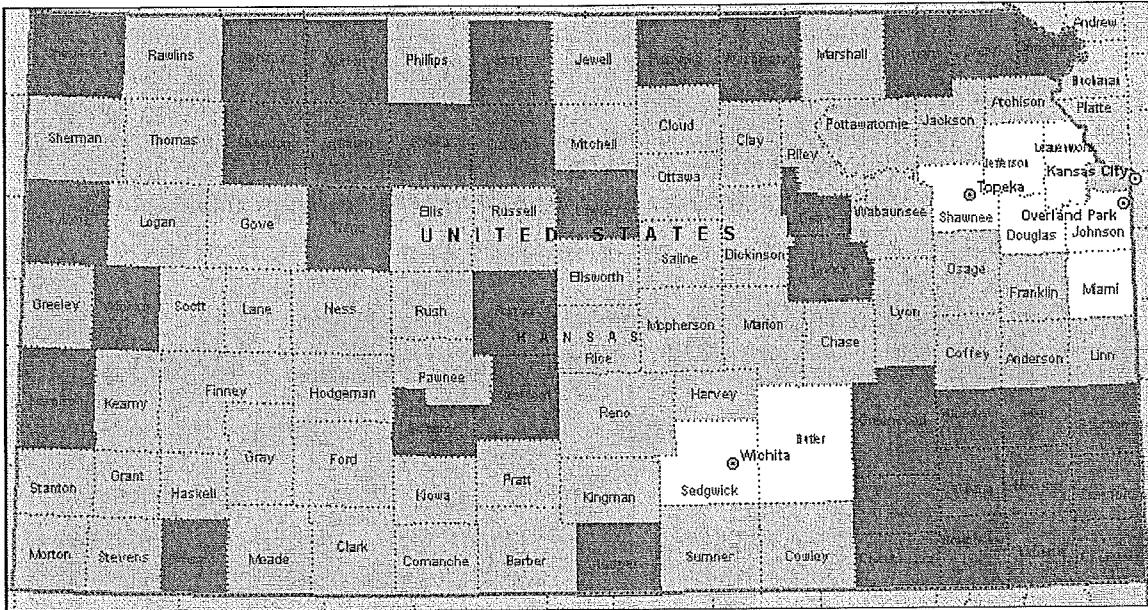
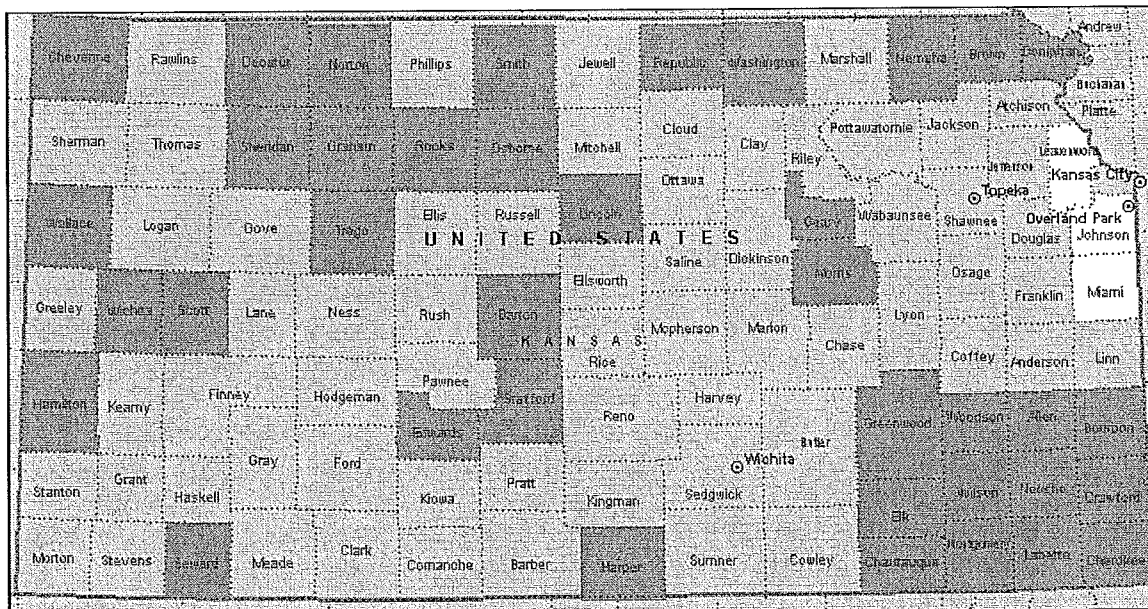


Exhibit 25: Variations in Income Tax Kakwani Indices



Region

Exhibit 26 shows the 11 economic reporting regions used in the *Governor's Economic and Demographic Report* and Exhibit 27 shows average individual income tax rates by region for 2003. A list of counties comprising each region may be found in Appendix B. The regions with the highest average ETRs are Region IV in south central Kansas (3.46 percent), Region I in eastern Kansas (3.15 percent), and Region III in east central Kansas (3.08 percent). The regions with the lowest ETRs are Region II in

southeast Kansas (2.70 percent), Region XI in northeast Kansas (2.71 percent), and Region VIII in northwest Kansas (2.93 percent). This, indicates that taxpayers along or near the Kansas Turnpike corridor are paying the higher effective tax rates, while those in the far corners are paying a lower effective tax rate. Since there is no provision for a local income tax in Kansas, these patterns are largely due to the distribution of income in the respective region and the composition of that income. In the urban areas of the state, a higher proportion of income is derived from wages and salaries, while in the rural areas a higher proportion of income is derived from other sources such as farm income.

Exhibit 26: Kansas Economic Reporting Regions

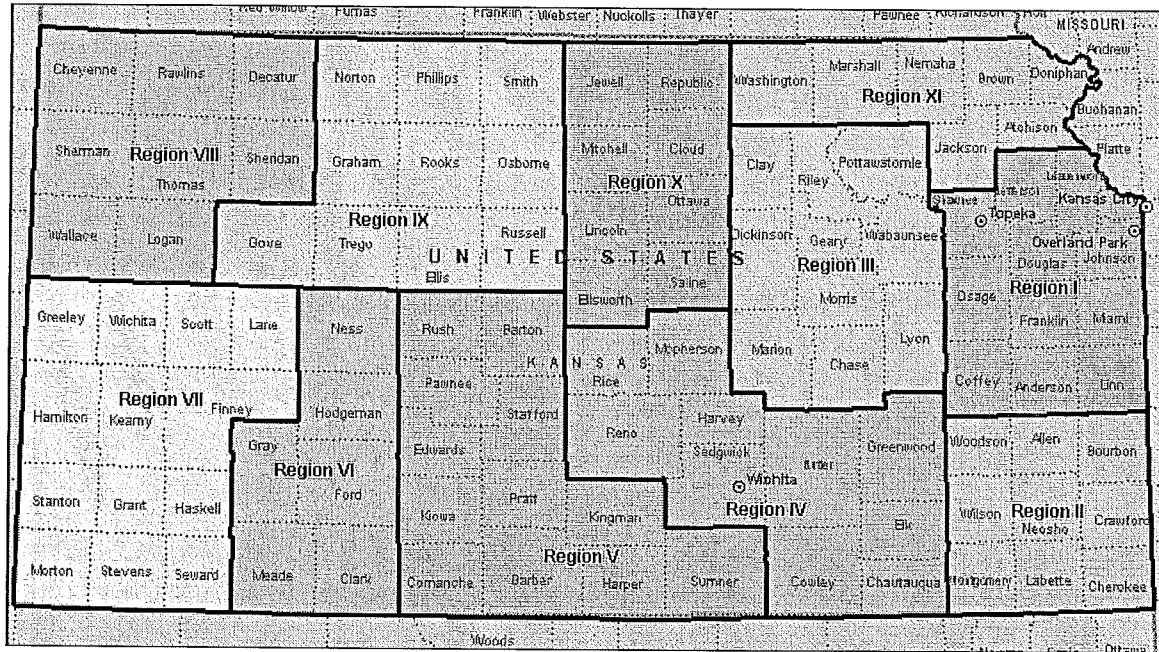


Exhibit 27 also shows Suits and Kakwani Indices by region for 2003. The regions with the highest Suits Indices are Region II in southeast Kansas (0.3478), Region XI in northeast Kansas (0.3192), and Region IX in northwest central Kansas (0.3146). The regions with the highest Kakwani Indices are Region II (0.3278), Region XI (0.3028), and Region VII (0.2972). The regions with the lowest Suits Indices are Region I in eastern Kansas (0.1932), Region IV in south central Kansas (0.2395), and Region X in north central Kansas (0.2807). The regions with the lowest Kakwani Indices are Region I (0.1851), Region IV (0.2288), and Region X (0.2668). Again, this indicates that the Kansas individual income tax is more progressively distributed in the rural areas of the state than in the urban areas.

Exhibit 27: Individual Income Tax Incidence by Region

Region	Percentage	Suits	Kakwani
I	3.15%	0.1932	0.1851
II	2.70%	0.3478	0.3278
III	3.08%	0.3000	0.2844
IV	3.46%	0.2395	0.2288
V	3.05%	0.3016	0.2862
VI	3.00%	0.2999	0.2865
VII	3.00%	0.3094	0.2972
VIII	2.93%	0.3070	0.2905
IX	3.06%	0.3146	0.2958
X	3.07%	0.2807	0.2668
XI	2.71%	0.3192	0.3028
Total	3.18%	0.2397	0.2284

Location

Exhibit 28 shows the geographic relationship between the border counties and the non-border counties in Kansas and Exhibit 29 shows average effective individual income tax rates by location for 2003. The non-border counties had an ETR of 3.31 percent, while the border counties had an ETR of 3.04 percent.

Exhibit 28: Kansas Border and Non-Border Counties

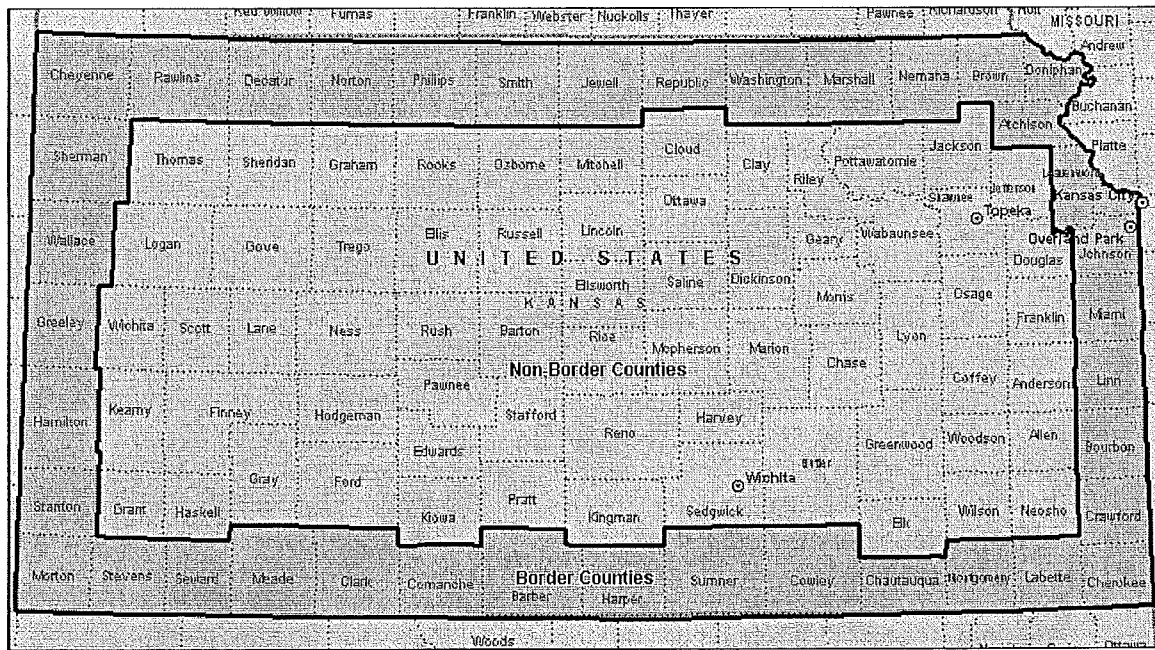


Exhibit 29 also shows Suits and Kakwani Indices by location for 2003. Non-border counties had a Suits Index of 0.2573, while border counties had an index of 0.2156. Non-border counties had a Kakwani Index of 0.2450, while border counties had an index of 0.2057. This indicates that the Kansas individual income tax is more progressively distributed in non-border counties than in border counties. Thus, higher

income taxpayers in non-border counties tend to bear a higher income tax burden than those in border counties.

Exhibit 29: Individual Income Tax Incidence by Location

Location	Percentage	Suits	Kakwani
Border	3.04%	0.2156	0.2057
Non-Border	3.31%	0.2573	0.2450
Total	3.18%	0.2397	0.2284

Concentration

In 2003, the federal Office of Management and Budget (OMB) announced new geographic definitions for metropolitan areas based upon updated criteria and data from the 2000 census. Under the new definitions Metropolitan Statistical Areas (MSAs) must have at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. MSAs must have at minimum one county and oftentimes include several counties. Under the revised definitions, there are five recognized MSAs in Kansas: Kansas City, Missouri-Kansas; Lawrence, Kansas; St. Joseph, Missouri-Kansas; Topeka, Kansas; and Wichita, Kansas. The Kansas portion of the Kansas City MSA includes Franklin, Johnson, Leavenworth, Miami, and Wyandotte Counties. The Lawrence MSA includes only Douglas County. The Kansas portion of the St. Joseph MSA includes only Doniphan County. The Topeka MSA includes Jackson, Jefferson, Osage, Shawnee, and Wabaunsee Counties. The Wichita MSA includes Butler, Harvey, Sumner, and Sedgwick Counties. Micropolitan areas must have an urbanized area (city) of at least 10,000 population but less than 50,000 population. Micropolitan areas must be at least one county. There are 15 recognized micropolitan areas in Kansas: Atchison (Atchison County), Coffeyville (Montgomery County), Dodge City (Ford County), Emporia (Chase and Lyon Counties), Garden City (Finney County), Great Bend (Barton County), Hays (Ellis County), Hutchinson (Reno County), Liberal (Seward County), McPherson (McPherson County), Manhattan (Geary, Pottawatomie, and Riley Counties), Parsons (Labette County), Pittsburg (Crawford County), Salina (Ottawa and Saline Counties), and Winfield (Cowley County).

Exhibit 30 shows Kansas counties based on population concentration and Exhibit 31 shows average effective individual income tax rates by population concentration for 2003. Metropolitan counties (3.26 percent) had the highest ETR, followed by micropolitan counties (3.04 percent), and rural counties (2.90 percent). This indicates that taxpayers in more densely populated counties are paying higher effective tax rates than those living in less densely populated counties. Again, these patterns are largely due to the distribution of income in the respective region and the composition of that income. In the urban areas of the state, a higher proportion of income is derived from wages and salaries, while in the rural areas a higher proportion of income is derived from other sources such as farm income.

Exhibit 30: Kansas Metropolitan, Micropolitan, and Rural Counties

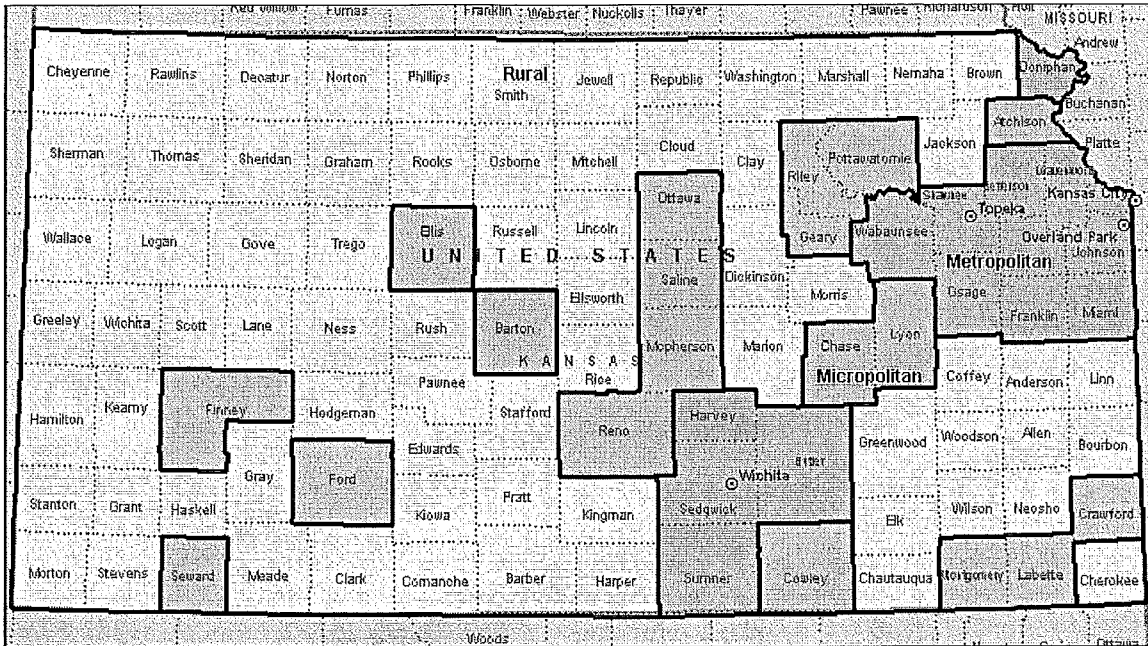


Exhibit 31 also shows Suits and Kakwani Indices by population concentration for 2003. Rural counties had the highest Suits Index (0.3181), followed by micropolitan counties (0.3018), and metropolitan counties (0.2048). Similarly, rural counties also had the highest Kakwani Index (0.3010), followed by micropolitan counties (0.2864), and metropolitan counties (0.1961). Again, this indicates that the Kansas individual income tax is more progressively distributed in the rural areas of the state than in the urban areas. Thus, higher income taxpayers in rural areas tend to bear a higher income tax burden than those from urban areas.

Exhibit 31: Individual Income Tax Incidence by Concentration

Concentration	Percentage	Suits	Kakwani
Metropolitan	3.26%	0.2048	0.1961
Micropolitan	3.04%	0.3018	0.2864
Rural	2.90%	0.3181	0.3010
Total	3.18%	0.2397	0.2284

Population

Exhibit 32 shows Kansas counties according to population quintile and Exhibit 33 shows average effective individual income tax rates by population quintile for 2003. The first population quintile is comprised of the 25 counties with the largest population. The second population quintile is comprised of the 25 counties with the next largest population, and so on. A list of counties comprising each quintile may be found in Appendix B. The first population quintile (3.24 percent) had the highest effective individual income tax rates, followed by the fifth quintile (3.02 percent), the fourth quintile (2.96 percent), the third quintile (2.93 percent), and the second quintile (2.89 percent). This indicates that taxpayers in the 25 most heavily populated counties pay

Residential Property Taxes

The Kansas residential property tax includes both state and local components. The base of state property tax levies includes the assessed valuation of all taxable tangible property as of January 1 of each year. The state portion includes both a state building fund levy and a mandatory school district general fund levy. The state building fund levy includes a 1.0 mill levy to support the Educational Building Fund and a 0.5 mill levy to support the State Institutions Building Fund. A mill is \$1 of property tax for each \$1,000 of assessed valuation (Kansas Tax Facts, 2000, 2005).

The base for the mandatory school district general fund levy is assessed valuation of all taxable tangible property as of January 1 of each year. In addition to the general property tax exemptions, KSA 2000 Supp. 79-201x provides an exemption—from this levy only—for the first \$20,000 of the appraised valuation of property used for residential purposes. The present rate for the mandatory school levy is 20 mills (Kansas Tax Facts, 2000, 2005).

The base of local property taxes includes the assessed valuation of taxable real and tangible personal property. Rates vary markedly among the numerous local taxing units (counties, cities, townships, school and community college districts, special purpose districts) in accordance with the ad valorem requirements of their locally-adopted budgets. Kansas residential property taxes accounted for \$1.4 billion of revenue in fiscal year 2003. This amounts to 21.1 percent of all state and local taxes. Average county mill levy rates ranges from a low of 68.989 mills in Coffey County to a high of 161.899 mills in Harper County. Appendix D shows average countywide property tax levies per \$1,000 of assessed valuation for years 2002 through 2004, while Appendix E presents total property taxes levied by county for tax years 2003 and 2004 (Kansas Tax Facts, 2000, 2005).

Estimation of Kansas Residential Property Tax Liability

For the purposes of this study, hypothetical residential property tax liabilities were computed for five household characteristics and 10 income groupings for each of the 105 Kansas counties and five county groupings. The county groupings used were:

- Region,
- Location: Border or non-border,
- Concentration: Metropolitan, micropolitan, or rural,
- Population, and
- Income.

Data on residential housing characteristics for each county were obtained from the 2000 U.S. Census, Profile of Selected Housing Characteristics (DP-4). Housing units were separated into owner-occupied units and rental units. Owner-occupied units were disaggregated based on value of the property, while rental units were disaggregated based on monthly rental costs:

- Owner-occupied units
 - Less than \$50,000

- \$50,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 to \$299,999
- \$300,000 to \$499,999
- \$500,000 to \$999,999
- \$1,000,000 or more
- Renter-occupied units
 - Less than \$200
 - \$200 to \$299
 - \$300 to \$499
 - \$500 to \$749
 - \$750 to \$999
 - \$1,000 to \$1,499
 - \$1,500 or more
 - No cash rent

Data on income groupings for each county were obtained from the 2000 U.S. Census, Profile of Selected Economic Characteristics (DP-3). The income groupings used were:

- <\$10,000,
- \$10,000-\$14,999,
- \$15,000-\$24,999,
- \$25,000-\$34,999,
- \$35,000-\$49,999,
- \$50,000-\$74,999,
- \$75,000-\$99,999,
- \$100,000-\$149,999,
- \$150,000-\$199,999, and
- ≥\$200,000.

From the residential housing characteristics and income grouping data for each county, a matrix was constructed to estimate the number and percentage of taxpayers with each combination of characteristics in each county. Data for the county groupings were obtained by tabulating across the constituent counties. Exhibit 36 shows the estimated number and percentage of taxpayers with each combination of characteristics

for the state of Kansas as a whole. According to this data 65.2 percent of Kansas households occupy owner-occupied units, while 34.8 percent of households occupy renter-occupied units.

Exhibit 36: Characteristics of Residential Property Taxpayers

2003 PROPERTY TAXES	<\$10,000	\$10,000- \$14,999	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	>\$200,000	Total
NUMBER OF UNITS											
Owner-occupied units	49,812	37,118	80,178	81,463	105,224	118,199	55,977	35,248	9,022	9,720	581,960
Less than \$50,000	12,206	9,096	19,648	19,962	25,785	28,964	13,717	8,637	2,211	2,382	142,608
\$50,000 to \$99,999	18,497	13,783	29,773	30,250	39,073	43,892	20,786	13,089	3,350	3,609	216,103
\$100,000 to \$149,999	10,334	7,700	16,634	16,900	21,830	24,522	11,613	7,313	1,872	2,016	120,734
\$150,000 to \$199,999	4,584	3,416	7,379	7,497	9,883	10,877	5,151	3,244	830	894	53,556
\$200,000 to \$299,999	2,792	2,080	4,494	4,566	5,897	6,624	3,137	1,975	506	545	32,616
\$300,000 to \$499,999	1,075	801	1,730	1,758	2,271	2,551	1,208	761	195	210	12,558
\$500,000 to \$999,999	270	201	435	442	571	641	304	191	49	53	3,158
\$1,000,000 or more	54	40	86	88	113	127	60	38	10	10	627
Renter-occupied units	26,542	19,778	42,724	43,408	56,069	62,983	29,828	18,782	4,807	5,179	310,101
Less than \$200	1,522	1,134	2,450	2,489	3,215	3,611	1,710	1,077	276	297	17,780
\$200 to \$299	2,408	1,794	3,875	3,938	5,086	5,713	2,706	1,704	436	470	28,129
\$300 to \$499	8,767	6,533	14,112	14,338	18,520	20,804	9,852	6,204	1,588	1,711	102,428
\$500 to \$749	8,221	6,126	13,233	13,445	17,367	19,508	9,239	5,818	1,489	1,604	96,050
\$750 to \$999	2,719	2,026	4,377	4,447	5,744	6,453	3,056	1,924	493	531	31,770
\$1,000 to \$1,499	956	712	1,539	1,563	2,019	2,268	1,074	676	173	187	11,169
\$1,500 or more	333	248	535	544	703	789	374	235	60	65	3,886
No cash rent	1,617	1,205	2,602	2,644	3,415	3,836	1,817	1,144	293	315	18,889
Total	76,354	56,896	122,902	124,871	161,293	181,182	85,805	54,030	13,829	14,899	892,061
PERCENTAGE OF UNITS											
Owner-occupied units	5.6%	4.2%	9.0%	9.1%	11.8%	13.3%	6.3%	4.0%	1.0%	1.1%	65.2%
Less than \$50,000	1.4%	1.0%	2.2%	2.2%	2.9%	3.2%	1.5%	1.0%	0.2%	0.3%	16.0%
\$50,000 to \$99,999	2.1%	1.5%	3.3%	3.4%	4.4%	4.9%	2.3%	1.5%	0.4%	0.4%	24.2%
\$100,000 to \$149,999	1.2%	0.9%	1.9%	1.9%	2.4%	2.7%	1.3%	0.8%	0.2%	0.2%	13.5%
\$150,000 to \$199,999	0.5%	0.4%	0.8%	0.8%	1.1%	1.2%	0.6%	0.4%	0.1%	0.1%	6.0%
\$200,000 to \$299,999	0.3%	0.2%	0.5%	0.5%	0.7%	0.7%	0.4%	0.2%	0.1%	0.1%	3.7%
\$300,000 to \$499,999	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.1%	0.1%	0.0%	0.0%	1.4%
\$500,000 to \$999,999	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.4%
\$1,000,000 or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Renter-occupied units	3.0%	2.2%	4.8%	4.9%	6.3%	7.1%	3.3%	2.1%	0.5%	0.6%	34.8%
Less than \$200	0.2%	0.1%	0.3%	0.3%	0.4%	0.4%	0.2%	0.1%	0.0%	0.0%	2.0%
\$200 to \$299	0.3%	0.2%	0.4%	0.4%	0.6%	0.6%	0.3%	0.2%	0.0%	0.1%	3.2%
\$300 to \$499	1.0%	0.7%	1.6%	1.6%	2.1%	2.3%	1.1%	0.7%	0.2%	0.2%	11.5%
\$500 to \$749	0.9%	0.7%	1.5%	1.5%	1.9%	2.2%	1.0%	0.7%	0.2%	0.2%	10.8%
\$750 to \$999	0.3%	0.2%	0.5%	0.5%	0.6%	0.7%	0.3%	0.2%	0.1%	0.1%	3.6%
\$1,000 to \$1,499	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.1%	0.1%	0.0%	0.0%	1.3%
\$1,500 or more	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.4%
No cash rent	0.2%	0.1%	0.3%	0.3%	0.4%	0.4%	0.2%	0.1%	0.0%	0.0%	2.1%
Total	8.6%	6.4%	13.8%	14.0%	18.1%	20.3%	9.6%	6.1%	1.6%	1.7%	100.0%

Next the total value of income for each combination of characteristics was estimated based on the midpoint of each income grouping. From this, the proportion of income for each combination of characteristics is derived. Finally, the total value of income attributed to each combination of characteristics is adjusted based on the total value of 2003 Kansas Adjusted Gross Income obtained from the *Annual Statistical Report* (2005) of the Kansas Department of Revenue. Exhibit 37 shows the estimated distribution of income for each combination of characteristics for the state of Kansas as a whole.

Exhibit 37: Distribution of Income by Occupancy Type

2003 PROPERTY TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-		Total
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000	
PERCENTAGE OF INCOME											
Owner-occupied units	0.6%	1.0%	3.6%	5.4%	9.9%	16.4%	10.9%	9.8%	3.5%	4.3%	65.2%
Less than \$50,000	0.1%	0.3%	0.9%	1.3%	2.4%	4.0%	2.7%	2.4%	0.9%	1.1%	16.0%
\$50,000 to \$99,999	0.2%	0.4%	1.3%	2.0%	3.7%	6.1%	4.0%	3.6%	1.3%	1.6%	24.2%
\$100,000 to \$149,999	0.1%	0.2%	0.7%	1.1%	2.1%	3.4%	2.3%	2.0%	0.7%	0.9%	13.5%
\$150,000 to \$199,999	0.1%	0.1%	0.3%	0.5%	0.9%	1.5%	1.0%	0.9%	0.3%	0.4%	6.0%
\$200,000 to \$299,999	0.0%	0.1%	0.2%	0.3%	0.6%	0.9%	0.6%	0.5%	0.2%	0.2%	3.7%
\$300,000 to \$499,999	0.0%	0.0%	0.1%	0.1%	0.2%	0.4%	0.2%	0.2%	0.1%	0.1%	1.4%
\$500,000 to \$999,999	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%
\$1,000,000 or more	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Renter-occupied units	0.3%	0.5%	1.9%	2.9%	5.3%	8.7%	5.8%	5.2%	1.9%	2.3%	34.8%
Less than \$200	0.0%	0.0%	0.1%	0.2%	0.3%	0.5%	0.3%	0.3%	0.1%	0.1%	2.0%
\$200 to \$299	0.0%	0.0%	0.2%	0.3%	0.5%	0.8%	0.5%	0.5%	0.2%	0.2%	3.2%
\$300 to \$499	0.1%	0.2%	0.6%	1.0%	1.7%	2.9%	1.9%	1.7%	0.6%	0.8%	11.5%
\$500 to \$749	0.1%	0.2%	0.6%	0.9%	1.6%	2.7%	1.8%	1.6%	0.6%	0.7%	10.8%
\$750 to \$999	0.0%	0.1%	0.2%	0.3%	0.5%	0.9%	0.6%	0.5%	0.2%	0.2%	3.6%
\$1,000 to \$1,499	0.0%	0.0%	0.1%	0.1%	0.2%	0.3%	0.2%	0.2%	0.1%	0.1%	1.3%
\$1,500 or more	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%
No cash rent	0.0%	0.0%	0.1%	0.2%	0.3%	0.5%	0.4%	0.3%	0.1%	0.1%	2.1%
Total	0.8%	1.6%	5.4%	8.3%	15.2%	25.1%	16.6%	15.0%	5.4%	6.6%	100.0%

Residential property tax liability per household was estimated in a similar fashion. First, the taxable value of owner-occupied properties was estimated for each combination of characteristics based on the 2000 U.S. Census, Profile of Selected Housing Characteristics (DP-4). An adjustment was included to take into consideration the exemption from the mandatory statewide school district general fund levy for the first \$20,000 of the appraised valuation of property used for residential purposes. An assessment ratio of 11.5 percent was applied to obtain assessed values of owner-occupied residential properties.

A similar procedure was used to derive the taxable value of renter-occupied properties. The taxable value of renter-occupied properties was estimated for each combination of characteristics based on the 2000 U.S. Census, Profile of Selected Housing Characteristics (DP-4). To convert the rental value of the properties into taxable values, the rental value of the properties were capitalized using a 6.0 percent annual capitalization rate and a 30 year amortization. An adjustment was included to take into consideration the exemption from the mandatory statewide school district general fund levy for the first \$20,000 of the appraised valuation of property used for residential purposes. Again, an assessment ratio of 11.5 percent was applied to estimate the assessed values of renter-occupied residential properties.

Property taxes per household were computed for each combination of characteristics based on the 2000 U.S. Census, Profile of Selected Housing Characteristics (DP-4) and average countywide property tax levies per \$1,000 of assessed valuation for 2003 taken from the Kansas Department of Revenue *Annual Statistical Report* (2005). Exhibit 38 shows imputed residential property taxes per household.

Exhibit 38: Imputed Residential Property Taxes per Household

2003 PROPERTY TAXES	
KANSAS	Total
TAXES PER UNIT	
Owner-occupied units	
Less than \$50,000	287
\$50,000 to \$99,999	954
\$100,000 to \$149,999	1,621
\$150,000 to \$199,999	2,287
\$200,000 to \$299,999	3,288
\$300,000 to \$499,999	5,288
\$500,000 to \$999,999	9,955
\$1,000,000 or more	13,288
Renter-occupied units	
Less than \$200	176
\$200 to \$299	510
\$300 to \$499	844
\$500 to \$749	1,344
\$750 to \$999	1,900
\$1,000 to \$1,499	2,734
\$1,500 or more	3,290
No cash rent	-
Average County Levy	115.95

Once average tax liabilities per household were estimated, total taxes were estimated based on respective combinations of residential and income characteristics. From this, the percentage of taxes paid by taxpayers with each of the combinations of characteristics was determined. Based on this, total residential property tax liabilities obtained from the 2005 Kansas Department of Revenue Annual Report were allocated based on property and income characteristics. Once average tax liabilities per household were estimated for each combination of taxpayer characteristics, total taxes were estimated based on the number of taxpayers with the respective combination of characteristics. From this, the percentage of taxes paid by taxpayers with each of the combinations of characteristics was determined. Based on this, total individual income tax liabilities obtained from the Kansas Department of Revenue *Annual Statistical Report* (2005) were allocated based on property characteristics and income class. Exhibit 39 shows the percentage of taxes paid by taxpayers with each of the combinations of characteristics. According to this data, households living in owner-occupied dwelling accounted for 69.8 percent of residential property taxes, while households living in renter-occupied dwellings accounted for 30.2 percent.

Exhibit 39: Percentage of Property Taxes Paid

2003 PROPERTY TAXES KANSAS	<\$10,000	\$10,000- \$14,999	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	>\$200,000	Total
PERCENTAGE OF TAXES											
Owner-occupied units	6.0%	4.5%	9.6%	9.8%	12.6%	14.2%	6.7%	4.2%	1.1%	1.2%	69.8%
Less than \$50,000	0.3%	0.2%	0.5%	0.5%	0.7%	0.7%	0.4%	0.2%	0.1%	0.1%	3.7%
\$50,000 to \$99,999	1.6%	1.2%	2.5%	2.6%	3.3%	3.8%	1.8%	1.1%	0.3%	0.3%	18.5%
\$100,000 to \$149,999	1.5%	1.1%	2.4%	2.5%	3.2%	3.6%	1.7%	1.1%	0.3%	0.3%	17.5%
\$150,000 to \$199,999	0.9%	0.7%	1.5%	1.5%	2.0%	2.2%	1.1%	0.7%	0.2%	0.2%	11.0%
\$200,000 to \$299,999	0.8%	0.6%	1.3%	1.3%	1.7%	2.0%	0.9%	0.6%	0.1%	0.2%	9.6%
\$300,000 to \$499,999	0.5%	0.4%	0.8%	0.8%	1.1%	1.2%	0.6%	0.4%	0.1%	0.1%	6.0%
\$500,000 to \$999,999	0.2%	0.2%	0.4%	0.4%	0.5%	0.6%	0.3%	0.2%	0.0%	0.0%	2.8%
\$1,000,000 or more	0.1%	0.0%	0.1%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.7%
Renter-occupied units	2.6%	1.9%	4.2%	4.2%	5.5%	6.1%	2.9%	1.8%	0.5%	0.5%	30.2%
Less than \$200	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.3%
\$200 to \$299	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.1%	0.1%	0.0%	0.0%	1.3%
\$300 to \$499	0.7%	0.5%	1.1%	1.1%	1.4%	1.6%	0.7%	0.5%	0.1%	0.1%	7.7%
\$500 to \$749	1.0%	0.7%	1.6%	1.6%	2.1%	2.4%	1.1%	0.7%	0.2%	0.2%	11.6%
\$750 to \$999	0.5%	0.3%	0.7%	0.8%	1.0%	1.1%	0.5%	0.3%	0.1%	0.1%	5.4%
\$1,000 to \$1,499	0.2%	0.2%	0.4%	0.4%	0.5%	0.6%	0.3%	0.2%	0.0%	0.0%	2.7%
\$1,500 or more	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	1.1%
No cash rent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	8.6%	6.4%	13.8%	14.0%	18.1%	20.3%	9.6%	6.1%	1.6%	1.7%	100.0%

Incidence of Kansas Residential Property Taxes

Exhibit 40 presents Kansas residential property tax incidence by residential characteristics and income class. The first section of the table shows the average tax rates paid by Kansas households with the respective combinations of occupancy and income characteristics.

The second section of the table shows similar data with owner-occupied units combined with renter-occupied units. Average effective tax rates are computed as a percentage of Kansas adjusted gross income. The average effective tax rate for the state as a whole is 2.3 percent, with the lowest income population group paying an effective tax rate of 23.6 percent, while the highest income population group paying an effective tax rate of 0.6 percent. As a basis of comparison the *Minnesota Tax Incidence Study (2005)* found an effective average residential property tax rate of 1.9 percent, with the lowest income population group (\$8,354 and under) paying an effective tax rate of 5.8 percent, while the highest income population group (\$102,426 and over) paying an effective tax rate of 1.2 percent. According to *Texas Tax Exemptions and Tax Incidence (2005)* that state's effective average school property tax rate ranged from 9.3 percent for the lowest income group (less than \$12,820) to the highest income population group (\$135,599 and over) paying an ETR of 2.3 percent. The *Wisconsin Tax Study (2004)* found that residents paid 4.5 percent of their income in residential property taxes. According to this study the lowest income group paid 6.9 percent their income in residential property taxes. In contrast, the top income group paid 4.0 percent of their income on residential property taxes.

This result derives because lower income households tend to spend a higher proportion of income on housing than higher income households. In some cases, effective tax rates of over 100 percent may be reported in cases where the taxpayer may be occupying a high value residence, while receiving a low level of Kansas adjusted gross income. According to the *Minnesota Tax Incidence Study (2005)* the effective tax rate for the lowest income group may be overstated for several reasons. First, the lowest income group includes households who have temporarily low incomes or have better overall economic well-being than is indicated by their money income. A

portion of retirees, for example, may be living primarily on savings or other assets but report small amounts of annual money income received. Due to unemployment or business fluctuations, some households who normally have higher incomes are also included in the lowest income group. Second, effective tax rates for the lowest income group may be overstated because income may be understated. The value of most Social Security payments, some pensions, food stamps, and housing subsidies are not included in the income base. Based on occupancy characteristics, owner-occupied taxpayers pay an average of 2.5 percent of income as property tax, while renter-occupied taxpayers pay an average of 2.0 percent of income as property tax.

The last section of the table shows information used to assess the overall incidence of the residential property tax. The data for this section are derived from the above sections. Because of the methodology used to compute residential property tax liabilities, the values of the Suits and Kakwani Indices will be equal. The Suits/Kakwani Index (-0.4026) indicates that the Kansas residential property tax is significantly regressive. Comparatively, the *Minnesota Tax Incidence Study (2005)* found a Suits Index of -0.148 for that state's local general homeowners' property tax, while *Texas Tax Exemptions and Tax Incidence (2005)* found a Suits Index of -0.06 for that state's school property tax, and the *Wisconsin Tax Incidence Study (2004)* reported a Suits Index of -0.073 and Kakwani Index of -0.054 for residential properties including rental housing. Note that there is a detailed companion table for each of the 105 counties and five county groupings contained in the Detailed Appendix.

Exhibit 40: Residential Property Tax Incidence

2003 PROPERTY TAXES	<\$10,000	\$10,000- \$14,999	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	>\$200,000	Total
AVERAGE TAX RATES BASED ON INCOME											
Owner-occupied units	25.3%	10.1%	6.3%	4.2%	3.0%	2.0%	1.4%	1.0%	0.7%	0.6%	2.5%
Less than \$50,000	5.4%	2.2%	1.4%	0.9%	0.6%	0.4%	0.3%	0.2%	0.2%	0.1%	0.5%
\$50,000 to \$99,999	18.0%	7.2%	4.5%	3.0%	2.1%	1.4%	1.0%	0.7%	0.5%	0.5%	1.8%
\$100,000 to \$149,999	30.6%	12.2%	7.7%	5.1%	3.6%	2.4%	1.7%	1.2%	0.9%	0.8%	3.0%
\$150,000 to \$199,999	43.2%	17.3%	10.8%	7.2%	5.1%	3.5%	2.5%	1.7%	1.2%	1.1%	4.3%
\$200,000 to \$299,999	62.1%	24.8%	15.5%	10.3%	7.3%	5.0%	3.5%	2.5%	1.8%	1.6%	6.1%
\$300,000 to \$499,999	99.9%	39.9%	25.0%	16.6%	11.7%	8.0%	5.7%	4.0%	2.9%	2.5%	9.9%
\$500,000 to \$999,999	188.0%	75.2%	47.0%	31.3%	22.1%	15.0%	10.7%	7.5%	5.4%	4.7%	18.6%
\$1,000,000 or more	250.9%	100.4%	62.7%	41.8%	29.5%	20.1%	14.3%	10.0%	7.2%	6.3%	24.8%
Renter-occupied units	20.5%	8.2%	5.1%	3.4%	2.4%	1.6%	1.2%	0.8%	0.6%	0.5%	2.0%
Less than \$200	3.3%	1.3%	0.8%	0.6%	0.4%	0.3%	0.2%	0.1%	0.1%	0.1%	0.3%
\$200 to \$299	9.6%	3.9%	2.4%	1.8%	1.1%	0.8%	0.6%	0.4%	0.3%	0.2%	1.0%
\$300 to \$499	15.9%	6.4%	4.0%	2.7%	1.9%	1.3%	0.9%	0.6%	0.5%	0.4%	1.6%
\$500 to \$749	25.4%	10.2%	6.3%	4.2%	3.0%	2.0%	1.5%	1.0%	0.7%	0.6%	2.5%
\$750 to \$999	35.9%	14.4%	9.0%	6.0%	4.2%	2.9%	2.1%	1.4%	1.0%	0.9%	3.5%
\$1,000 to \$1,499	51.6%	20.7%	12.9%	8.6%	6.1%	4.1%	3.0%	2.1%	1.5%	1.3%	5.1%
\$1,500 or more	62.1%	24.9%	15.5%	10.4%	7.3%	5.0%	3.6%	2.5%	1.8%	1.6%	6.1%
No cash rent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	23.6%	9.4%	5.9%	3.9%	2.8%	1.9%	1.3%	0.9%	0.7%	0.6%	2.3%
COMBINED AVERAGE TAX RATES BASED ON INCOME											
Less than \$50,000	5.3%	2.1%	1.3%	0.9%	0.6%	0.4%	0.3%	0.2%	0.2%	0.1%	0.5%
\$50,000 to \$99,999	17.3%	6.9%	4.3%	2.9%	2.0%	1.4%	1.0%	0.7%	0.5%	0.4%	1.7%
\$100,000 to \$149,999	29.3%	11.7%	7.3%	4.9%	3.4%	2.3%	1.7%	1.2%	0.8%	0.7%	2.9%
\$150,000 to \$199,999	43.2%	17.3%	10.8%	7.2%	5.1%	3.5%	2.5%	1.7%	1.2%	1.1%	4.3%
\$200,000 to \$299,999	59.6%	23.9%	14.9%	9.9%	7.0%	4.8%	3.4%	2.4%	1.7%	1.5%	5.9%
\$300,000 to \$499,999	99.9%	39.9%	25.0%	16.6%	11.7%	8.0%	5.7%	4.0%	2.9%	2.5%	9.9%
\$500,000 to \$999,999	188.0%	75.2%	47.0%	31.3%	22.1%	15.0%	10.7%	7.5%	5.4%	4.7%	18.6%
\$1,000,000 or more	250.9%	100.4%	62.7%	41.8%	29.5%	20.1%	14.3%	10.0%	7.2%	6.3%	24.8%
Total	23.6%	9.4%	5.9%	3.9%	2.8%	1.9%	1.3%	0.9%	0.7%	0.6%	2.3%
CUMULATIVE % OF HOUSEHOLDS	0.0856	0.1494	0.2871	0.4271	0.6079	0.8110	0.9072	0.9678	0.9833	1.0000	
CUMULATIVE % OF INCOME	0.0085	0.0242	0.0787	0.1617	0.3135	0.5644	0.7307	0.8804	0.9340	1.0000	
CUMULATIVE % OF TAX	0.0856	0.1494	0.2871	0.4271	0.6079	0.8110	0.9072	0.9678	0.9833	1.0000	
KAKWANI INDEX	(0.0033)	(0.0065)	(0.0230)	(0.0332)	(0.0506)	(0.0549)	(0.0203)	(0.0080)	(0.0011)	(0.0004)	(0.4026)
SUITS INDEX	(0.0003)	(0.0016)	(0.0091)	(0.0197)	(0.0425)	(0.0679)	(0.0352)	(0.0197)	(0.0037)	(0.0016)	(0.4026)

County

Exhibit 41 shows average effective residential property tax rates by county for 2003. The counties with the highest ETRs are Elk (3.53 percent), Miami (3.02 percent), Leavenworth (2.98 percent), Riley (2.71 percent), and Douglas (2.70 percent). The high rates in Leavenworth, Riley, and Douglas Counties are due in part to the presence of significant federal and/or state facilities within the respective counties. The counties with the lowest ETRs are Doniphan (0.91 percent), Stevens (1.26 percent), Stanton (1.27 percent), Jewell (1.34 percent), and Comanche (1.40 percent). Exhibit 42 maps geographic variations in average effective residential property tax rates. The counties with the highest ETRs are indicated by the darkest shading, the counties with the lowest tax rates are indicated by the lightest shading. The remaining counties are indicated by transitional shading. As can be seen from the map, the counties with the highest ETRs are concentrated in the northeast, while the counties with the lowest rates tend to be in the southwest. Because most property taxes are local, variations in effective residential property tax rates are heavily influenced by local economic conditions and local governmental taxing and spending decisions.

Exhibit 41: Average Effective Residential Property Tax Rates by County

County	Percentage	County	Percentage	County	Percentage
Allen	1.78%	Greeley	2.26%	Osborne	1.83%
Anderson	2.44%	Greenwood	2.12%	Ottawa	2.10%
Atchison	2.18%	Hamilton	1.88%	Pawnee	2.33%
Barber	1.79%	Harper	2.38%	Phillips	2.02%
Barton	2.31%	Harvey	2.12%	Pottawatomie	1.81%
Bourbon	2.22%	Haskell	1.60%	Pratt	2.60%
Brown	1.86%	Hodgeman	2.38%	Rawlins	2.37%
Butler	2.30%	Jackson	1.91%	Reno	2.60%
Chase	2.26%	Jefferson	2.35%	Republic	2.42%
Chautauqua	1.52%	Jewell	1.34%	Rice	2.04%
Cherokee	1.66%	Johnson	2.21%	Riley	2.71%
Cheyenne	2.25%	Kearny	1.58%	Rooks	2.45%
Clark	2.01%	Kingman	2.15%	Rush	2.15%
Clay	2.34%	Kiowa	1.75%	Russell	2.57%
Cloud	2.20%	Labette	2.15%	Saline	2.22%
Coffey	1.53%	Lane	2.08%	Scott	2.66%
Comanche	1.40%	Leavenworth	2.98%	Sedgwick	1.78%
Cowley	2.10%	Lincoln	2.56%	Seward	1.69%
Crawford	1.80%	Linn	2.04%	Shawnee	2.26%
Decatur	2.38%	Logan	2.57%	Sheridan	1.99%
Dickinson	2.01%	Lyon	2.19%	Sherman	1.95%
Doniphan	0.91%	Marion	2.25%	Smith	2.06%
Douglas	2.70%	Marshall	1.68%	Stafford	1.86%
Edwards	1.83%	McPherson	2.28%	Stanton	1.27%
Elk	3.53%	Meade	1.98%	Stevens	1.26%
Ellis	2.55%	Miami	3.02%	Sumner	2.54%
Ellsworth	2.18%	Mitchell	2.24%	Thomas	2.46%
Finney	2.05%	Montgomery	2.19%	Trego	2.62%
Ford	2.30%	Morris	1.99%	Wabaunsee	2.44%
Franklin	2.32%	Morton	1.47%	Wallace	1.70%
Geary	2.34%	Nemaha	1.85%	Washington	1.51%
Gove	1.60%	Neosho	2.15%	Wichita	1.89%
Graham	2.42%	Ness	1.73%	Wilson	1.62%
Grant	1.41%	Norton	2.06%	Woodson	2.32%
Gray	2.08%	Osage	2.12%	Wyandotte	2.41%
				Total	2.33%

Exhibit 42: Variations in Average Effective Property Tax Rates

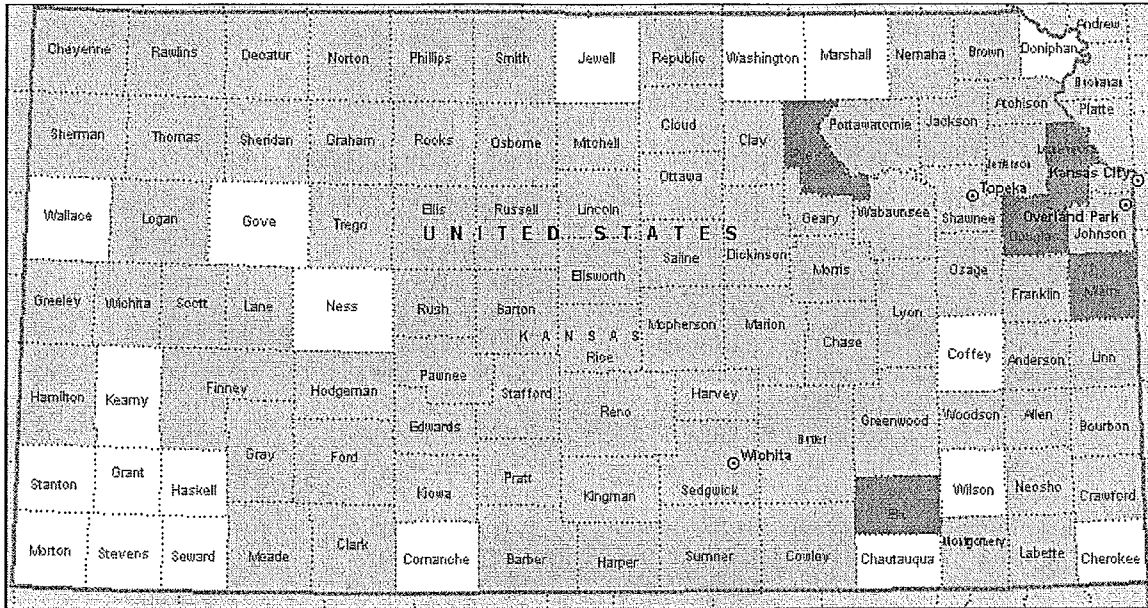
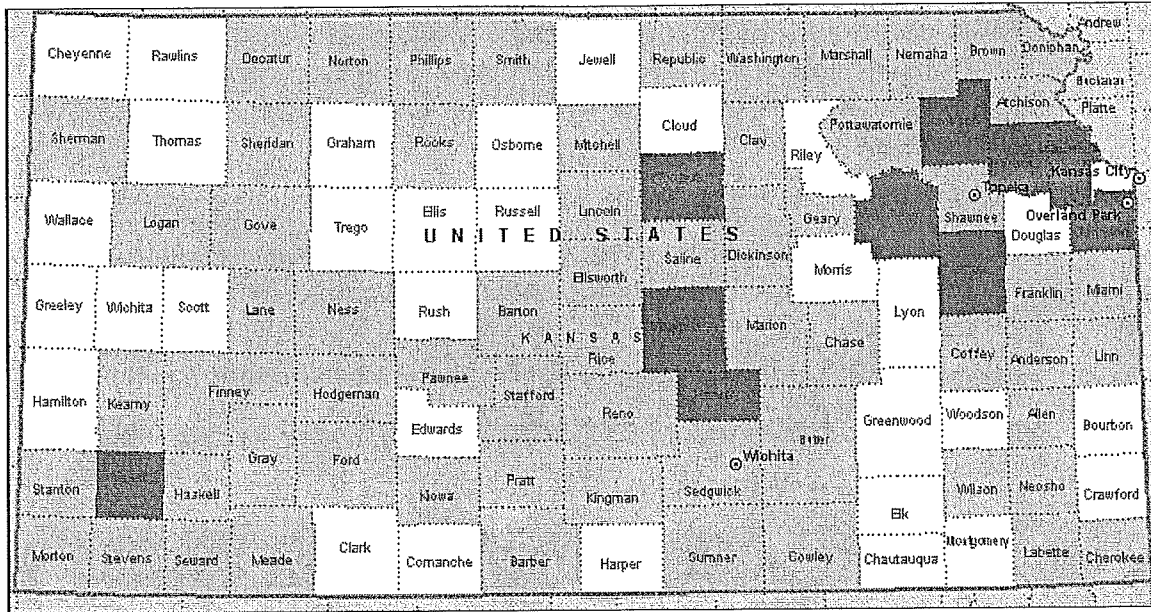


Exhibit 43 shows Suits/Kakwani Indices by county for 2003. The counties with the highest Suits/Kakwani Indices are Wabaunsee (-0.3397), Jefferson (-0.34999), Leavenworth (-0.3512), Johnson (-0.3590), and Jackson (-0.3604). The counties with the lowest Suits/Kakwani Indices are Riley (-0.4369), Greeley (-0.4364), Russell (-0.4356), Crawford (-0.4340), and Wallace (-0.4325). Keep in mind that the negative values indicate that the tax is regressively distributed. Therefore, the indices with the least negative values indicate where the tax has the least regressive effect. Exhibit 44 maps geographic variations in the Suits and Kakwani Indices, respectively. The counties with the highest indices are indicated by the darkest shading, the counties with the lowest indices are indicated by the lightest shading. The remaining counties are indicated by transitional shading. As can be seen from the maps, the counties with the highest indices are clustered in or around urban area such as Kansas City, Topeka, and Wichita, while the counties with the lowest indices are dispersed through western and southeastern parts of the state. This is an indication the Kansas residential property tax is less regressively distributed in the state's urban and suburban areas where higher value residences are more likely to be located, while the tax tends to be more regressively distributed in the state's rural areas where there is less likely to be higher value residences.

Exhibit 43: Residential Property Tax Incidence by County

County	Index	County	Index	County	Index
Allen	(0.3941)	Greeley	(0.4364)	Osborne	(0.4080)
Anderson	(0.3818)	Greenwood	(0.4063)	Ottawa	(0.3667)
Atchison	(0.3801)	Hamilton	(0.4055)	Pawnee	(0.3904)
Barber	(0.3825)	Harper	(0.4094)	Phillips	(0.3850)
Barton	(0.3997)	Harvey	(0.3653)	Pottawatomie	(0.3673)
Bourbon	(0.4115)	Haskell	(0.3825)	Pratt	(0.3975)
Brown	(0.3927)	Hodgeman	(0.3879)	Rawlins	(0.4099)
Butler	(0.3708)	Jackson	(0.3604)	Reno	(0.3989)
Chase	(0.3910)	Jefferson	(0.3499)	Republic	(0.4018)
Chautauqua	(0.4145)	Jewell	(0.4099)	Rice	(0.3814)
Cherokee	(0.4018)	Johnson	(0.3590)	Riley	(0.4369)
Cheyenne	(0.4036)	Kearny	(0.3723)	Rooks	(0.3804)
Clark	(0.4099)	Kingman	(0.3860)	Rush	(0.4070)
Clay	(0.3838)	Kiowa	(0.3954)	Russell	(0.4356)
Cloud	(0.4055)	Labette	(0.3928)	Saline	(0.3823)
Coffey	(0.3844)	Lane	(0.3869)	Scott	(0.4061)
Comanche	(0.4039)	Leavenworth	(0.3512)	Sedgwick	(0.3879)
Cowley	(0.3993)	Lincoln	(0.3860)	Seward	(0.3978)
Crawford	(0.4340)	Linn	(0.3854)	Shawnee	(0.3899)
Decatur	(0.3718)	Logan	(0.4003)	Sheridan	(0.3935)
Dickinson	(0.3711)	Lyon	(0.4050)	Sherman	(0.3891)
Doniphan	(0.3813)	Marion	(0.3711)	Smith	(0.3909)
Douglas	(0.4284)	Marshall	(0.3990)	Stafford	(0.3815)
Edwards	(0.4057)	McPherson	(0.3666)	Stanton	(0.4029)
Elk	(0.4195)	Meade	(0.3891)	Stevens	(0.3701)
Ellis	(0.4297)	Miami	(0.3708)	Sumner	(0.3762)
Ellsworth	(0.3756)	Mitchell	(0.3921)	Thomas	(0.4116)
Finney	(0.3819)	Montgomery	(0.4097)	Trego	(0.4072)
Ford	(0.3857)	Morris	(0.4049)	Wabaunsee	(0.3397)
Franklin	(0.3690)	Morton	(0.3819)	Wallace	(0.4325)
Geary	(0.3984)	Nemaha	(0.3934)	Washington	(0.3964)
Gove	(0.3940)	Neosho	(0.4031)	Wichita	(0.4044)
Graham	(0.4213)	Ness	(0.4008)	Wilson	(0.3972)
Grant	(0.3623)	Norton	(0.3905)	Woodson	(0.4137)
Gray	(0.3785)	Osage	(0.3614)	Wyandotte	(0.4039)
				Total	(0.4026)

Exhibit 44: Variations in Property Tax Indices



Region

The regions with the highest average effective residential property tax rates are Region IX in northwest central Kansas (2.37 percent), Region I in eastern Kansas (2.31 percent), and Region III in east central Kansas (2.31 percent). The regions with the lowest ETRs are Region XI in northeast Kansas (1.74 percent), Region VII in southwest Kansas (1.83 percent), and Region IV in south central Kansas (1.94 percent). Since the residential property tax includes both a uniform state component and non-uniform local government components, regional variations are the result of the distribution of wealth and income in the respective regions, the composition of that income, and local discretionary tax policy decisions. Exhibit 45 shows residential average effective property tax rates by region.

Exhibit 45: Residential Property Tax Incidence by Region

Region	Percentage	Index
I	2.31%	(0.3943)
II	1.97%	(0.4101)
III	2.31%	(0.4022)
IV	1.94%	(0.3894)
V	2.29%	(0.3940)
VI	2.20%	(0.3886)
VII	1.83%	(0.3878)
VIII	2.24%	(0.4036)
IX	2.37%	(0.4157)
X	2.21%	(0.3886)
XI	1.74%	(0.3870)
Total	2.33%	(0.4026)

Exhibit 45 also shows Suits/Kakwani Indices by region for 2003. The regions with the highest Suits/Kakwani Indices are Region XI in northeast Kansas (-0.3870),

Region VII in southwest Kansas (-0.3878), Region VI in southwest central Kansas (-0.3886), and Region X in north central Kansas (-0.3886). The regions with the lowest Suits/Kakwani Indices are Region IX in northwest central Kansas (-0.4157), Region II in southeast Kansas (-0.4101), and Region VIII in northwest Kansas (-0.4036). There does not appear to be a clearly discernable pattern concerning the regional incidence of residential property taxes.

Location

Exhibit 46 shows average effective residential property tax rates by location for 2003. The non-border counties had an effective residential property tax rate of 2.43 percent, while the border counties had an effective residential property tax rate of 2.23 percent.

Exhibit 46: Residential Property Tax Incidence by Location

Location	Percentage	Index
Border	2.23%	(0.4061)
Non-Border	2.43%	(0.3957)
Total	2.33%	(0.4026)

Exhibit 46 also shows Suits/Kakwani Indices by location for 2003. Non-border counties had a Suits/Kakwani Index of -0.3957, while border counties had an index of -0.4061. This indicates that the Kansas residential property tax is less regressively distributed in non-border counties than in border counties.

Concentration

Exhibit 47 shows average effective residential property tax rates by population concentration for 2003. Rural counties (3.47 percent) had the highest effective residential property tax rates, followed by micropolitan counties (2.25 percent), and metropolitan counties (2.18 percent). This indicates that taxpayers in less populated counties are paying higher effective tax rates than those living in more densely populated counties. This may be due in part to the presence of economies of scale in service provision that may be present in more densely populated areas, but less pervasive in less densely populated areas.

Exhibit 47: Residential Property Tax Incidence by Concentration

Concentration	Percentage	Index
Metropolitan	2.18%	(0.3925)
Micropolitan	2.25%	(0.4023)
Rural	3.47%	(0.3974)
Total	2.33%	(0.4026)

Exhibit 47 also shows Suits/Kakwani Indices by population concentration for 2003. Metropolitan counties had the highest Index (-0.3925), followed by rural counties (-0.3974), and micropolitan counties (-0.4023). This indicates that the Kansas residential property tax is less regressively distributed in the metropolitan areas of the state than in the micropolitan areas.

Population

Exhibit 48 shows average effective residential property tax rates by population quintile for 2003. The first population quintile (2.19 percent) had the highest effective residential property rates, followed by the second quintile (2.09 percent), the fifth quintile

(2.08 percent), the third quintile (2.06 percent), and the fourth quintile (1.97 percent). This indicates that taxpayers in the most heavily populated and least heavily counties pay the higher ETRs than those in moderately populated counties.

Exhibit 48: Residential Property Tax Incidence by Population

Quintile	Percentage	Index
First	2.19%	(0.4001)
Second	2.09%	(0.3897)
Third	2.06%	(0.3933)
Fourth	1.97%	(0.3967)
Fifth	2.08%	(0.4066)
Total	2.33%	(0.4026)

Exhibit 48 also shows Suits/Kakwani Indices by population quintile for 2003. The second quintile (-0.3897) had the highest Index, followed by the third quintile (-0.3933), the fourth quintile (-0.3967), the first quintile (-0.4001), and the fifth quintile (-0.4066). Generally, this indicates that the Kansas residential property tax is less regressively distributed in moderately populated counties than in either heavily or lightly populated counties.

Income

Exhibit 49 shows average effective individual income tax rates by income quintile for 2003. The second income quintile (2.51 percent) had the highest effective residential property tax rates, followed by the third quintile (2.31 percent), the first quintile (2.09 percent), the fourth quintile (2.09 percent), and the fifth quintile (2.08 percent). This indicates that taxpayers in the higher income counties paid the higher ETRs than those in lower income counties.

Exhibit 49: Residential Property Tax Incidence by Income

Quintile	Percentage	Index
First	2.09%	(0.3931)
Second	2.51%	(0.3971)
Third	2.31%	(0.4086)
Fourth	2.09%	(0.3952)
Fifth	2.08%	(0.3818)
Total	2.33%	(0.4026)

Exhibit 49 also shows Suits/Kakwani Indices by income quintile for 2003. The fifth quintile (-0.3818) had the highest index, followed by the first quintile (-0.3931), the fourth quintile (-0.3952), the second quintile (-0.3971), and the third quintile (-0.4086). Generally, this indicates that the Kansas residential property tax is less regressively distributed in lower and higher income counties than in moderate income counties.

Retail Sales Taxes

The Kansas retail sales tax includes both state and local components. Kansas state and local retail sales taxes accounted for \$2.2 billion of revenue in fiscal year 2003. This amounts to 34.2 percent of all state and local taxes (*Kansas Tax Facts*, 2000, 2005).

The base for state retail sales taxes includes gross receipts from retail sales of tangible personal property and certain services. The present rate for state sales taxes is 5.30 percent on most taxable transactions (*Kansas Tax Facts*, 2000, 2005). Appendix F presents total state sales tax collections by county.

The base for local sales taxes includes the same application and exemptions as state sales tax, with the exception of most residential utility services, which are subject to local taxes but exempt from the state tax. Cities and counties may levy a tax up to a normal maximum of 2.0 percent, subject to several exceptions. Sales taxes of up to 1.0 percent may be used for general purposes, but the additional authority (up to 1.0 percent) normally must be used only for the financing of "health care services." A city may impose a tax earmarked for health care only if the county has no such tax. Moreover, any such city tax expires immediately upon the imposition of a county health care sales tax. The Washburn University Board of Regents also has authority to impose a tax of up to 0.65 percent throughout Shawnee County (*Kansas Tax Facts*, 2000, 2005).

Estimation of Kansas Retail Sales Tax Liability

For the purposes of this study, hypothetical retail sales tax liabilities were computed for five household characteristics and 10 income groupings for each of the 105 Kansas counties and five county groupings. The county groupings used were:

- Region,
- Location: Border or non-border,
- Concentration: Metropolitan, micropolitan, or rural,
- Population, and
- Income.

Data on consumer expenditures were obtained from the 2003 Consumer Expenditure Survey (CES) conducted by the U.S. Bureau of Labor Statistics. The CES consists of two surveys—the quarterly Interview survey and the Diary survey—that provide information on the buying habits of American consumers, including data on their expenditures, income, and consumer unit characteristics. The surveys target the total non-institutionalized population of the United States. The data are collected in independent quarterly Interview and weekly Diary surveys of approximately 7,500 sample households. Each survey has its own independent sample, and each collects data on household income and socioeconomic characteristics. The Interview survey includes monthly out-of-pocket expenditures such as housing, apparel, transportation, health care, insurance, and entertainment. The Diary survey includes weekly expenditures of frequently purchased items such as food and beverages, tobacco, personal care products, and nonprescription drugs and supplies. The major categories of items incorporated in the CES include:

- Food
 - Food at home

- Cereals and bakery products
 - Meats, poultry, fish, and eggs
 - Dairy products
 - Fruits and vegetables
 - Other food at home
 - Food away from home
- Alcoholic beverages
- Housing
 - Shelter
 - Utilities, fuels, & public services
 - Household operations
 - Housekeeping supplies
 - Household furnishings & equip.
- Apparel and services
- Transportation
 - Vehicle purchases (net outlay)
 - Other vehicle expenses
- Health care
- Entertainment
 - Fees and admissions
 - TVs, radios, & sound equip.
 - Pets, toys, & playground equip.
 - Other entertainment supplies, equip., & services
- Personal care products & services
- Reading
- Tobacco products & smoking supplies
- Miscellaneous

Most of these major categories are also broken down into more detailed subgroupings.

Data on income groupings for each county were obtained from the 2000 U.S. Census, Profile of Selected Economic Characteristics (DP-3). The income groupings used were:

- <\$10,000,
- \$10,000-\$14,999,

- \$15,000-\$24,999,
- \$25,000-\$34,999,
- \$35,000-\$49,999,
- \$50,000-\$74,999,
- \$75,000-\$99,999,
- \$100,000-\$149,999,
- \$150,000-\$199,999, and
- \geq \$200,000.

From the average annual household expenditures and income grouping data for each county, a matrix was constructed to estimate the number and percentage of taxpayers with each combination of characteristics in each county. Data for the county groupings were obtained by tabulating across the constituent counties. Exhibit 50 shows the estimated average annual household expenditures by type and income class for the state of Kansas as a whole. Based on this data an average Kansas household spends \$42,742 annually including \$5,593 on food, \$13,653 on housing, \$1,744 on apparel, \$8,041 on transportation, \$2,495 on health care, and \$2,155 on entertainment.

Exhibit 50: Average Annual Household Expenditures by Type and Income

2003 SALES TAXES		\$10,000-	\$15,000-	\$25,000-	\$35,000-	\$50,000-	\$75,000-	\$100,000-	\$150,000-		Total	
KANSAS	<\$10,000	\$14,999	\$24,999	\$34,999	\$49,999	\$74,999	\$99,999	\$149,999	\$199,999	>\$200,000	118,674	42,742
AVERAGE ANNUAL EXPENDITURES	17,643	20,061	26,375	31,983	37,344	53,459	61,543	81,026	99,850	118,674	118,674	42,742
Food	3,097	3,422	4,030	4,666	5,240	7,030	7,694	9,202	10,318	11,435	11,435	5,593
Food at home	1,953	2,425	2,668	2,952	3,141	4,027	4,245	4,619	4,821	5,023	5,023	3,236
Cereals and bakery products	293	365	384	409	442	564	604	613	641	670	670	456
Cereals and cereal products	114	122	131	145	152	189	203	193	206	218	218	155
Bakery products	180	243	253	264	290	375	401	420	436	452	452	301
Meats, poultry, fish, and eggs	489	633	716	792	803	1,053	1,031	1,153	1,214	1,274	1,274	837
Beef	130	169	207	228	236	352	331	325	347	368	368	252
Pork	108	157	165	178	168	193	194	217	222	227	227	171
Other meats	60	88	87	96	100	133	130	136	137	137	137	104
Poultry	91	107	127	135	138	187	190	211	210	208	208	145
Fish and seafood	72	79	92	116	123	151	146	217	251	286	286	125
Eggs	29	33	40	41	40	39	41	48	48	48	48	38
Dairy products	200	252	287	312	344	420	456	484	506	528	528	343
Fresh milk and cream	84	105	120	125	134	159	170	165	169	172	172	132
Other dairy products	116	147	167	187	210	261	287	319	337	356	356	212
Fruits and vegetables	338	428	473	524	537	683	742	829	845	861	861	556
Fresh fruits	100	121	149	166	169	223	251	282	291	300	300	177
Fresh vegetables	109	137	151	176	173	223	251	269	277	286	286	179
Processed fruits	73	95	98	103	106	137	142	161	163	164	164	112
Processed vegetables	57	75	77	80	89	101	99	118	114	111	111	87
Other food at home	633	746	807	915	1,016	1,308	1,412	1,542	1,616	1,690	1,690	1,044
Sugar and other sweets	72	91	105	111	119	148	160	183	192	202	202	123
Fats and oils	54	71	77	83	88	105	110	119	118	118	118	87
Miscellaneous foods	305	367	386	439	504	649	719	770	809	849	849	513
Nonalcoholic beverages	189	203	224	259	277	357	359	390	396	401	401	281
Food prepared by consumer unit on odd/even town trips	6	17	25	29	29	51	65	82	101	120	120	38
Food away from home	1,144	997	1,363	1,714	2,099	3,003	3,449	4,583	5,497	6,411	6,411	2,358
Alcoholic beverages	208	200	229	278	358	587	604	825	1,264	1,703	1,703	442
Housing	6,537	7,457	9,200	10,544	11,994	16,094	18,461	24,962	30,966	36,971	36,971	13,653
Shelter	4,004	4,268	5,295	6,073	6,890	9,296	10,406	14,876	18,496	22,117	22,117	7,921
Owned dwellings	1,503	1,553	2,436	3,107	4,045	6,948	8,251	12,240	15,275	18,310	18,310	5,247
Mortgage interest and charges	634	427	1,021	1,581	2,255	4,293	5,062	7,291	8,877	10,463	10,463	2,947
Property taxes	524	637	744	833	990	1,553	1,868	2,673	3,762	4,850	4,850	1,310
Maintenance, repairs, insurance, other expenses	490	490	671	693	800	1,103	1,322	2,277	2,637	2,997	2,997	989
Rented dwellings	2,339	2,591	2,711	2,787	2,592	1,850	1,535	1,417	1,254	1,090	1,090	2,220
Other lodging	163	123	149	179	254	498	621	1,218	1,968	2,717	2,717	455
Utilities, fuels, & public services	1,552	1,945	2,293	2,530	2,786	3,325	3,606	4,021	4,495	4,969	4,969	2,820
Natural gas	198	295	323	338	366	446	470	589	696	802	802	387
Electricity	606	749	867	951	1,035	1,170	1,261	1,325	1,496	1,667	1,667	1,021
Fuel oil and other fuels	54	85	91	100	107	136	156	174	184	193	193	112
Telephone services	539	608	758	856	951	1,168	1,270	1,441	1,552	1,662	1,662	970
Water and other public services	156	208	255	286	328	406	450	492	569	646	646	330
Household operations	187	337	406	432	505	831	1,040	1,643	2,417	3,191	3,191	730
Personal services	52	144	182	156	195	373	499	751	918	1,085	1,085	303
Other household expenses	135	194	224	276	310	458	541	892	1,499	2,106	2,106	427
Housekeeping supplies	259	348	418	460	518	699	833	1,078	1,234	1,390	1,390	582
Laundry and cleaning supplies	80	103	136	134	135	193	220	168	203	239	239	145
Other household products	122	158	178	209	257	317	410	621	712	803	803	287
Postage and stationery	56	88	104	118	126	190	205	290	319	348	348	149
Household furnishings & equip.	538	558	788	1,050	1,296	1,945	2,577	3,346	4,325	5,304	5,304	1,600
Household textiles	41	44	79	86	112	161	197	275	298	321	321	126
Furniture	118	126	174	250	303	536	724	886	1,218	1,551	1,551	419
Floor coverings	18	37	13	23	30	50	78	167	229	292	292	54
Major appliances	63	101	131	179	198	227	289	319	475	632	632	205
Small appliances, miscellaneous household wares	47	63	74	74	74	121	152	151	226	302	302	95
Miscellaneous household equipment	255	202	330	438	580	850	1,136	1,551	1,878	2,205	2,205	701

Exhibit 50 (Continued)

2003 SALES TAXES	<\$10,000	\$10,000- \$14,999	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	>=\$200,000	Total
KANSAS											
Apparel and services	913	912	1,091	1,308	1,509	2,258	2,548	3,118	4,101	5,083	1,744
Men and boys	216	137	203	284	353	519	624	658	897	1,135	385
Men, 16 and over	171	79	146	210	269	400	494	521	698	874	294
Boys, 2 to 15	45	58	57	75	84	120	130	137	199	261	91
Women and girls	321	410	431	522	600	968	1,066	1,239	1,672	2,104	699
Women, 16 and over	279	360	357	441	511	795	865	1,056	1,420	1,783	588
Girls, 2 to 15	42	50	74	81	90	172	201	183	252	321	110
Children under 2	36	46	67	76	85	111	134	162	159	155	86
Footwear	241	216	255	257	266	404	405	483	469	455	311
Other apparel products and services	100	102	137	170	206	257	321	577	905	1,234	263
Transportation	2,685	3,130	4,824	6,294	7,461	11,098	12,418	14,982	15,890	16,799	8,041
Vehicle purchases (net outlay)	1,115	1,397	2,098	2,936	3,475	5,553	6,266	7,614	7,648	7,683	3,871
Cars and trucks, new	399	750	877	1,353	1,448	3,096	4,006	5,370	5,687	6,003	2,154
Cars and trucks, used	686	639	1,222	1,564	1,967	2,357	2,125	2,081	1,858	1,836	1,649
Other vehicles	61	7		38	60	100	136	163	104	44	68
Gasoline and motor oil	590	652	980	1,181	1,402	1,787	1,950	2,129	2,131	2,133	1,353
Other vehicle expenses	810	952	1,518	1,916	2,316	3,318	3,687	4,402	4,766	5,130	2,416
Vehicle finance charges	107	94	180	295	383	593	691	699	652	605	383
Maintenance and repairs	246	294	466	528	631	860	989	1,137	1,228	1,320	657
Vehicle insurance	298	444	661	815	942	1,221	1,353	1,592	1,621	1,651	929
Vehicle rental, leases, licenses, other charges	120	212	212	277	359	644	654	975	1,265	1,555	447
Public transportation	170	129	230	263	270	441	516	838	1,345	1,853	400
Health care	1,130	1,834	2,151	2,373	2,545	2,756	3,018	3,472	3,959	4,447	2,495
Health insurance	570	975	1,118	1,230	1,313	1,431	1,489	1,694	1,904	2,115	1,267
Medical services	210	340	398	521	626	717	874	931	1,201	1,470	612
Drugs	301	456	539	513	503	477	501	650	643	636	501
Medical supplies	51	64	96	111	105	132	155	198	212	226	115
Entertainment	702	716	1,232	1,630	1,834	2,803	3,425	4,096	5,622	7,147	2,155
Fees and admissions	152	105	183	260	338	636	784	1,218	1,908	2,599	511
TVs, radios, & sound equip.	354	397	522	610	713	921	1,031	1,225	1,457	1,689	745
Pets, toys, & playground equip.	117	156	329	370	369	500	592	724	822	920	411
Other entertainment sply., equip., & services	118	58	199	390	415	747	1,019	931	1,435	1,939	488
Personal care products & services	263	335	373	418	493	680	797	1,007	1,206	1,405	559
Reading	51	72	86	100	117	162	191	261	316	372	133
Education	782	361	292	286	360	728	969	2,129	3,186	4,243	792
Tobacco products & smoking sply.	209	257	315	324	369	335	342	251	228	204	307
Miscellaneous	302	292	464	528	619	835	797	1,116	1,245	1,373	658
Cash contributions	427	519	753	1,021	1,104	1,505	1,900	2,468	5,501	8,534	1,458
Personal insurance and pensions	341	554	1,338	2,216	3,344	6,591	8,383	13,141	16,050	18,958	4,710
Life and other personal insurance	111	142	236	249	314	460	575	837	1,397	1,958	414
Pensions and Social Security	230	412	1,102	1,967	3,031	6,132	7,808	12,305	14,653	17,001	4,296

Next the total value of income for each combination of characteristics was estimated based on the midpoint of each income grouping. From this, the proportion of income for each combination of characteristics was derived. Finally, the total value of income attributed to each combination of characteristics was adjusted based on the total value of 2003 Kansas Adjusted Gross Income obtained from the *Annual Statistical Report (2005)* of the Kansas Department of Revenue.

Retail sales tax liability per household was estimated in a similar fashion. First, the taxability of each category of consumer expenditure was established based on Kansas law in 2003. From this, average taxable expenditures per household were established for each income class.

Retail sales taxes per household were computed for each income class based on estimated taxable expenditures based on the CES and average countywide sales tax rates for 2003 computed from the Kansas Department of Revenue *Sales Tax Reports (2003)*. These average tax rates were computed based on a weighted average of retail sales within each county.

Once average tax liabilities per household were estimated, total taxes were estimated based on respective combination of consumption categories and income classes. From this, the percentage of taxes paid by taxpayers with each of the

combinations of characteristics was determined. Based on this, total retail sales tax liabilities obtained from the Kansas Department of Revenue *Annual Statistical Report* (2005) were allocated based on property and income characteristics. Once average tax liabilities per household were estimated for each combination of taxpayer characteristics, total taxes were estimated based on the number of taxpayers with the respective combination of characteristics. From this, the percentage of taxes paid by taxpayers with each of the combinations of characteristics was determined. Total individual income tax liabilities obtained from the Kansas Department of Revenue *Sales Tax Reports* (2003) were then allocated based on property characteristics and income class.

Incidence of Kansas Retail Sales Taxes

Exhibit 51 presents Kansas retail sales tax incidence by expenditure category and income class. The first section of the table shows the average annual taxes paid by Kansas households for the respective expenditure categories based on income. Based on these data an average Kansas household pays \$1,595 in retail sales taxes annually. The largest amount goes to housing (\$416), food (\$395), and transportation (\$352).

The second section of the table shows the average effective tax rates paid by Kansas households with the respective combinations of household and income characteristics. In agreement with most incidence studies, this analysis finds the consumer portion of the sales tax to be regressive, especially at low-income levels. This is because the share of income represented by taxable consumption tends to be smaller for high-income households than for low-income ones. Hence, tax burdens as a proportion of income tend to decline as income increases. Average effective tax rates are computed as a percentage of Kansas adjusted gross income. The average effective tax rate for the state as a whole is 3.7 percent. For 2003, the effective consumer sales tax rate for the lowest income group was 16.5 percent, compared to the rate for the highest income group of 2.3 percent.

As a basis of comparison the *Minnesota Tax Incidence Study* (2005) found an average effective state and local retail sales rate on purchases by individuals of 1.9 percent, with the lowest income population group (\$8,354 and under) paying an effective rate of 5.2 percent and the highest income population group (\$102,426 and over) paying an ETR of 1.3 percent. According to *Texas Tax Exemptions and Tax Incidence* (2005) that state's effective average limited sales and use tax rate ranged from 10.0 percent for the lowest income group (less than \$12,820) to the highest income population group (\$135,599 and over) paying an ETR of 1.6 percent. The *Wisconsin Tax Incidence Study* (2004) found that households paid 2.1 percent of their income on sales taxes. The lowest income households paid 4.0 percent of their income in sales taxes, whereas the highest income households paid 1.5 percent of their income in sales taxes.

The last section of the table shows information used to assess the overall incidence of the retail sales tax. The data for this section are derived from the above sections. Both the Suits Index (-0.1730) and the Kakwani Index (-0.1643) indicate the Kansas retail sales tax is modestly regressive. The *Minnesota Tax Incidence Study* (2005) found a Suits Index of -0.143 for that state's state and local sales tax. Similarly, *Texas Tax Exemptions and Tax Incidence* (2005) found a Suits Index of -0.18 for that

state's limited sales and use tax, while the *Wisconsin Tax Incidence Study* reported a Suits Index of -0.134 and a Kakwani Index of -0.099 for consumer purchases. Retail sales taxes in Kansas tend to be more regressive than many states because of the base of the tax is relatively broad and has relatively few major exemptions for such as for food and clothing. Note that there is a comparable table for each of the 105 counties and five county groupings contained in the Detailed Appendix.

Exhibit 51: Retail Sales Tax Incidence

2003 SALES TAXES	<\$10,000	\$10,000- \$14,999	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	>\$200,000	Total
KANSAS											
AVG. TAXES PER HOUSEHOLD	706	795	1,029	1,245	1,433	2,036	2,307	2,853	3,405	3,958	1,595
Food	219	242	285	330	370	497	544	651	729	808	395
Food at home	138	171	189	209	222	285	300	327	341	355	228
Cereals and bakery products	21	26	27	29	31	40	43	43	45	47	32
Meats, poultry, fish, and eggs	35	45	51	56	57	74	73	82	86	90	59
Dairy products	14	18	20	22	24	.30	32	34	36	37	24
Fruits and vegetables	24	30	33	37	38	48	52	59	60	61	39
Other food at home	45	53	57	65	72	92	100	109	114	119	74
Food away from home	81	70	96	121	148	212	244	324	389	453	167
Alcoholic beverages	15	14	16	20	25	41	43	58	89	120	31
Housing	187	224	274	318	365	489	578	746	956	1,165	416
Shelter	11	9	10	13	18	35	44	86	139	192	32
Utilities, fuels, & public services	110	137	162	179	197	235	255	284	318	351	199
Household operations	10	14	16	20	22	32	38	63	106	149	30
Housekeeping supplies	18	25	30	33	37	49	59	76	87	98	41
Household furnishings & equip.	38	39	56	74	92	137	182	237	306	375	113
Apparel and services	64	64	77	92	107	160	180	220	290	359	123
Transportation	110	128	196	266	316	499	559	687	717	746	352
Vehicle purchases (net outlay)	81	99	148	209	246	393	443	538	541	543	274
Other vehicle expenses	29	29	48	57	70	106	116	149	176	203	78
Health care	4	5	7	8	7	9	11	14	15	16	8
Entertainment	50	51	87	115	130	198	242	290	397	505	152
Fees and admissions	11	7	13	18	24	45	55	86	135	184	36
TVs, radios, & sound equip.	25	28	37	43	50	65	73	87	103	119	53
Pets, toys, & playground equip.	8	11	23	26	26	35	42	51	58	65	29
Other entertainment sply, equip., & services	4	4	14	28	29	53	72	66	101	137	34
Personal care products & services	19	24	26	30	35	48	56	71	85	99	40
Reading	4	5	6	7	8	11	14	18	22	26	9
Tobacco products & smoking sply.	15	18	22	23	26	24	24	18	16	14	22
Miscellaneous	21	21	33	37	44	59	56	79	88	97	47
AVG. TAX RATE BASED ON INC.	16.5%	7.4%	6.0%	4.8%	3.9%	3.8%	3.1%	2.7%	2.3%	2.3%	3.7%
CUMULATIVE % OF HOUSEHOLDS	0.0856	0.1494	0.2871	0.4271	0.6080	0.8111	0.9073	0.9678	0.9833	1.0000	
CUMULATIVE % OF INCOME	0.0085	0.0242	0.0786	0.1617	0.3136	0.5645	0.7308	0.8804	0.9340	1.0000	
CUMULATIVE % OF TAX	0.0374	0.0689	0.1567	0.2648	0.4254	0.6817	0.8193	0.9263	0.9590	1.0000	
KAKWANI INDEX	(0.0012)	(0.0023)	(0.0085)	(0.0127)	(0.0194)	(0.0233)	(0.0099)	(0.0041)	(0.0005)	(0.0002)	(0.1643)
SUITS INDEX	(0.0001)	(0.0006)	(0.0033)	(0.0075)	(0.0163)	(0.0287)	(0.0171)	(0.0100)	(0.0019)	(0.0008)	(0.1730)

County

Exhibit 52 shows average effective retail sales tax rates by county for 2003. The counties with the highest ETRs are Seward (6.42 percent), Ellis (5.70 percent), Geary (5.68 percent), Pratt (5.64 percent), and Saline (5.62 percent). The counties with the lowest ETRs are Doniphan (1.07 percent), Jefferson (1.20 percent), Wabaunsee (1.30 percent), Clark (1.38 percent), and Rush (1.53 percent). Exhibit 53 maps geographic variations in effective retail sales tax rates. The counties with the highest ETRs are indicated by the darkest shading, the counties with the lowest ETRs are indicated by the lightest shading. The remaining counties are indicated by transitional shading. As can be seen from the map, the counties with the highest ETRs are primarily in the micropolitan areas.

Exhibit 52: Average Effective Retail Sales Tax Rates by County

County	Percentage	County	Percentage	County	Percentage
Allen	3.93%	Greeley	3.02%	Osborne	3.32%
Anderson	3.03%	Greenwood	2.52%	Ottawa	1.53%
Atchison	3.84%	Hamilton	3.14%	Pawnee	2.87%
Barber	4.42%	Harper	3.28%	Phillips	3.30%
Barton	5.30%	Harvey	2.10%	Pottawatomie	5.33%
Bourbon	4.00%	Haskell	2.43%	Pratt	5.64%
Brown	3.34%	Hodgeman	1.54%	Rawlins	2.37%
Butler	2.09%	Jackson	2.82%	Reno	4.88%
Chase	2.29%	Jefferson	1.20%	Republic	3.11%
Chautauqua	2.23%	Jewell	1.95%	Rice	2.49%
Cherokee	2.52%	Johnson	3.49%	Riley	4.72%
Cheyenne	3.99%	Kearny	1.59%	Rooks	3.42%
Clark	1.38%	Kingman	1.88%	Rush	1.53%
Clay	3.66%	Kiowa	1.88%	Russell	3.80%
Cloud	4.97%	Labette	4.10%	Saline	5.62%
Coffey	2.14%	Lane	2.03%	Scott	3.41%
Comanche	2.67%	Leavenworth	2.94%	Sedgwick	3.74%
Cowley	2.94%	Lincoln	2.24%	Seward	6.42%
Crawford	4.18%	Linn	1.96%	Shawnee	4.40%
Decatur	2.29%	Logan	3.56%	Sheridan	2.72%
Dickinson	3.48%	Lyon	4.27%	Sherman	4.91%
Doniphan	1.07%	Marion	2.38%	Smith	2.46%
Douglas	4.06%	Marshall	3.05%	Stafford	2.21%
Edwards	2.10%	McPherson	3.21%	Stanton	1.84%
Elk	2.50%	Meade	2.50%	Stevens	2.33%
Ellis	5.70%	Miami	2.91%	Sumner	2.11%
Ellsworth	2.53%	Mitchell	4.04%	Thomas	5.23%
Finney	5.11%	Montgomery	4.72%	Trego	3.44%
Ford	5.51%	Morris	2.68%	Wabaunsee	1.30%
Franklin	3.74%	Morton	2.96%	Wallace	2.08%
Geary	5.68%	Nemaha	2.71%	Washington	1.97%
Gove	3.83%	Neosho	5.27%	Wichita	2.16%
Graham	4.09%	Ness	4.01%	Wilson	2.81%
Grant	3.93%	Norton	3.00%	Woodson	2.55%
Gray	1.96%	Osage	1.73%	Wyandotte	4.12%
				Total	3.73%

Exhibit 53: Variations in Average Effective Sales Tax Rates

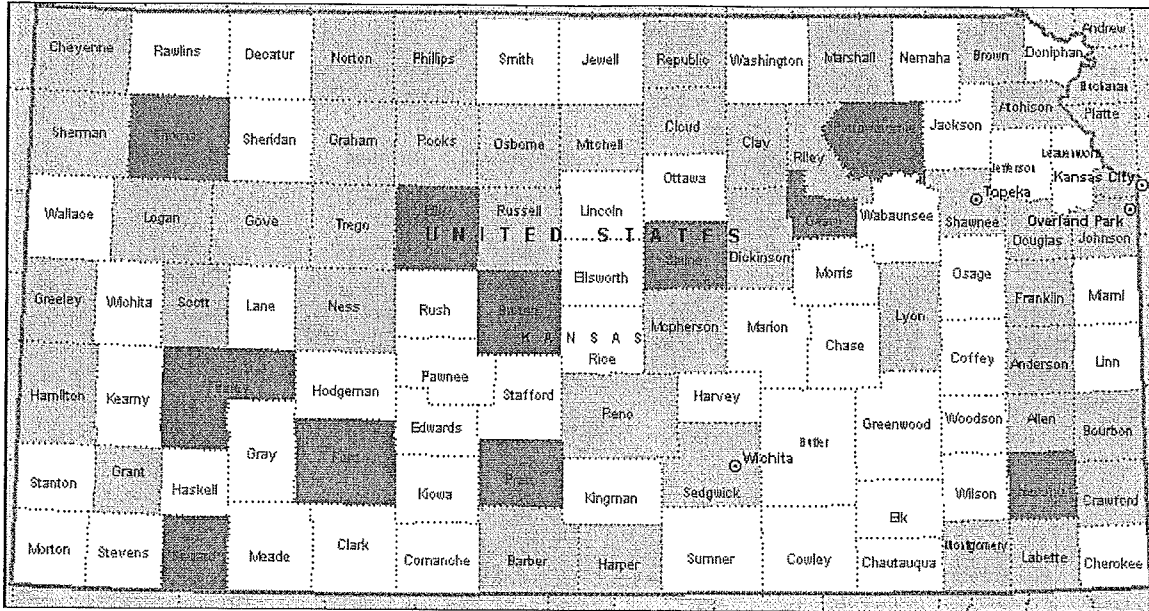


Exhibit 54 shows Suits and Kakwani Indices by county for 2003. The counties with the highest Suits Indices are Wabaunsee (-0.1409), Jefferson (-0.1444), Johnson (-0.1459), Leavenworth (-0.1464), and Jackson (-0.1522). The counties with the highest Kakwani Indices are Wabaunsee (-0.1359), Johnson (-0.1378), Jefferson (-0.1381), Leavenworth (-0.1389), and Jackson (-0.1468). The counties with the lowest Suits Indices are Russell (-0.2018), Woodson (-0.2004), Crawford (-0.1995), Riley (-0.1974), and Chautauqua (-0.1958). The counties with the lowest Kakwani Indices are Woodson (-0.1961), Russell (-0.1948), Crawford (-0.1928), Elk (-0.1908), and Chautauqua (-0.1902). Exhibits 55 and 56 map geographic variations in the Suits and Kakwani Indices, respectively. The counties with the highest indices are indicated by the darkest shading, the counties with the lowest indices are indicated by the lightest shading. The remaining counties are indicated by transitional shading. As can be seen from the map, the counties with the highest indices surround urban areas such as Kansas City, Lawrence, Topeka, and Wichita. This is an indication the Kansas retail sales tax is less regressively distributed in the state's suburban areas. This may be due to the presence of a greater proportion of higher income households and the location of regional shopping malls in suburban areas.

Exhibit 54: Retail Sales Tax Incidence by County

County	Suits	Kakwani	County	Suits	Kakwani	County	Suits	Kakwani
Allen	(0.1779)	(0.1739)	Greeley	(0.1927)	(0.1822)	Osborne	(0.1918)	(0.1867)
Anderson	(0.1689)	(0.1648)	Greenwood	(0.1853)	(0.1805)	Ottawa	(0.1566)	(0.1511)
Atchison	(0.1674)	(0.1631)	Hamilton	(0.1820)	(0.1756)	Pawnee	(0.1716)	(0.1646)
Barber	(0.1709)	(0.1659)	Harper	(0.1868)	(0.1813)	Phillips	(0.1675)	(0.1624)
Barton	(0.1799)	(0.1741)	Harvey	(0.1540)	(0.1477)	Pottawatomie	(0.1549)	(0.1488)
Bourbon	(0.1868)	(0.1813)	Haskell	(0.1650)	(0.1578)	Pratt	(0.1756)	(0.1695)
Brown	(0.1752)	(0.1714)	Hodgeman	(0.1713)	(0.1662)	Rawlins	(0.1859)	(0.1800)
Butler	(0.1577)	(0.1495)	Jackson	(0.1522)	(0.1468)	Reno	(0.1756)	(0.1686)
Chase	(0.1731)	(0.1678)	Jefferson	(0.1444)	(0.1381)	Republic	(0.1860)	(0.1801)
Chautauqua	(0.1958)	(0.1902)	Jewell	(0.1902)	(0.1848)	Rice	(0.1654)	(0.1601)
Cherokee	(0.1821)	(0.1780)	Johnson	(0.1459)	(0.1378)	Riley	(0.1974)	(0.1891)
Cheyenne	(0.1889)	(0.1827)	Kearny	(0.1601)	(0.1535)	Rooks	(0.1735)	(0.1702)
Clark	(0.1832)	(0.1750)	Kingman	(0.1665)	(0.1597)	Rush	(0.1843)	(0.1785)
Clay	(0.1673)	(0.1625)	Kiowa	(0.1764)	(0.1709)	Russell	(0.2018)	(0.1948)
Cloud	(0.1838)	(0.1772)	Labette	(0.1773)	(0.1731)	Saline	(0.1653)	(0.1587)
Coffey	(0.1662)	(0.1598)	Lane	(0.1689)	(0.1623)	Scott	(0.1753)	(0.1657)
Comanche	(0.1875)	(0.1817)	Leavenworth	(0.1464)	(0.1389)	Sedgwick	(0.1649)	(0.1567)
Cowley	(0.1754)	(0.1692)	Lincoln	(0.1756)	(0.1713)	Seward	(0.1745)	(0.1678)
Crawford	(0.1995)	(0.1928)	Linn	(0.1670)	(0.1620)	Shawnee	(0.1666)	(0.1585)
Decatur	(0.1694)	(0.1664)	Logan	(0.1801)	(0.1736)	Sheridan	(0.1761)	(0.1702)
Dickinson	(0.1594)	(0.1546)	Lyon	(0.1801)	(0.1743)	Sherman	(0.1723)	(0.1664)
Doniphan	(0.1686)	(0.1650)	Marion	(0.1621)	(0.1573)	Smith	(0.1779)	(0.1749)
Douglas	(0.1873)	(0.1778)	Marshall	(0.1787)	(0.1723)	Stafford	(0.1699)	(0.1657)
Edwards	(0.1853)	(0.1794)	McPherson	(0.1550)	(0.1487)	Stanton	(0.1751)	(0.1666)
Elk	(0.1956)	(0.1908)	Meade	(0.1694)	(0.1630)	Stevens	(0.1576)	(0.1501)
Ellis	(0.1931)	(0.1848)	Miami	(0.1551)	(0.1469)	Sumner	(0.1597)	(0.1535)
Ellsworth	(0.1616)	(0.1569)	Mitchell	(0.1755)	(0.1688)	Thomas	(0.1804)	(0.1725)
Finney	(0.1651)	(0.1582)	Montgomery	(0.1854)	(0.1799)	Trego	(0.1838)	(0.1790)
Ford	(0.1671)	(0.1605)	Morris	(0.1821)	(0.1758)	Wabaunsee	(0.1409)	(0.1359)
Franklin	(0.1567)	(0.1510)	Morton	(0.1656)	(0.1588)	Wallace	(0.1956)	(0.1873)
Geary	(0.1789)	(0.1725)	Nemaha	(0.1738)	(0.1683)	Washington	(0.1838)	(0.1796)
Gove	(0.1740)	(0.1682)	Neosho	(0.1817)	(0.1757)	Wichita	(0.1804)	(0.1734)
Graham	(0.1930)	(0.1864)	Ness	(0.1785)	(0.1728)	Wilson	(0.1813)	(0.1773)
Grant	(0.1537)	(0.1471)	Norton	(0.1780)	(0.1729)	Woodson	(0.2004)	(0.1961)
Gray	(0.1627)	(0.1553)	Osage	(0.1525)	(0.1476)	Wyandotte	(0.1787)	(0.1727)
						Total	(0.1731)	(0.1643)

Exhibit 55: Variations in Sales Tax Suits Indices

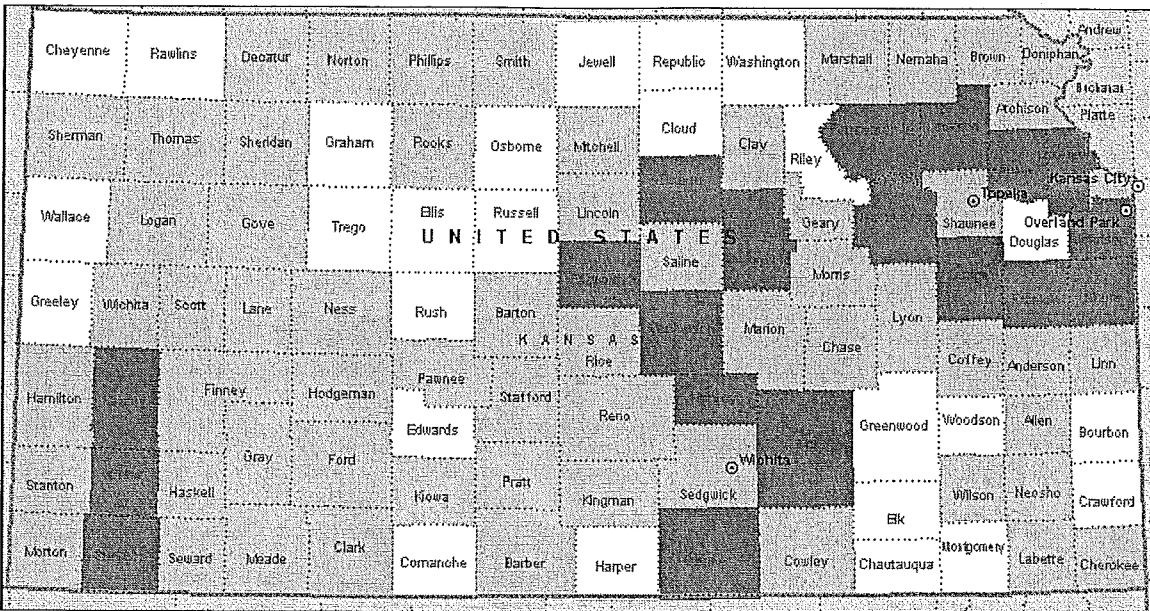
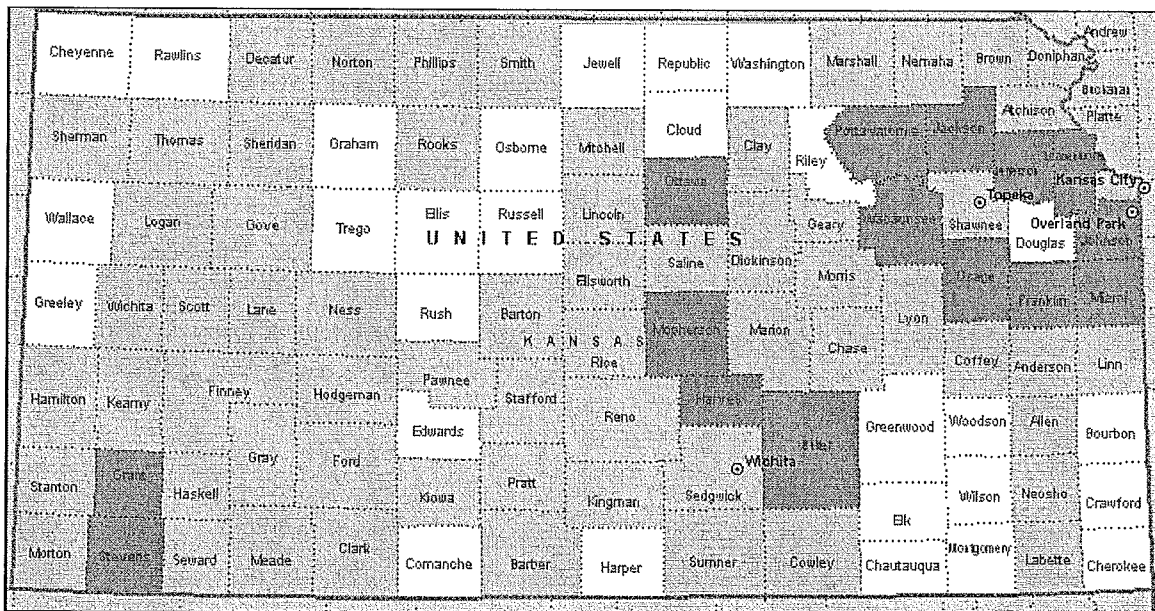


Exhibit 56: Variations in Sales Tax Kakwani Indices



Region

The regions with the highest average effective retail sales tax rates are Region X in north central Kansas (4.72 percent), Region IX in northwest central Kansas (4.45 percent), and Region VII in southwest Kansas (4.43 percent). The regions with the lowest rates are Region XI in northeast Kansas (2.78 percent), Region V in southwest central Kansas (3.38 percent), and Region IV in south central Kansas (3.50 percent). Exhibit 57 shows average effective retail sales tax rates by region.

Exhibit 57: Retail Sales Tax Incidence by Region

Region	Percentage	Suits	Kakwani
I	3.61%	(0.1655)	(0.1560)
II	4.06%	(0.1490)	(0.1246)
III	4.23%	(0.1779)	(0.1714)
IV	3.50%	(0.1664)	(0.1585)
V	3.38%	(0.1738)	(0.1678)
VI	4.33%	(0.1690)	(0.1624)
VII	4.43%	(0.1681)	(0.1610)
VIII	4.01%	(0.1812)	(0.1747)
IX	4.45%	(0.1885)	(0.1819)
X	4.72%	(0.1705)	(0.1641)
XI	2.78%	(0.1708)	(0.1659)
Total	3.73%	(0.1731)	(0.1643)

Exhibit 57 also shows Suits and Kakwani Indices by region for 2003. The regions with the highest Suits Indices are Region II in southeast Kansas (-0.1490), Region I in eastern Kansas (-0.1655), and Region IV in south central Kansas (-0.1664). The regions with the highest Kakwani Indices are Region II (-0.1246), Region I (-0.1560), and Region IV (-0.1585). The regions with the lowest Suits Indices are Region IX in northwest central Kansas (-0.1885), Region VIII in northwest Kansas (-0.1812), and Region III in east central Kansas (-0.1779). The regions with the lowest Kakwani Indices are Region IX (-0.1819), Region VIII (-0.1747), and Region III (-0.1714). It should be kept in mind that negative index values indicate a regressively distributed tax. Therefore, a less negative index value would indicate a less regressively distributed tax. Thus it would appear that the retail sales tax is less regressively distributed in the state's urban areas than in the rural areas.

Location

Exhibit 58 shows average effective retail sales tax rates by location for 2003. The non-border counties had an effective individual income tax rate of 3.92 percent, while the border counties had an effective individual income tax rate of 3.50 percent.

Exhibit 58: Retail Sales Tax Incidence by Location

Location	Percentage	Suits	Kakwani
Border	3.50%	(0.1724)	(0.1627)
Non-Border	3.92%	(0.1620)	(0.1491)
Total	3.73%	(0.1731)	(0.1643)

Exhibit 58 also shows Suits and Kakwani Indices by location for 2003. Non-border counties had a Suits Index of -0.1620, while border counties had an index of -0.1724. Non-border counties had a Kakwani Index of -0.1491, while border counties had an index of -0.1627. This indicates that the Kansas retail sales tax is less regressively distributed in non-border counties than in border counties. This may be due in part to non-border counties likely being less affected by interstate differentials in sales tax rates than border counties.

Concentration

Exhibit 59 shows average effective retail sales tax rates by population concentration for 2003. Micropolitan counties (4.71 percent) had the highest effective retail sales tax rates, followed by rural counties (3.61 percent), and metropolitan counties (3.53 percent). This indicates that taxpayers in moderately populated counties are paying higher effective tax rates than those living in more or less densely populated counties. Again, these patterns are largely due to the distribution of income in the respective region and the composition of that income and the presence or absence of locally imposed sales taxes.

Exhibit 59: Retail Sales Tax Incidence by Concentration

Concentration	Percentage	Suits	Kakwani
Metropolitan	3.53%	(0.1654)	(0.1562)
Micropolitan	4.71%	(0.1776)	(0.1710)
Rural	3.61%	(0.1779)	(0.1724)
Total	3.73%	(0.1731)	(0.1643)

Exhibit 59 also shows Suits and Kakwani Indices by population concentration for 2003. Metropolitan counties had the highest Suits Index (-0.1654), followed by micropolitan counties (-0.1776), and rural counties (-0.1779). Similarly, metropolitan counties also had the highest Kakwani Index (-0.1562), followed by micropolitan counties (-0.1710), and rural counties (-0.1724). Again, this indicates that the Kansas retail sales tax is less regressively distributed in the urban areas of the state than in the rural areas.

Population

Exhibit 60 shows average effective retail sales tax rates by population quintile for 2003. The first population quintile (3.78 percent) had the highest effective retail sales tax rate, followed by the second quintile (3.61 percent), the third quintile (3.09 percent), the fourth quintile (2.67 percent), and the fifth quintile (2.63 percent). This indicates that the ETR seems to increase with population.

Exhibit 60: Retail Sales Tax Incidence by Population

Quintile	Percentage	Suits	Kakwani
First	3.78%	(0.1703)	(0.1612)
Second	3.61%	(0.1705)	(0.1648)
Third	3.09%	(0.1735)	(0.1676)
Fourth	2.67%	(0.1777)	(0.1718)
Fifth	2.63%	(0.1831)	(0.1767)
Total	3.73%	(0.1731)	(0.1643)

Exhibit 60 also shows Suits and Kakwani Indices by population quintile for 2003. The first quintile (-0.1703) had the highest Suits Index, followed by the second quintile (-0.1705), the third quintile (-0.1735), the fourth quintile (-0.1777), and the fifth quintile (-0.1831). Similarly, the first quintile (-0.1612) had the highest Kakwani Index, followed by the second quintile (-0.1648), the third quintile (-0.1676), the fourth quintile (-0.1718), and the fifth quintile (-0.1767). This indicates that the Kansas retail sales tax is less regressively distributed in more populated areas than in less populated areas in the state.

Income

Exhibit 61 shows average effective retail sales tax rates by income quintile for 2003. The third income quintile (3.90 percent) had the highest effective retail sales tax rate, followed by the fourth quintile (3.79 percent), the first quintile (3.72 percent), the second quintile (3.65 percent), and the fifth quintile (2.74 percent). This indicates that taxpayers in moderate income counties paid a higher percentage of their income in sales tax, than did taxpayers in higher income or lower income counties.

Exhibit 61: Retail Sales Tax Incidence by Population

Quintile	Percentage	Suits	Kakwani
First	3.72%	(0.1655)	(0.1562)
Second	3.65%	(0.1714)	(0.1635)
Third	3.90%	(0.1818)	(0.1755)
Fourth	3.79%	(0.1742)	(0.1681)
Fifth	2.74%	(0.1661)	(0.1606)
Total	3.73%	(0.1731)	(0.1643)

Exhibit 61 also shows Suits and Kakwani Indices by income quintile for 2003. The first quintile (-0.1655) had the highest Suits Index, followed by the fifth quintile (-0.1661), the second quintile (-0.1714), the fourth quintile (-0.17472), and the third quintile (-0.1818). Similarly, the first quintile (-0.1562) had the highest Kakwani Index, followed by the fifth quintile (-0.1606), the second quintile (-0.1635), the fourth quintile (-0.1681), and the third quintile (-0.1755). Generally, this indicates that the Kansas retail sales tax is less regressively distributed in higher and lower income areas than in moderate income areas.

Incidence of Combined Individual Income, Residential Property, and Retail Sales Taxes

Exhibit 62 presents the distribution of combined Kansas individual income, residential property, and retail sales taxes by income grouping. The first section of the table shows the effective tax rate paid by households within the respective income groupings. Out of the ten income groupings, the highest effective tax rate paid is by households that earn less than \$10,000 (32.7 percent), while the lowest effective rate paid is for households with \$200,000 or more of income (7.7 percent). Again, it should be kept in mind that the ETRs are computed as a percentage of Kansas adjusted gross income. The average effective tax rate for the state as a whole is 9.2 percent.

As a basis of comparison the *Minnesota Tax Incidence Study* (2005) found an effective average total state and local tax rate on individuals of 8.9 percent, with the lowest income population group (\$8,354 and under) paying an effective tax rate of 10.2 percent, while the highest income population group (\$102,426 and over) paying an effective tax rate of 9.1 percent. According to the *Oregon Tax Incidence Model* (2001) that state's effective average total state and local tax rate on households was 7.1 percent, ranging from 5.9 percent for households earning between \$21,255 and \$128,739 to the highest income group (over \$126,172) paying an ETR of 8.9 percent. The *Wisconsin Tax Incidence Study* (2004) found that the overall tax structure was moderately progressive to proportional for almost all households. The lowest income group paid 9.6 percent of their income in taxes, while households with income between

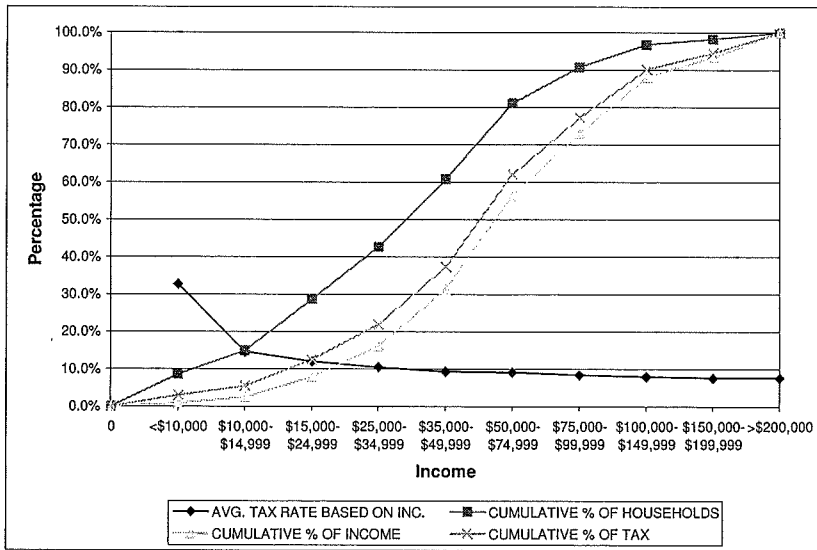
\$93,401 and \$254,200 paid the highest tax rate of 11.9 percent, but the tax rate for the highest income group declined to 10.9 percent.

The next section of the table shows information used to assess the overall incidence of the combined taxes. The data for this section are derived from the above sections. Both the Suits Index (-0.0888) and the Kakwani Index (-0.0892) indicate total Kansas state and local individual income, residential property, and retail sales taxes are slightly regressive. The Minnesota Tax Incidence Study (2005) reported a Suits Index of -0.018 for total state and local taxes, while the *Wisconsin Tax Incidence Study* (2004) reported a Suits Index of 0.006 and a Kakwani Index of 0.013 for total state and local taxes.

The chart at the bottom of the exhibit shows the relationship among the average effective tax rate, the cumulative percentage of households, the cumulative percentage of income, and the cumulative percentage of tax. Note that there is a comparable table for each of the 105 counties and five county groupings contained in the Detailed Appendix.

Exhibit 62: Combined Tax Incidence by Income Class

2003 TOTAL TAXES KANSAS	<\$10,000	\$10,000- \$14,999	\$15,000- \$24,999	\$25,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	>\$200,000	Total
AVG. TAX RATE BASED ON INC.	32.7%	14.6%	12.0%	10.5%	9.3%	9.1%	8.4%	8.0%	7.6%	7.7%	9.2%
CUMULATIVE % OF HOUSEHOLDS	8.6%	14.9%	28.7%	42.7%	60.8%	81.1%	90.7%	96.8%	98.3%	100.0%	
CUMULATIVE % OF INCOME	0.8%	2.4%	7.9%	16.2%	31.4%	56.4%	73.1%	88.0%	93.4%	100.0%	
CUMULATIVE % OF TAX	3.0%	5.5%	12.6%	22.0%	37.3%	62.1%	77.2%	90.1%	94.5%	100.0%	
KAKWANI INDEX	(0.0009)	(0.0017)	(0.0053)	(0.0074)	(0.0107)	(0.0118)	(0.0047)	(0.0019)	(0.0002)	(0.0001)	(0.0892)
SUITS INDEX	(0.0001)	(0.0004)	(0.0021)	(0.0044)	(0.0089)	(0.0145)	(0.0081)	(0.0046)	(0.0009)	(0.0004)	(0.0888)



County

Exhibit 63 shows combined average effective tax rates by county for 2003. The counties with the highest ETRs are Pratt (11.70 percent), Ellis (11.54 percent), Saline (11.06 percent), Seward (10.92 percent), and Thomas (10.85 percent). The counties

with the lowest ETRs are Doniphan (4.25 percent), Jewell (5.82 percent), Kearny (6.24 percent), Chautauqua (6.27 percent), and Washington (6.30 percent). Exhibit 64 maps geographic variations in combined average effective tax rates. The counties with the highest ETRs are indicated by the darkest shading, the counties with the lowest ETRs are indicated by the lightest shading. The remaining counties are indicated by transitional shading.

Exhibit 63: Combined Average Effective Tax Rates by County

County	Percentage	County	Percentage	County	Percentage
Allen	8.51%	Greeley	9.11%	Osborne	7.82%
Anderson	8.15%	Greenwood	7.61%	Ottawa	6.57%
Atchison	8.69%	Hamilton	8.53%	Pawnee	8.06%
Barber	9.09%	Harper	8.65%	Phillips	8.17%
Barton	10.61%	Harvey	7.21%	Pottawatomie	10.30%
Bourbon	8.79%	Haskell	7.80%	Pratt	11.70%
Brown	7.79%	Hodgeman	6.74%	Rawlins	7.52%
Butler	7.88%	Jackson	7.66%	Reno	10.56%
Chase	7.49%	Jefferson	6.59%	Republic	8.00%
Chautauqua	6.27%	Jewell	5.82%	Rice	7.34%
Cherokee	6.39%	Johnson	8.92%	Riley	10.80%
Cheyenne	9.12%	Kearny	6.24%	Rooks	8.64%
Clark	6.40%	Kingman	7.25%	Rush	6.55%
Clay	8.81%	Kiowa	6.60%	Russell	9.22%
Cloud	9.93%	Labette	8.92%	Saline	11.06%
Coffey	6.87%	Lane	7.07%	Scott	9.45%
Comanche	7.07%	Leavenworth	8.85%	Sedgwick	9.10%
Cowley	7.99%	Lincoln	7.29%	Seward	10.92%
Crawford	8.84%	Linn	6.72%	Shawnee	9.99%
Decatur	7.42%	Logan	9.17%	Sheridan	8.20%
Dickinson	8.44%	Lyon	9.46%	Sherman	9.45%
Doniphan	4.25%	Marion	7.63%	Smith	7.41%
Douglas	10.18%	Marshall	7.65%	Stafford	6.89%
Edwards	6.93%	McPherson	8.78%	Stanton	6.34%
Elk	8.51%	Meade	7.55%	Stevens	6.85%
Ellis	11.54%	Miami	9.19%	Sumner	7.69%
Ellsworth	7.73%	Mitchell	9.28%	Thomas	10.85%
Finney	10.19%	Montgomery	9.64%	Trego	8.76%
Ford	10.75%	Morris	7.83%	Wabaunsee	6.74%
Franklin	9.01%	Morton	7.64%	Wallace	6.53%
Geary	10.74%	Nemaha	7.34%	Washington	6.30%
Gove	8.52%	Neosho	10.26%	Wichita	7.23%
Graham	9.48%	Ness	8.73%	Wilson	7.27%
Grant	8.63%	Norton	8.02%	Woodson	7.45%
Gray	7.37%	Osage	6.83%	Wyandotte	8.87%
				Total	9.24%

Exhibit 64: Variations in Combined Average Effective Tax Rates

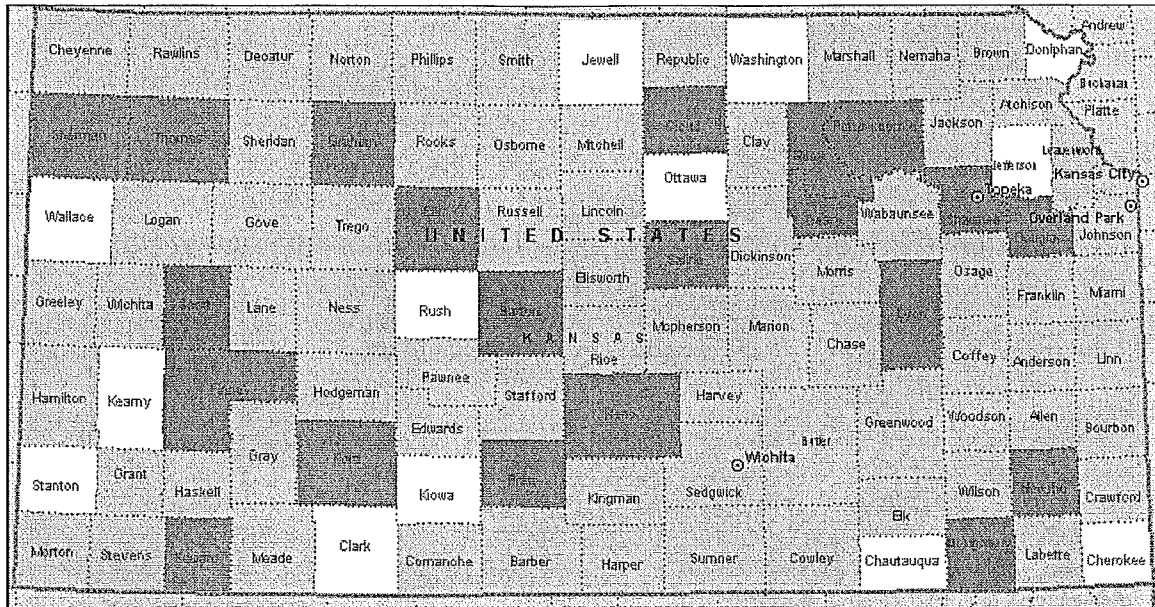


Exhibit 65 shows Suits and Kakwani Indices by county for 2003. Based on the Suits Index total taxes are distributed slightly progressively in six counties: Doniphan (0.0573), Haskell (0.0154), Kearny (0.0144), Stanton (0.0116), Washington (0.0069), and Stevens (0.0016). Based on the Kakwani index total taxes are distributed slightly progressively in only four counties: Doniphan (0.0489), Haskell (0.0120), Kearny (0.0103), and Stanton (0.0073). On the hand, the counties with the lowest Suits Indices are Elk (-0.1292), Wyandotte (-0.1155), Douglas (-0.1121), Ellis (-0.1086), and Riley (-0.1084). The counties with the lowest Kakwani Indices are Elk (-0.1347), Wyandotte (-0.1167), Douglas (-0.1127), Riley (-0.1101), and Ellis (-0.1093). Exhibits 66 and 67 map geographic variations in the Suits and Kakwani Indices, respectively. The counties with the highest indices are indicated by the darkest shading, the counties the lowest indices are indicated by the lightest shading. The remaining counties are indicated by transitional shading.

Exhibit 65: Combined Tax Incidence by County

County	Suits	Kakwani	County	Suits	Kakwani	County	Suits	Kakwani
Allen	(0.0505)	(0.0551)	Greeley	(0.0517)	(0.0542)	Osborne	(0.0580)	(0.0630)
Anderson	(0.0709)	(0.0751)	Greenwood	(0.0408)	(0.0474)	Ottawa	(0.0328)	(0.0374)
Atchison	(0.0714)	(0.0743)	Hamilton	(0.0194)	(0.0239)	Pawnee	(0.0774)	(0.0793)
Barber	(0.0600)	(0.0627)	Harper	(0.0659)	(0.0706)	Phillips	(0.0591)	(0.0628)
Barton	(0.0835)	(0.0853)	Harvey	(0.0641)	(0.0656)	Pottawatomie	(0.0635)	(0.0638)
Bourbon	(0.0883)	(0.0916)	Haskell	0.0154	0.0120	Pratt	(0.0881)	(0.0899)
Brown	(0.0531)	(0.0579)	Hodgeman	(0.0422)	(0.0485)	Rawlins	(0.0697)	(0.0750)
Butler	(0.0485)	(0.0501)	Jackson	(0.0457)	(0.0481)	Reno	(0.0979)	(0.0989)
Chase	(0.0519)	(0.0562)	Jefferson	(0.0439)	(0.0473)	Republic	(0.0906)	(0.0942)
Chautauqua	(0.0227)	(0.0297)	Jewell	(0.0164)	(0.0243)	Rice	(0.0485)	(0.0525)
Cherokee	(0.0454)	(0.0512)	Johnson	(0.0945)	(0.0929)	Riley	(0.1084)	(0.1101)
Cheyenne	(0.0747)	(0.0778)	Kearny	0.0144	0.0103	Rooks	(0.0641)	(0.0688)
Clark	(0.0257)	(0.0314)	Kingman	(0.0359)	(0.0401)	Rush	(0.0379)	(0.0447)
Clay	(0.0729)	(0.0759)	Kiowa	(0.0736)	(0.0756)	Russell	(0.1048)	(0.1084)
Cloud	(0.0949)	(0.0963)	Labette	(0.0705)	(0.0740)	Saline	(0.0844)	(0.0845)
Coffey	(0.0098)	(0.0141)	Lane	(0.0465)	(0.0502)	Scott	(0.0859)	(0.0863)
Comanche	(0.0148)	(0.0207)	Leavenworth	(0.0976)	(0.0976)	Sedgwick	(0.0552)	(0.0556)
Cowley	(0.0569)	(0.0603)	Lincoln	(0.0736)	(0.0785)	Seward	(0.0795)	(0.0793)
Crawford	(0.0757)	(0.0794)	Linn	(0.0469)	(0.0521)	Shawnee	(0.0862)	(0.0861)
Decatur	(0.0454)	(0.0509)	Logan	(0.0819)	(0.0846)	Sheridan	(0.0139)	(0.0196)
Dickinson	(0.0546)	(0.0573)	Lyon	(0.0758)	(0.0785)	Sherman	(0.0882)	(0.0892)
Doniphan	0.0573	0.0489	Marion	(0.0391)	(0.0434)	Smith	(0.0259)	(0.0333)
Douglas	(0.1121)	(0.1127)	Marshall	(0.0391)	(0.0428)	Stafford	(0.0219)	(0.0274)
Edwards	(0.0168)	(0.0230)	McPherson	(0.0565)	(0.0585)	Stanton	0.0116	0.0073
Elk	(0.1292)	(0.1347)	Meade	(0.0343)	(0.0380)	Stevens	0.0016	(0.0004)
Ellis	(0.1086)	(0.1093)	Miami	(0.0954)	(0.0959)	Sumner	(0.0615)	(0.0647)
Ellsworth	(0.0519)	(0.0558)	Mitchell	(0.0790)	(0.0807)	Thomas	(0.1024)	(0.1028)
Finney	(0.0649)	(0.0648)	Montgomery	(0.0870)	(0.0898)	Trego	(0.0905)	(0.0950)
Ford	(0.0863)	(0.0864)	Morris	(0.0326)	(0.0375)	Wabaunsee	(0.0385)	(0.0420)
Franklin	(0.0717)	(0.0734)	Morton	(0.0160)	(0.0185)	Wallace	(0.0305)	(0.0356)
Geary	(0.0907)	(0.0911)	Nemaha	(0.0369)	(0.0413)	Washington	0.0069	(0.0014)
Gove	(0.0425)	(0.0461)	Neosho	(0.0850)	(0.0869)	Wichita	(0.0142)	(0.0194)
Graham	(0.0861)	(0.0899)	Ness	(0.0620)	(0.0652)	Wilson	(0.0150)	(0.0216)
Grant	(0.0254)	(0.0263)	Norton	(0.0420)	(0.0466)	Woodson	(0.0552)	(0.0626)
Gray	(0.0226)	(0.0254)	Osage	(0.0310)	(0.0353)	Wyandotte	(0.1155)	(0.1167)
						Total	(0.0888)	(0.0892)

Exhibit 66: Variations in Combined Tax Suits Indices

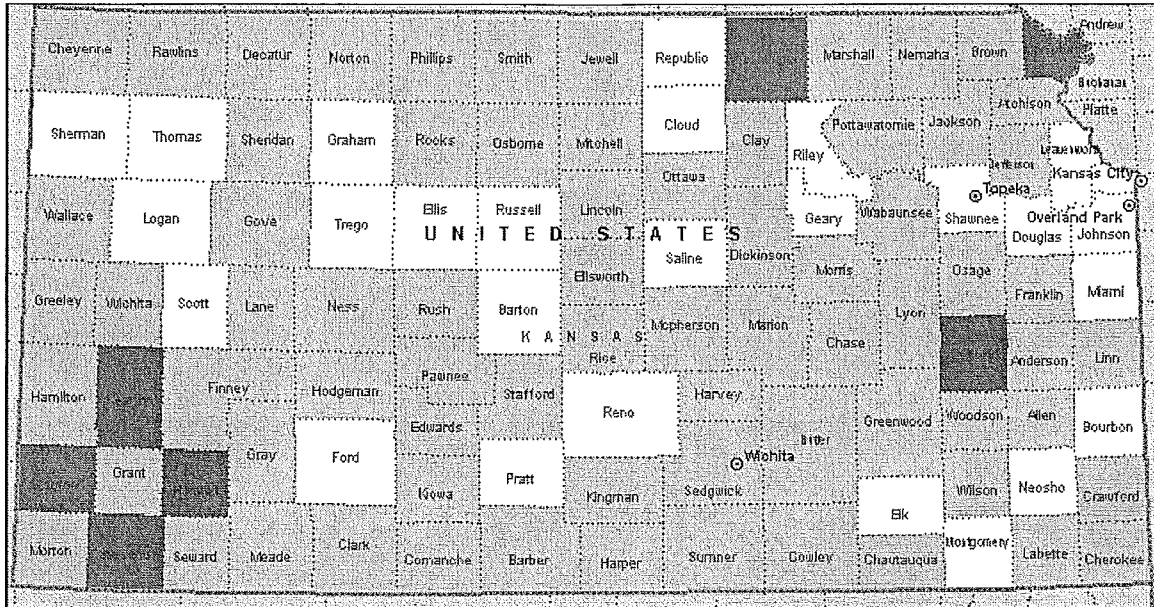
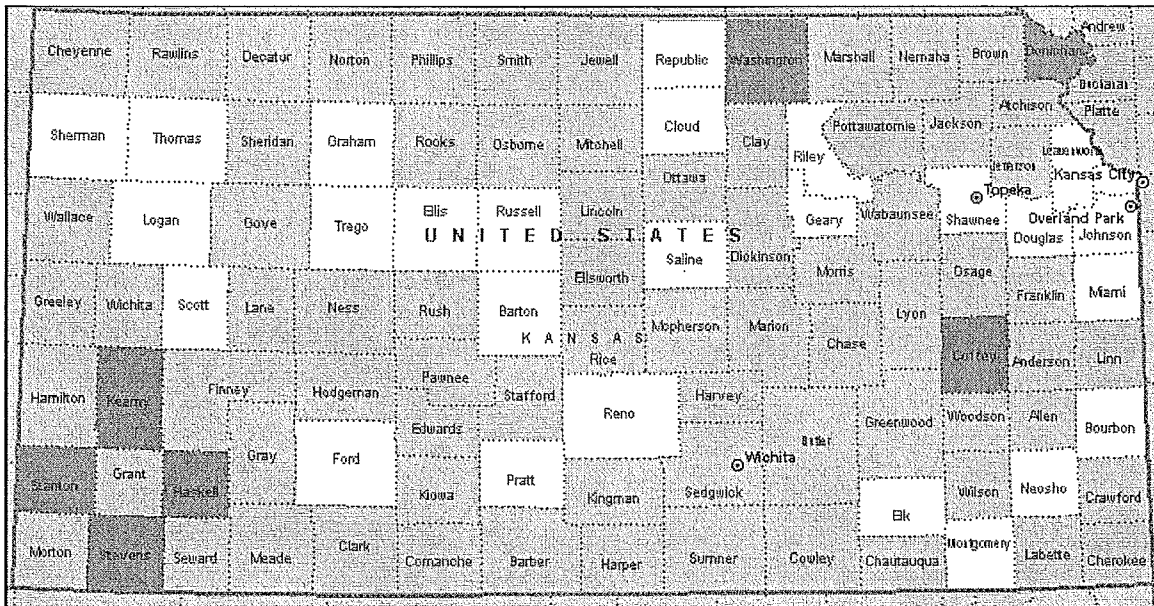


Exhibit 67: Variations in Combined Tax Kakwani Indices



Region

Exhibit 68 shows average effective total tax rates by region for 2003. The regions with the highest ETRs are Region X in northern Kansas (9.99 percent), Region IX in northwest central Kansas (9.88 percent), and Region III in north central Kansas (9.62 percent). The regions with the lowest ETRs are Region XI in northeast Kansas (7.23 percent), Region V in southern Kansas (8.72 percent), and Region II in southeast Kansas (8.73 percent).

Exhibit 68: Combined Tax Incidence by Region

Region	Percentage	Suits	Kakwani
I	9.07%	(0.0995)	(0.0985)
II	8.73%	(0.0512)	(0.0463)
III	9.62%	(0.0786)	(0.0807)
IV	8.90%	(0.0583)	(0.0593)
V	8.72%	(0.0677)	(0.0706)
VI	9.53%	(0.0719)	(0.0731)
VII	9.25%	(0.1324)	(0.1300)
VIII	9.18%	(0.0795)	(0.0819)
IX	9.88%	(0.0872)	(0.0900)
X	9.99%	(0.0802)	(0.0815)
XI	7.23%	(0.0393)	(0.0436)
Total	9.24%	(0.0888)	(0.0892)

Exhibit 68 also shows Suits and Kakwani Indices by region for 2003. The regions with the highest Suits Indices are Region XI in northeast Kansas (-0.0393), Region II in southeast Kansas (-0.0512), and Region IV in south central Kansas (-0.0583). The regions with the highest Kakwani Indices are Region XI (-0.0436), Region II (-0.0463), and Region IV (-0.0593). The regions with the lowest Suits Indices are Region VII in southwestern Kansas (-0.1324), Region I in eastern Kansas (-0.0995), and Region IX in northwest central Kansas (-0.0872). The regions with the lowest Kakwani Indices are Region VII (-0.1300), Region I (-0.0985), and Region IX (-0.0900).

Location

Exhibit 69 shows the combined average effective tax rates by location for 2003. The non-border counties had an ETR of 9.66 percent, while the border counties had an ETR of 8.77 percent.

Exhibit 69: Combined Tax Incidence by Location

Location	Percentage	Suits	Kakwani
Border	8.77%	(0.0970)	(0.0966)
Non-Border	9.66%	(0.0754)	(0.0746)
Total	9.24%	(0.0888)	(0.0892)

Exhibit 69 also shows Suits and Kakwani Indices by location for 2003. Non-border counties had a Suits Index of -0.0754, while border counties had an index of -0.0970. Non-border counties had a Kakwani Index of -0.0746, while border counties had an index of -0.0966. This indicates that combined Kansas state and local taxes are less regressively distributed in non-border counties than in border counties. This may

be due in part to non-border counties being less likely to be affected by interstate differentials in tax rates than border counties.

Concentration

Exhibit 70 shows combined average effective tax rates by population concentration for 2003. Micropolitan counties (10.01 percent) had the highest ETR, followed by rural counties (9.98 percent), and metropolitan counties (8.97 percent). This indicates that taxpayers in moderately populated counties are paying higher effective tax rates than those living in more or less densely populated counties. Again, these patterns are largely due to the distribution of income in the respective region and the composition of that income.

Exhibit 70: Combined Tax Incidence by Concentration

Concentration	Percentage	Suits	Kakwani
Metropolitan	8.97%	(0.0867)	(0.0861)
Micropolitan	10.01%	(0.0807)	(0.0823)
Rural	9.98%	(0.1079)	(0.1113)
Total	9.24%	(0.0888)	(0.0892)

Exhibit 70 also shows Suits and Kakwani Indices by population concentration for 2003. Micropolitan counties had the highest Suits Index (-0.0807), followed by metropolitan counties (-0.0867), and rural counties (-0.1079). Similarly, micropolitan counties also had the highest Kakwani Index (-0.0823), followed by metropolitan counties (-0.0861), and rural counties (-0.1113).

Population

Exhibit 71 shows combined average effective tax rates by population quintile for 2003. The first population quintile (9.21 percent) had the highest ETR, followed by the second quintile (8.59 percent), the third quintile (8.08 percent), the fifth quintile (7.73 percent), and the fourth quintile (7.60 percent). This indicates that the ETR generally increases with population.

Exhibit 71: Combined Tax Incidence by Population

Quintile	Percentage	Suits	Kakwani
First	9.21%	(0.0879)	(0.0876)
Second	8.59%	(0.0641)	(0.0669)
Third	8.08%	(0.0576)	(0.0611)
Fourth	7.60%	(0.0394)	(0.0439)
Fifth	7.73%	(0.0522)	(0.0565)
Total	9.24%	(0.0888)	(0.0892)

Exhibit 71 also shows Suits and Kakwani Indices by population quintile for 2003. The fourth quintile (-0.0394) had the highest Suits Index, followed by the fifth quintile (-0.0522), the third quintile (-0.0576), the second quintile (-0.0641), and the first quintile (-0.0879). Similarly, the fourth quintile (-0.0439) had the highest Kakwani Index, followed by the fifth quintile (-0.0565), the third quintile (-0.0611), the second quintile (-0.0669), and the first quintile (-0.0876). This indicates that combined Kansas state and local taxes are less regressively distributed in less populated areas than in more populated areas in the state.

Income

Exhibit 72 shows combined average effective tax rates by income quintile for 2003. The first income quintile (9.14 percent) had the highest ETR, followed by the second quintile (9.38 percent), the third quintile (8.97 percent), the fourth quintile (8.78 percent), and the fifth quintile (7.70 percent). This indicates that taxpayers in higher income areas paid a higher percentage of their income in taxes, than did taxpayers in lower income areas.

Exhibit 72: Combined Tax Incidence by Income

Quintile	Percentage	Suits	Kakwani
First	9.14%	(0.0845)	(0.0837)
Second	9.38%	(0.0867)	(0.0878)
Third	8.97%	(0.0918)	(0.0941)
Fourth	8.78%	(0.0664)	(0.0689)
Fifth	7.70%	(0.0485)	(0.0521)
Total	9.24%	(0.0888)	(0.0892)

Exhibit 72 also shows Suits and Kakwani Indices by income quintile for 2003. The fifth quintile (-0.0485) had the highest Suits Index, followed by the fourth quintile (-0.0664), the first quintile (-0.0845), the second quintile (-0.0867), and the third quintile (-0.0918). Similarly, the fifth quintile (-0.0521) had the highest Kakwani Index, followed by the fourth quintile (-0.0689), the first quintile (-0.0837), the second quintile (-0.0878), and the third quintile (-0.0941). Generally, this indicates that combined Kansas state and local taxes are generally less regressively distributed in lower income areas than in higher income areas. Combined state and local taxes are most regressively distributed in moderate income areas.

Conclusions and Recommendations

The objective of this study was to measure the distribution of \$6.4 billion of state and local taxes collected in 2003. The report:

- Analyzed \$6.4 billion in taxes collected in 2003, a total that represents 83.0 percent of all state and local taxes.
- Calculated average household tax burden by income range.

Tax Incidence

- Tax incidence analysis is the study of who ultimately bears the economic burden of a tax.
- The effective tax rate is the tax rate paid as a percentage of income.
- A progressive tax is a tax for which the effective tax rate rises as income rises.
- A proportional tax is a tax for which the effective tax rate does not change with income.
- A regressive tax is a tax for which the effective tax rate falls as income rises.

- Individual income, residential property, and retail sales taxes accounted for \$6.4 billion or 83.0 percent of all Kansas state and local government taxes in 2003.

Individual Income Tax

- Because of its graduated tax rate structure and allowance of personal exemptions and deductions, the individual income tax is, by design, progressive. The average effective tax rate for individual income taxes for the state as a whole is 3.2 percent. Effective tax rates rise significantly with increases in household income. At the low end, the ETR for the income tax is -7.4 percent for the lowest income group. It rises steadily to 4.7 percent for the highest income group. Lower income households can receive refundable tax credits, which can more than offset any income tax liabilities. Based on household composition single households without children and non-family households have the highest ETR at 4.1 percent, while married couples with children have the lowest ETR at 2.0 percent.
- The Kansas individual income tax is modestly progressive. Although the Kansas individual income tax is only modestly progressive, it tends to be more progressive than many other states because it is comprised of only three brackets, with some taxpayers subject to the highest rate with taxable income as low as \$30,000. The progressivity of the individual income tax nearly offsets the regressivity of the other taxes.
- The counties with the highest average ETRs are in the Wichita area, the Lawrence area, and in western Kansas, while the counties with the lowest rates tend to be in the north and southeast areas of the state. Taxpayers in more densely populated counties areas are paying higher effective tax rates than those living in less densely populated areas.
- Kansas individual income tax is less progressively distributed in the state's urban areas than in other areas, meaning that lower income households bear a larger share of the burden in these areas.

Residential Property Tax

- The average effective tax rate for the state as a whole is 2.3 percent, with the lowest income population group paying an effective tax rate of 23.6 percent, while the highest income population group paying an effective tax rate of 0.6 percent. This result derives because lower income households tend to spend a higher proportion of income on housing than higher income households. In some cases, effective tax rates of over 100 percent may be reported in cases where the taxpayer may be occupying a high value residence, while receiving a low level of Kansas adjusted gross income.
- The Kansas residential property tax is significantly regressive. Property taxes were regressive across all household groups. Overall, households paid 2.3 percent of their income in property taxes. The lowest income group (under \$10,000) paid 23.6 percent of their income in property taxes. In contrast, the highest-income households (\$200,000 and over) spent an average of 0.6 percent of their income on property taxes.

- The counties with the highest ETRs are concentrated in the northeast, while the counties with the lowest rates tend to be in the southwest. However, taxpayers in less densely populated areas are paying higher effective tax rates than those living in more densely populated areas. This may be due in part to the presence of economies of scale in service provision that may be present in more densely populated areas, but less pervasive in less densely populated areas.
- The Kansas residential property tax is less regressively distributed in the state's urban and suburban areas where higher value residences are more likely to be located, while the tax tends to be more regressively distributed in the state's rural areas where there is less likely to be higher value residences.
- Since the residential property tax includes both a uniform state component and non-uniform local government components, regional variations are the result of the distribution of wealth and income in the respective regions, the composition of that income, and local discretionary tax policy decisions.

Retail Sales Tax

- Average Kansas household pays \$1,595 in retail sales taxes annually. The largest amount goes to housing (\$416), food (\$395), and transportation (\$352). The average effective tax rate for the state as a whole is 3.7 percent. For 2003, the effective consumer sales tax rate for the lowest income group was 16.5 percent, compared to the rate for the highest income group of 2.3 percent.
- Taxpayers in moderately populated areas are paying higher ETRs than those living in more or less densely populated areas.
- The Kansas retail sales tax is moderately regressive. Retail sales taxes in Kansas tend to be more regressive than many states because of the base of the tax is relatively broad and has relatively few major exemptions for such as for food and clothing.
- The Kansas retail sales tax is less regressively distributed in the state's suburban areas. This may be due to the presence of a greater proportion of higher income households and the location of regional shopping malls in suburban areas.

Combined Taxes

- Combined state and local taxes are proportional to slightly regressive. However, combined taxes in several counties are slightly progressive. The lowest income group (under \$10,000) paid 32.7 percent of income in taxes. The effective tax rates decreased slightly for the middle-range of households, ranging from 14.6 percent to 7.6 percent. These households had income between \$10,000 and \$199,000. The highest income group (\$200,000 and over), paid 7.7 percent of income in taxes. The combined average effective tax rate for the state as a whole is 9.2 percent. Taxpayers in moderately populated areas tend to pay higher ETRs than those living in less densely populated areas. Combined taxes are less regressively distributed in less populated areas than in more populated areas.

- On average the sales tax (3.7 percent) accounted for the largest burden most households. The second largest tax was the sales tax (3.2 percent). Although the property tax is the most regressive of the three taxes, it accounted for the smallest burden (2.3 percent)
- Refundable tax credits increase the progressivity of the Kansas tax structure. The earned income tax credit makes the individual income tax increases progressive at low-income levels. The Homestead credit sharply reduces, though it does not eliminate, the regressivity of the property tax for low-income homeowners and renters. While refundable credits significantly reduced the burden of the poorest households, they did not completely eliminate the regressivity of the property tax.

Incidence Models

- There are many benefits to developing a tax incidence model, and many states have already done so.
- While the study estimates the incidence of Kansas' current level of taxes, its findings cannot be used to draw conclusions about incremental tax changes, since the incidence of an incremental change of a tax may not be the same as the incidence of an existing tax.
- For instance, business owners may bear the burden of an existing tax, but be able to entirely shift an increase in that tax to workers or consumers if the resulting effective tax rate is higher than the national average.
- However, the tax incidence model may be useful for evaluating existing features of Kansas' tax structure, for example, the distributional impact of existing tax exemptions, deductions and credits, or the effectiveness of the current earned income tax credit in lifting the working poor out of poverty.
- Other areas to consider for further development of the tax incidence model include the following:
 - Include more taxes in the analysis. In particular, the incidence of the cigarette, alcohol beverage, motor fuels and other excise taxes and of the estate tax can be explored.
 - Explore factors that may result in horizontal inequities such as race, gender, and age.
 - Compare findings to prior years to assess changes in tax incidence and the underlying causes
 - Develop a comprehensive microsimulation economic incidence model based on a sampling of actual income tax returns and property tax records.

The purpose of the study was to measure the distribution of taxes across Kansas households. The study does not seek to make policy recommendations. However, it is hoped that the findings of the study will be used to inform the policy making process.

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Appendices

Appendix A:

County Comparison of Various State Tax Collections and Per Capita Tax Collections
 The most current available tax year and fiscal year data is used for each tax type and is reflective of the tables within this report.

County	Individual Income		Sales Tax	Vehicle Property (Per cap)	Real/Personal Property (Per cap)	Real/Personal Property (Per cap)		
	Individual Income Tax Liability	Tax Liability (Per cap)						
	FY 03	FY 03	FY 05	FY 05	FY 04	FY 04	FY 04	
Allen	\$3,764,398	\$414	\$5,983,989	\$429	\$1,474,898	\$106	\$10,072,400	\$724
Anderson	\$3,195,040	\$389	\$2,898,906	\$354	\$877,593	\$107	\$8,702,054	\$1,060
Atchison	\$6,751,349	\$403	\$7,529,066	\$446	\$1,557,455	\$93	\$14,208,670	\$949
Barber	\$3,100,309	\$417	\$2,774,841	\$555	\$649,155	\$129	\$7,690,769	\$1,567
Barton	\$12,814,442	\$467	\$18,491,403	\$676	\$3,789,847	\$138	\$26,017,235	\$947
Bearbon	\$5,331,773	\$353	\$6,352,975	\$422	\$1,571,749	\$104	\$11,174,869	\$741
Brown	\$3,734,557	\$358	\$4,087,054	\$394	\$887,498	\$85	\$9,423,450	\$902
Butler	\$44,577,652	\$729	\$25,368,641	\$410	\$7,678,042	\$126	\$56,107,146	\$918
Chase	\$1,317,534	\$393	\$739,713	\$341	\$293,024	\$96	\$4,405,453	\$1,418
Chautauque	\$1,262,449	\$303	\$936,849	\$224	\$448,582	\$107	\$3,202,061	\$765
Cherokee	\$6,540,059	\$300	\$5,200,589	\$237	\$1,567,342	\$72	\$13,628,538	\$579
Cheyenne	\$968,430	\$328	\$845,386	\$391	\$270,734	\$92	\$3,478,370	\$1,177
Clark	\$1,137,975	\$488	\$812,772	\$262	\$358,620	\$154	\$5,607,217	\$2,493
Clay	\$3,469,691	\$398	\$3,391,675	\$395	\$668,829	\$113	\$8,285,707	\$966
Cloud	\$3,552,864	\$391	\$5,678,601	\$580	\$1,195,611	\$121	\$9,659,228	\$1,010
Coffey	\$4,959,323	\$563	\$3,608,373	\$412	\$570,639	\$65	\$3,384,575	\$3,561
Comanche	\$934,642	\$488	\$857,959	\$451	\$235,437	\$122	\$4,654,142	\$2,587
Cowley	\$17,166,692	\$479	\$14,831,281	\$415	\$3,668,839	\$103	\$37,728,547	\$773
Crawford	\$16,210,274	\$422	\$18,918,208	\$497	\$3,137,014	\$82	\$25,428,756	\$862
Decatur	\$1,181,456	\$359	\$877,712	\$268	\$361,631	\$110	\$3,914,054	\$1,183
Dickinson	\$9,017,239	\$468	\$8,797,424	\$400	\$2,026,512	\$105	\$15,028,836	\$781
Doniphan	\$4,124,095	\$506	\$1,954,594	\$242	\$591,523	\$73	\$6,627,277	\$813
Douglas	\$69,130,663	\$671	\$64,154,030	\$624	\$7,979,166	\$77	\$99,879,678	\$970
Edwards	\$1,450,614	\$443	\$865,484	\$392	\$422,920	\$129	\$5,308,799	\$1,682
Elk	\$937,745	\$296	\$820,908	\$287	\$311,939	\$98	\$3,373,933	\$1,065
Ellis	\$15,766,898	\$579	\$24,145,014	\$892	\$2,391,475	\$106	\$26,918,336	\$989
Ellsworth	\$1,827,478	\$443	\$2,115,851	\$333	\$806,519	\$127	\$7,580,316	\$1,194
Finney	\$19,200,147	\$490	\$24,995,156	\$636	\$3,208,016	\$82	\$50,268,289	\$1,284
Ford	\$14,126,114	\$428	\$19,813,228	\$395	\$3,798,594	\$115	\$33,075,754	\$1,062
Franklin	\$13,254,560	\$519	\$12,202,056	\$468	\$2,724,111	\$107	\$21,387,643	\$357
Geary	\$8,582,103	\$326	\$14,321,831	\$570	\$2,209,173	\$84	\$16,577,281	\$630
Gove	\$1,252,920	\$420	\$1,367,929	\$481	\$327,520	\$113	\$4,273,279	\$1,468
Graham	\$1,021,391	\$364	\$1,379,425	\$503	\$375,058	\$134	\$4,758,859	\$1,695
Grant	\$4,325,712	\$539	\$4,373,753	\$569	\$626,558	\$81	\$20,688,048	\$2,671
Gray	\$3,608,045	\$595	\$2,315,393	\$304	\$785,050	\$129	\$7,669,695	\$1,395
Greeley	\$793,598	\$559	\$540,938	\$382	\$233,761	\$165	\$4,329,873	\$3,643
Greenwood	\$2,961,111	\$396	\$2,122,039	\$283	\$853,477	\$114	\$7,694,912	\$1,016
Hamilton	\$1,275,628	\$478	\$952,932	\$359	\$308,869	\$116	\$6,624,683	\$3,235
Harper	\$2,921,239	\$471	\$3,026,563	\$484	\$942,484	\$152	\$6,484,066	\$1,367
Harvey	\$18,711,892	\$559	\$16,490,776	\$483	\$3,191,073	\$95	\$26,338,677	\$786
Haskell	\$3,420,711	\$570	\$1,469,562	\$351	\$360,470	\$85	\$14,209,605	\$3,347
Hodgeman	\$776,043	\$361	\$480,905	\$230	\$299,065	\$139	\$4,334,144	\$2,015
Jackson	\$6,316,608	\$485	\$5,450,814	\$414	\$1,262,768	\$97	\$9,030,376	\$694
Jefferson	\$10,918,235	\$581	\$2,976,729	\$210	\$2,108,559	\$112	\$15,222,898	\$810
Jewell	\$1,064,617	\$310	\$779,847	\$228	\$407,165	\$119	\$4,846,694	\$1,412
Johnson	\$565,524,358	\$1,162	\$447,090,615	\$900	\$63,743,429	\$131	\$721,925,721	\$1,484
Kearny	\$2,081,358	\$453	\$1,073,203	\$238	\$324,056	\$71	\$18,142,163	\$3,653
Kingman	\$4,392,073	\$524	\$3,003,693	\$358	\$1,007,499	\$120	\$10,602,087	\$1,265
Kiowa	\$1,374,909	\$436	\$2,384,019	\$449	\$394,401	\$125	\$6,224,782	\$1,675
Labette	\$8,079,835	\$363	\$8,584,143	\$385	\$2,282,763	\$103	\$16,308,320	\$733
Lane	\$944,525	\$485	\$834,019	\$325	\$283,471	\$148	\$3,894,161	\$2,001
Leavenworth	\$32,755,544	\$458	\$25,756,462	\$356	\$7,279,077	\$102	\$53,969,379	\$754
Lincoln	\$1,061,566	\$303	\$796,983	\$333	\$419,033	\$120	\$5,113,715	\$1,463
Linn	\$3,923,823	\$404	\$2,488,111	\$247	\$858,596	\$88	\$14,292,441	\$1,470
Logan	\$1,320,897	\$463	\$1,301,213	\$460	\$382,424	\$134	\$4,425,227	\$1,550
Lyon	\$17,104,740	\$478	\$19,217,593	\$538	\$3,418,483	\$95	\$28,485,167	\$796
Marion	\$6,007,593	\$452	\$1,917,631	\$301	\$1,250,873	\$94	\$11,867,284	\$894
Marshall	\$4,862,828	\$459	\$4,374,189	\$469	\$1,155,095	\$109	\$10,507,377	\$992
McPherson	\$19,345,629	\$639	\$16,872,449	\$574	\$3,140,881	\$107	\$32,521,060	\$1,168
Meade	\$1,864,176	\$405	\$1,317,041	\$287	\$457,229	\$98	\$8,792,554	\$2,101

Appendix A (Continued):

County Comparison of Various State Tax Collections and Per Capita Tax Collections

The most current available tax year and fiscal year data is used for each tax type and is reflective of the tables within this report.

County	Individual Income		Sales Tax FY 05	Sales Tax (Per cap) FY 05	Vehicle Property FY 04	Vehicle Property (Per cap) FY 04	Real/Personal Property FY 04	Real/Personal Property (Per cap) FY 04
	Individual Income Tax Liability FY 03	Individual Income Tax Liability (Per cap) FY 03						
Miami	\$19,277,313	\$660	\$13,468,643	\$453	\$3,515,817	\$121.5	\$32,218,114	\$1,104
Mitchell	\$3,354,883	\$500	\$3,643,078	\$555	\$873,978	\$130.3	\$7,439,674	\$1,109
Montgomery	\$14,612,687	\$418	\$18,524,654	\$530	\$3,379,646	\$111.1	\$29,346,231	\$940
Montic	\$1,987,324	\$498	\$2,214,612	\$372	\$567,193	\$94.6	\$5,755,927	\$960
Morton	\$1,919,834	\$579	\$1,562,390	\$473	\$399,368	\$90.3	\$12,839,515	\$3,871
Newahna	\$4,516,188	\$430	\$4,078,915	\$390	\$1,051,179	\$100.1	\$8,867,005	\$854
Nesshe	\$6,957,757	\$420	\$9,884,636	\$597	\$2,156,028	\$130.0	\$12,929,945	\$780
Ness	\$1,305,575	\$477	\$2,087,856	\$678	\$490,316	\$155.3	\$5,550,665	\$1,758
Norton	\$2,200,090	\$380	\$2,128,808	\$367	\$570,998	\$98.5	\$5,044,473	\$870
Osage	\$8,238,518	\$490	\$4,156,029	\$243	\$1,544,594	\$92.0	\$12,911,527	\$769
Osborne	\$1,409,953	\$337	\$1,601,514	\$391	\$525,823	\$125.8	\$5,298,273	\$1,268
Ottawa	\$3,185,013	\$516	\$1,398,203	\$225	\$716,139	\$116	\$7,146,244	\$1,157
Pawnee	\$2,881,571	\$424	\$2,465,705	\$366	\$894,516	\$132	\$7,754,609	\$1,141
Phillips	\$2,204,879	\$390	\$2,240,380	\$403	\$685,545	\$121	\$6,297,098	\$1,113
Pottawatomie	\$10,121,463	\$541	\$17,073,868	\$957	\$1,364,303	\$73	\$29,541,562	\$1,579
Pott	\$5,194,849	\$550	\$6,844,213	\$727	\$1,405,789	\$149	\$12,896,380	\$1,473
Rawlins	\$1,023,068	\$360	\$771,788	\$279	\$455,692	\$160	\$4,297,878	\$1,512
Reco	\$33,281,629	\$521	\$40,406,358	\$635	\$7,104,586	\$111	\$62,927,228	\$986
Republic	\$1,784,552	\$336	\$1,383,950	\$361	\$703,742	\$133	\$6,913,684	\$1,303
Rice	\$4,330,163	\$416	\$3,531,129	\$336	\$1,288,767	\$124	\$12,331,102	\$1,252
Riley	\$27,719,802	\$445	\$36,042,430	\$476	\$4,394,188	\$71	\$39,018,532	\$626
Roos	\$2,013,883	\$373	\$2,381,843	\$442	\$724,833	\$134	\$7,015,519	\$1,295
Rush	\$1,445,232	\$423	\$796,178	\$230	\$444,461	\$130	\$4,869,068	\$1,425
Russell	\$2,937,191	\$425	\$3,426,547	\$491	\$1,020,923	\$148	\$10,851,697	\$1,571
Saline	\$33,350,255	\$621	\$44,292,974	\$821	\$5,029,879	\$64	\$49,945,408	\$929
Scott	\$2,866,378	\$596	\$2,430,499	\$561	\$720,629	\$150	\$8,349,532	\$1,737
Sedgwick	\$376,117,431	\$813	\$343,193,175	\$740	\$45,169,150	\$88	\$388,942,334	\$340
Seward	\$9,792,278	\$424	\$15,870,093	\$683	\$1,827,285	\$79	\$26,502,429	\$1,148
Shawnee	\$126,346,526	\$736	\$134,216,893	\$723	\$19,917,469	\$117	\$185,504,706	\$1,085
Sheridan	\$1,368,873	\$523	\$941,011	\$360	\$352,945	\$133	\$3,793,917	\$1,425
Sherman	\$2,805,781	\$447	\$4,461,413	\$717	\$671,111	\$107	\$6,821,597	\$1,103
Smith	\$1,710,781	\$409	\$1,404,793	\$356	\$522,035	\$125	\$5,837,208	\$1,396
Stafford	\$1,924,226	\$419	\$1,523,035	\$337	\$603,004	\$132	\$8,017,707	\$1,747
Stanton	\$1,320,404	\$549	\$734,603	\$309	\$248,062	\$103	\$8,548,281	\$3,556
Stevens	\$3,201,806	\$594	\$2,228,005	\$404	\$354,988	\$66	\$20,273,333	\$3,782
Sumner	\$12,096,295	\$479	\$7,348,305	\$291	\$5,038,186	\$120	\$23,959,471	\$949
Thomas	\$4,004,525	\$505	\$5,916,437	\$753	\$975,333	\$123	\$10,476,992	\$1,321
Trigo	\$1,112,972	\$336	\$1,370,585	\$434	\$486,097	\$121	\$4,955,342	\$1,397
Wabaussee	\$1,553,843	\$525	\$1,259,249	\$182	\$742,042	\$110	\$7,445,367	\$1,100
Wallace	\$655,430	\$404	\$546,279	\$346	\$174,271	\$108	\$2,958,179	\$1,825
Washington	\$2,538,865	\$417	\$1,607,823	\$263	\$734,513	\$120	\$7,864,470	\$1,283
Wichita	\$1,420,277	\$580	\$792,831	\$336	\$332,391	\$136	\$4,537,479	\$1,854
Wilson	\$4,015,787	\$398	\$3,044,753	\$306	\$963,995	\$96	\$7,589,587	\$754
Woodson	\$1,097,429	\$303	\$926,855	\$261	\$384,894	\$106	\$3,756,940	\$1,035
Wyandotte	\$61,659,889	\$393	\$83,168,251	\$531	\$17,317,781	\$110	\$165,605,264	\$1,054
Total	\$1,891,081,045	\$694	\$1,711,406,775	\$626	\$294,193,465	\$108	\$2,843,544,950	\$1,083

Notes: Individual income tax liability total includes Kansas residents with no county indicator.

Appendix B:

County Distributional Categories

Regions

I—Anderson, Coffey, Douglas, Franklin, Jefferson, Johnson, Leavenworth, Linn, Miami, Osage, Shawnee, Wyandotte

II—Allen, Bourbon, Cherokee, Crawford, Labette, Montgomery, Neosho, Wilson, Woodson

III—Chase, Clay, Dickinson, Geary, Lyon, Marion, Morris, Pottawatomie, Riley, Wabaunsee

IV—Butler, Cowley, Elk, Chautauqua, Greenwood, Harvey, McPherson, Reno, Rice, Sedgwick

V—Barber, Barton, Comanche, Edwards, Harper, Kingman, Kiowa, Pawnee, Pratt, Rush, Stafford, Sumner

VI—Clark, Ford, Gray, Hodgeman, Meade, Ness

VII—Finney, Grant, Greeley, Hamilton, Haskell, Kearny, Lane, Morton, Scott, Seward, Stanton, Stevens, Wichita

VIII—Cheyenne, Decatur, Logan, Rawlins, Sheridan, Sherman, Thomas, Wallace

IX—Ellis, Gove, Graham, Norton, Osborne, Phillips, Rooks, Russell, Smith, Trego

X—Cloud, Ellsworth, Jewell, Lincoln, Mitchell, Ottawa, Republic, Saline

XI—Atchison, Brown, Doniphan, Jackson, Marshall, Nemaha, Washington

Appendix B (Continued):

Location

Border—Atchison, Barber, Bourbon, Brown, Chautauqua, Cherokee, Cheyenne, Clark, Comanche, Cowley, Crawford, Decatur, Doniphan, Greeley, Hamilton, Harper, Jewell, Johnson, Labette, Leavenworth, Linn, Marshall, Meade, Miami, Montgomery, Morton, Nemaha, Norton, Phillips, Rawlins, Republic, Seward, Sherman, Smith, Stanton, Stevens, Sumner, Wallace, Washington, Wyandotte

Non-Border—Allen, Anderson, Barton, Butler, Chase, Clay, Cloud, Coffey, Dickinson, Douglas, Edwards, Elk, Ellis, Ellsworth, Finney, Ford, Franklin, Geary, Gove, Graham, Grant, Gray, Greenwood, Harvey, Haskell, Hodgeman, Jackson, Jefferson, Kearny, Kingman, Kiowa, Lane, Lincoln, Logan, Lyon, McPherson, Marion, Mitchell, Morris, Neosho, Ness, Osage, Osborne, Ottawa, Pawnee, Pottawatomie, Pratt, Reno, Rice, Riley, Rooks, Rush, Russell, Scott, Saline, Sedgwick, Shawnee, Sheridan, Stafford, Thomas, Trego, Wabaunsee, Wichita, Wilson, Woodson

Concentration

Metropolitan—Butler, Doniphan, Douglas, Franklin, Harvey, Jackson, Jefferson, Johnson, Leavenworth, Miami, Osage, Sedgwick, Shawnee, Sumner, Wabaunsee, Wyandotte

Micropolitan—Atchison, Barton, Chase, Cowley, Crawford, Ellis, Finney, Ford, Geary, Labette, Lyon, McPherson, Montgomery, Ottawa, Pottawatomie, Reno, Riley, Saline, Seward

Rural—Allen, Anderson, Barber, Bourbon, Brown, Chautauqua, Cherokee, Cheyenne, Clark, Clay, Cloud, Coffey, Comanche, Decatur, Dickinson, Douglas, Edwards, Elk, Ellsworth, Gove, Graham, Grant, Gray, Greeley, Greenwood, Hamilton, Harper, Haskell, Hodgeman, Jewell, Kearny, Kingman, Kiowa, Lane, Lincoln, Linn, Logan, Marion, Marshall, Meade, Mitchell, Morris, Morton, Nemaha, Neosho, Ness, Norton, Osborne, Pawnee, Phillips, Pratt, Rawlins, Republic, Rice, Rooks, Rush, Russell, Scott, Sheridan, Sherman, Smith, Stafford, Stanton, Stevens, Thomas, Trego, Wallace, Washington, Wichita, Wilson, Woodson

Appendix B (Continued):

Population Quintiles

First—Barton, Butler, Cowley, Crawford, Douglas, Finney, Ford, Geary, Harvey, Johnson, Leavenworth, Lyon, McPherson, Miami, Montgomery, Reno, Riley, Saline, Sedgwick, Shawnee, Wyandotte

Second—Allen, Atchison, Bourbon, Brown, Cherokee, Dickinson, Ellis, Franklin, Jackson, Jefferson, Labette, Marion, Marshall, Nemaha, Neosho, Osage, Pottawatomie, Rice, Seward, Sumner, Wilson

Third—Anderson, Clay, Cloud, Coffey, Doniphan, Ellsworth, Grant, Greenwood, Harper, Kingman, Linn, Mitchell, Morris, Ottawa, Pawnee, Pratt, Russell, Sherman, Thomas, Wabaunsee, Washington

Fourth—Barber, Chautauqua, Decatur, Gray, Haskell, Jewell, Kearny, Lincoln, Meade, Morton, Norton, Osborne, Phillips, Republic, Rooks, Rush, Scott, Smith, Stafford, Stevens, Woodson

Fifth—Chase, Cheyenne, Clark, Comanche, Edwards, Elk, Gove, Graham, Greeley, Hamilton, Hodgeman, Kiowa, Lane, Logan, Ness, Rawlins, Sheridan, Stanton, Trego, Wallace, Wichita

Income Quintiles

First—Barton, Coffey, Ellis, Geary, Graham, Harvey, Jewell, Johnson, Kiowa, Lane, Marshall, McPherson, Ness, Phillips, Rawlins, Saline, Scott, Sedgwick, Shawnee, Sheridan, Wallace

Second—Barber, Butler, Chase, Clark, Clay, Douglas, Edwards, Gove, Greeley, Harper, Haskell, Jackson, Leavenworth, Mitchell, Pottawatomie, Pratt, Reno, Sherman, Smith, Thomas, Wichita

Third—Allen, Bourbon, Brown, Cowley, Crawford, Decatur, Dickinson, Ellsworth, Hamilton, Logan, Miami, Montgomery, Nemaha, Neosho, Osborne, Riley, Rooks, Rush, Stafford, Stanton, Wyandotte

Fourth—Chautauqua, Cherokee, Cloud, Comanche, Ford, Franklin, Grant, Gray, Kingman, Labette, Lyon, Meade, Morris, Norton, Pawnee, Republic, Russell, Seward, Stevens, Sumner, Wilson

Fifth—Anderson, Atchison, Cheyenne, Doniphan, Elk, Finney, Greenwood, Hodgeman, Jefferson, Kearny, Lincoln, Linn, Marion, Morton, Osage, Ottawa, Rice, Trego, Wabaunsee, Washington, Woodson

Appendix C:

Individual Income Tax for Tax Year 2003 by County

Resident Taxpayers Only

County	Number Returns	Kansas Adjusted Gross Income	Tax Year Liability	Percent of Total Liability	Per Return Average	
					Tax Liability	Rank
Allen	7,237	\$205,451,256	\$5,764,398	0.3%	\$797	74
Anderson	4,109	\$119,160,937	\$3,195,040	0.2%	\$778	79
Atchison	7,942	\$251,780,457	\$6,751,349	0.4%	\$850	63
Barber	2,609	\$72,704,520	\$2,100,309	0.1%	\$805	72
Barton	13,603	\$426,163,337	\$12,814,442	0.7%	\$942	44
Bourbon	7,170	\$207,477,493	\$5,331,773	0.3%	\$744	86
Brown	5,253	\$144,230,732	\$3,736,557	0.2%	\$711	93
Butler	29,281	\$1,277,554,460	\$44,577,652	2.4%	\$1,522	3
Chase	1,416	\$41,408,770	\$1,217,534	0.1%	\$860	61
Chautauqua	1,789	\$50,087,370	\$1,262,449	0.1%	\$706	95
Cherokee	9,845	\$295,377,801	\$6,540,059	0.4%	\$664	99
Cheyenne	1,489	\$33,527,512	\$968,430	0.1%	\$650	100
Clark	1,157	\$37,766,234	\$1,137,975	0.1%	\$984	38
Clay	4,242	\$121,785,140	\$3,409,681	0.2%	\$804	73
Cloud	5,027	\$139,734,909	\$3,852,064	0.2%	\$766	83
Coffey	4,438	\$155,147,592	\$4,959,322	0.3%	\$1,117	21
Comanche	1,043	\$31,118,003	\$934,642	0.1%	\$896	53
Cowley	17,464	\$583,410,973	\$17,166,692	0.9%	\$983	39
Crawford	17,940	\$568,124,700	\$16,210,274	0.9%	\$904	52
Decatur	1,735	\$43,063,157	\$1,181,456	0.1%	\$681	97
Dickinson	9,886	\$305,536,689	\$9,017,289	0.5%	\$912	51
Douphan	4,400	\$182,144,868	\$4,124,095	0.2%	\$937	45
Douglas	48,090	\$2,023,351,458	\$69,130,663	3.7%	\$1,438	4
Edwards	1,722	\$48,355,623	\$1,450,614	0.1%	\$842	65
Ell	1,571	\$37,906,413	\$937,765	0.1%	\$597	104
Ellis	13,714	\$478,755,391	\$15,766,998	0.9%	\$1,150	15
Ellsworth	3,050	\$93,922,285	\$2,827,478	0.2%	\$927	49
Finney	17,881	\$632,975,876	\$19,200,147	1.0%	\$1,074	26
Ford	13,978	\$487,157,630	\$14,126,114	0.8%	\$1,011	34
Franklin	13,027	\$449,136,493	\$13,254,560	0.7%	\$1,017	33
Geary	10,842	\$315,291,808	\$8,582,103	0.5%	\$792	77
Gove	1,620	\$40,461,844	\$1,252,020	0.1%	\$773	80
Graham	1,395	\$34,417,040	\$1,021,591	0.1%	\$732	90
Grant	3,646	\$131,492,237	\$4,325,712	0.2%	\$1,186	11
Gray	3,081	\$108,357,061	\$3,608,045	0.2%	\$1,171	13
Greeley	754	\$20,745,392	\$795,598	0.0%	\$1,053	29
Greenwood	3,732	\$99,735,497	\$2,961,111	0.2%	\$793	76
Hamilton	1,236	\$36,335,950	\$1,275,628	0.1%	\$1,032	31
Harper	3,311	\$97,807,452	\$2,921,239	0.2%	\$882	54
Harvey	16,966	\$626,436,862	\$18,711,992	1.0%	\$1,103	23
Haskell	1,879	\$64,021,431	\$2,420,711	0.1%	\$1,288	8
Hodgeman	992	\$27,547,398	\$776,043	0.0%	\$782	78
Jackson	6,787	\$215,314,901	\$6,316,608	0.3%	\$931	47
Jefferson	9,523	\$358,427,758	\$10,918,235	0.6%	\$1,147	17
Jewell	1,791	\$42,094,405	\$1,064,617	0.1%	\$594	103
Johnson	253,955	\$17,556,167,840	\$565,524,858	30.6%	\$2,227	1
Kearny	1,862	\$67,854,381	\$2,081,358	0.1%	\$1,118	20
Kingman	4,083	\$136,069,524	\$4,392,075	0.2%	\$1,076	25
Kiowa	1,577	\$46,298,699	\$1,374,909	0.1%	\$872	56
Lafayette	10,877	\$301,978,731	\$8,079,935	0.4%	\$743	88
Lane	1,077	\$31,958,762	\$944,525	0.1%	\$877	55
Leavenworth	28,535	\$1,119,096,776	\$32,755,544	1.8%	\$1,148	16
Lincoln	1,717	\$42,567,681	\$1,061,566	0.1%	\$618	102
Linn	4,534	\$144,417,113	\$3,925,623	0.2%	\$866	57
Logan	1,602	\$43,367,329	\$1,320,887	0.1%	\$825	67
Lyon	17,386	\$569,950,549	\$17,104,740	0.9%	\$984	36
Marion	6,437	\$200,941,686	\$6,007,595	0.3%	\$933	46
Marshall	5,660	\$166,745,192	\$4,862,828	0.3%	\$859	62

Appendix C (Continued):

Individual Income Tax for Tax Year 2003 by County						
Resident Taxpayers Only						
County	Number Returns	Kansas Adjusted Gross Income	Tax Year Liability	Percent of Total Liability	Per Return Average Tax Liability	Rank
McPherson	15,006	\$586,328,286	\$19,345,629	1.0%	\$1,289	7
Meade	2,027	\$61,356,290	\$1,886,176	0.1%	\$931	48
Miami	13,650	\$592,094,064	\$19,277,213	1.0%	\$1,412	5
Mitchell	3,652	\$111,956,865	\$3,354,882	0.2%	\$919	50
Montgomery	17,822	\$535,473,708	\$14,612,687	0.8%	\$820	69
Morris	2,914	\$94,491,050	\$2,987,324	0.2%	\$1,025	33
Morton	1,642	\$60,044,134	\$1,919,884	0.1%	\$1,169	14
Nemaha	5,243	\$162,695,675	\$4,516,188	0.2%	\$861	59
Neosho	8,538	\$244,737,133	\$6,957,757	0.4%	\$815	70
Ness	1,748	\$50,336,255	\$1,505,575	0.1%	\$861	60
Norton	2,700	\$74,222,286	\$2,200,090	0.1%	\$815	71
Osage	8,516	\$276,077,093	\$8,228,518	0.4%	\$966	42
Osborne	2,039	\$52,896,047	\$1,409,951	0.1%	\$691	96
Ottawa	3,238	\$108,063,907	\$3,185,013	0.2%	\$984	37
Pawnee	3,413	\$100,668,612	\$2,881,571	0.2%	\$844	64
Phillips	2,974	\$77,517,747	\$2,204,979	0.1%	\$741	89
Pottawatomie	8,870	\$320,451,015	\$10,121,463	0.3%	\$1,141	18
Pratt	4,813	\$150,057,220	\$5,194,849	0.3%	\$1,079	24
Rawlins	1,448	\$36,898,074	\$1,023,068	0.1%	\$707	94
Reno	31,816	\$1,082,057,789	\$33,281,629	1.8%	\$1,046	30
Republic	2,838	\$72,232,684	\$1,784,552	0.1%	\$629	101
Rice	5,018	\$154,473,912	\$4,330,163	0.2%	\$863	58
Riley	21,908	\$821,472,995	\$27,719,902	1.5%	\$1,265	9
Rooks	2,764	\$72,508,057	\$2,013,083	0.1%	\$728	91
Rush	1,887	\$50,400,083	\$1,445,281	0.1%	\$766	84
Russell	3,854	\$103,250,139	\$2,937,191	0.2%	\$762	85
Saline	28,428	\$1,036,171,690	\$33,350,255	1.8%	\$1,173	12
Scott	2,547	\$84,833,242	\$2,866,378	0.2%	\$1,125	19
Sedgwick	234,411	\$10,514,272,792	\$376,117,431	20.3%	\$1,605	2
Seward	10,269	\$348,220,832	\$9,792,278	0.5%	\$954	43
Shawnee	96,648	\$3,785,865,895	\$126,346,528	6.8%	\$1,307	6
Sheridan	1,375	\$39,782,522	\$1,388,873	0.1%	\$1,010	35
Sherman	3,403	\$108,126,638	\$2,805,781	0.2%	\$825	68
Smith	2,301	\$59,339,787	\$1,710,781	0.1%	\$743	87
Stafford	2,324	\$68,383,434	\$1,924,226	0.1%	\$828	66
Stanton	1,183	\$40,832,578	\$1,320,404	0.1%	\$1,116	22
Stevens	2,584	\$98,260,315	\$3,201,606	0.2%	\$1,239	10
Sumner	11,332	\$397,929,638	\$12,096,295	0.7%	\$1,067	27
Thomas	4,097	\$126,589,498	\$4,004,525	0.2%	\$977	41
Trego	1,662	\$40,984,936	\$1,113,072	0.1%	\$669	98
Wabaunsee	3,373	\$118,489,942	\$3,533,843	0.2%	\$1,054	28
Wallace	904	\$23,759,967	\$655,430	0.0%	\$725	92
Washington	3,317	\$90,664,328	\$2,558,865	0.1%	\$771	81
Wichita	1,447	\$44,746,911	\$1,420,277	0.1%	\$982	40
Wilson	5,060	\$141,123,494	\$4,015,787	0.2%	\$794	75
Woodson	1,838	\$42,397,397	\$1,097,429	0.1%	\$597	103
Wyandotte	80,123	\$2,635,842,608	\$61,659,899	3.3%	\$770	82
KS Residents with county indicator	1,357,929	\$58,084,618,962	\$1,848,657,098		\$1,361	
KS Residents with no county indicator	28,479	\$1,359,069,559	\$42,423,967		\$1,490	
Total Residents	1,386,408	\$59,443,688,521	\$1,891,081,065	87.9%	\$1,364	
Non-Residents	236,203	\$33,350,000,000	\$260,105,038	12.1%	\$1,101	
All Taxpayers	1,622,611	\$92,793,688,521	\$2,151,186,103	100.0%	\$1,326	

Appendix D:

Average Countywide Levies per \$1,000 Assessed Valuation, Tax Years 2002 through 2004

County	2002	2003	2004	County	2002	2003	2004
Allen	129.19	134.87	134.64	Logan	134.94	135.75	130.36
Anderson	127.67	128.42	123.53	Lyon	130.35	133.69	135.64
Atchison	120.41	130.04	129.01	Marion	124.68	124.87	125.70
Barber	134.00	136.61	125.65	Marshall	220.83	120.80	123.49
Barton	150.01	150.74	151.17	McPherson	116.80	119.11	116.44
Benton	138.61	144.55	141.77	Meade	106.44	110.93	114.37
Brown	109.49	116.22	118.30	Miami	109.35	108.77	109.56
Butler	135.74	134.36	135.28	Michell	133.64	133.45	140.96
Chase	116.66	117.26	117.10	Montgomery	147.39	147.65	145.53
Chautauqua	132.94	133.02	140.35	Morris	107.55	105.40	108.19
Cherokee	93.84	97.20	98.39	Morton	91.25	93.80	88.48
Cheyenne	90.74	95.46	90.18	Nemaha	113.27	118.03	116.84
Clark	151.93	160.75	168.72	Neosho	152.94	151.76	147.83
Clay	133.56	138.26	140.63	Ness	133.83	131.00	126.68
Cloud	150.13	149.16	148.98	Newton	129.60	132.96	129.14
Coffey	68.63	68.99	69.03	Osage	105.18	106.38	114.48
Comanche	119.55	125.90	123.98	Osburn	142.26	143.44	153.72
Cowley	134.33	141.29	143.69	Ottawa	128.21	124.26	133.13
Crawford	109.19	113.31	121.69	Pawnee	149.91	151.75	147.88
Decatur	122.23	126.55	124.82	Phillips	138.54	139.91	139.63
Dickinson	119.11	116.23	116.80	Pottawatomia	79.66	81.10	82.05
Doniphan	97.15	104.41	103.64	Pratt	151.42	158.39	153.04
Douglas	102.74	104.83	104.11	Rawlins	139.06	144.06	137.73
Edwards	130.25	134.42	132.48	Reno	135.99	141.11	140.14
Elk	126.83	145.06	142.42	Republic	145.13	146.36	146.26
Ellis	118.16	124.45	113.79	Rice	147.02	143.53	135.51
Ellsworth	147.23	151.75	150.92	Riley	119.98	113.32	113.89
Finney	112.73	120.41	111.20	Rooks	154.32	163.70	150.81
Ford	156.22	149.82	151.18	Rush	144.53	149.39	148.12
Franklin	125.96	128.87	130.80	Russell	152.08	160.25	178.46
Geary	133.96	132.17	135.46	Saline	104.59	106.82	111.08
Gove	108.76	107.62	115.90	Scott	128.97	129.56	129.28
Graham	143.82	145.83	138.00	Sedgwick	113.33	112.62	113.29
Grant	79.26	78.95	71.57	Seward	106.93	118.32	109.78
Gray	123.34	123.93	125.75	Shawnee	132.96	132.28	136.12
Greeley	130.84	123.84	132.88	Sheridan	116.35	116.00	120.66
Greenwood	137.92	139.16	140.15	Sherman	112.38	119.30	120.83
Hamilton	120.57	128.52	122.02	Smith	138.52	146.34	161.50
Harper	161.95	161.90	155.07	Stafford	148.21	150.52	147.66
Harvey	119.40	119.67	122.61	Stanton	90.90	97.72	92.33
Haskell	85.41	88.36	82.43	Stevens	66.22	72.06	71.16
Hodgenian	150.88	161.68	172.74	Sumner	147.77	153.38	154.52
Jackson	115.60	116.43	122.09	Thomas	128.78	136.57	136.34
Jefferson	120.59	119.43	120.31	Trego	132.35	135.60	143.24
Jewell	127.95	136.64	136.66	Wabaunsee	116.47	123.50	124.41
Johnson	103.70	103.03	106.24	Wallace	102.14	112.84	119.34
Kearny	78.42	85.14	74.73	Washington	138.91	139.12	142.43
Kingman	125.42	124.13	120.57	Wichita	133.17	137.61	137.99
Kiowa	118.06	125.96	117.63	Wilson	118.87	119.37	118.39
Labette	138.55	146.63	150.40	Woodson	123.58	130.35	134.58
Lane	141.59	146.49	147.25	Wyandotte	165.23	158.14	159.14
Laavenworth	122.19	121.01	119.76				
Lincoln	155.47	152.99	154.66	Statewide	115.10	115.95	116.68
Linn	90.86	91.94	90.91				

Appendix E:

Total Preliminary Real and Personal Property Taxes Levied by County

Figures do not include motor vehicles taxed under K.S.A. 79-5100.

County	Property Taxes Tax Year 2003	Property Taxes Tax Year 2004	Percent Change	County	Property Taxes Tax Year 2003	Property Taxes Tax Year 2004	Percent Change
Allen	\$9,624,824	\$10,072,400	4.7%	Logan	\$4,287,846	\$4,425,227	3.2%
Anderson	\$7,664,148	\$8,702,054	13.1%	Lyon	\$26,912,788	\$28,495,167	5.9%
Atchison	\$13,501,945	\$14,209,670	5.2%	Marion	\$11,420,447	\$11,837,284	4.1%
Barber	\$7,933,967	\$7,870,789	6.1%	Marshall	\$10,010,061	\$10,507,377	5.0%
Barton	\$25,308,434	\$26,017,255	2.8%	McPherson	\$31,310,062	\$31,521,060	3.8%
Bourbon	\$10,929,680	\$11,174,869	1.9%	Maize	\$8,847,275	\$9,793,554	-9.5%
Brown	\$8,717,776	\$9,413,450	8.1%	Miami	\$29,563,472	\$32,218,114	9.0%
Bufler	\$52,461,565	\$56,107,146	7.1%	Mitchell	\$6,846,865	\$7,439,674	8.7%
Chase	\$4,148,249	\$4,495,453	6.3%	Montgomery	\$18,394,722	\$19,346,281	3.4%
Chautauque	\$2,993,585	\$3,202,061	7.0%	Neosho	\$5,428,375	\$5,755,827	6.0%
Cherokee	\$11,846,844	\$12,629,558	6.6%	Monroe	\$11,846,759	\$12,839,519	8.4%
Cheyenne	\$3,432,148	\$3,478,970	1.4%	Nemaha	\$8,775,774	\$8,987,005	2.2%
Clark	\$5,115,626	\$5,607,217	9.8%	Neosho	\$12,845,584	\$11,929,945	2.2%
Clay	\$7,389,669	\$8,285,707	5.0%	Ness	\$5,537,844	\$5,530,665	3.6%
Cloud	\$8,728,620	\$9,959,228	2.4%	Norton	\$5,068,132	\$5,044,472	-0.5%
Coffey	\$30,471,138	\$31,384,575	3.0%	Osage	\$11,354,626	\$12,911,527	13.7%
Columbia	\$4,446,880	\$4,854,142	11.4%	Osborne	\$4,837,286	\$5,298,272	13.8%
Cowley	\$28,377,371	\$27,728,547	-4.0%	Ottawa	\$6,433,506	\$7,146,244	10.6%
Crawford	\$2,320,079	\$25,428,756	11.4%	Pawnee	\$7,719,798	\$7,754,609	0.5%
Decatur	\$3,820,847	\$3,914,054	2.4%	Phillips	\$6,136,741	\$6,297,098	2.6%
Dickinson	\$14,247,750	\$15,028,936	5.5%	Pottawatomie	\$27,484,282	\$29,541,562	7.5%
Douglas	\$6,288,532	\$6,627,277	5.2%	Pratt	\$13,013,717	\$13,896,330	6.8%
Douglas	\$93,964,615	\$99,879,678	6.3%	Rawlins	\$4,253,954	\$4,297,878	1.0%
Edwards	\$5,584,444	\$5,506,799	2.1%	Reis	\$61,221,722	\$62,927,228	2.8%
Elk	\$3,130,142	\$3,373,933	7.8%	Republic	\$6,746,334	\$6,913,684	2.5%
Ellis	\$25,549,556	\$26,918,386	6.2%	Rice	\$12,293,516	\$12,831,102	1.8%
Ellsworth	\$7,289,982	\$7,530,816	4.0%	Riley	\$35,998,539	\$39,018,532	8.4%
Finney	\$44,398,245	\$50,288,289	13.3%	Rooks	\$6,930,567	\$7,015,519	1.2%
Ford	\$30,398,995	\$33,075,754	7.1%	Rush	\$4,790,759	\$4,869,068	1.6%
Franklin	\$20,420,200	\$21,887,643	7.2%	Russell	\$8,091,826	\$10,851,697	19.4%
Gasry	\$15,293,408	\$16,577,281	8.4%	Salina	\$48,297,292	\$48,945,408	7.9%
Gove	\$3,853,522	\$4,273,279	10.9%	Scott	\$8,130,797	\$8,348,532	2.7%
Graham	\$4,461,766	\$4,758,859	6.7%	Sedgewick	\$370,394,859	\$388,942,534	4.9%
Grant	\$20,603,507	\$20,688,048	0.4%	Seward	\$23,315,180	\$26,592,429	13.7%
Gray	\$7,749,517	\$7,909,695	2.1%	Shawnee	\$171,047,328	\$185,504,706	8.5%
Greeley	\$3,615,758	\$4,320,873	19.3%	Sheridan	\$3,568,695	\$3,783,917	6.2%
Greenwood	\$7,531,148	\$7,604,912	1.0%	Sherman	\$6,669,549	\$6,921,597	3.8%
Hamilton	\$7,098,365	\$8,624,683	21.5%	Smith	\$5,164,666	\$5,837,208	13.0%
Harper	\$8,325,407	\$8,484,066	1.9%	Stafford	\$7,966,412	\$8,017,707	0.6%
Harvey	\$25,134,925	\$26,338,677	4.8%	Stanton	\$8,098,599	\$8,548,281	5.6%
Haskell	\$12,177,632	\$14,209,605	16.7%	Stevens	\$17,823,707	\$20,273,333	15.7%
Hodgeman	\$3,991,409	\$4,334,144	8.6%	Sumner	\$22,343,150	\$23,956,471	4.9%
Jackson	\$8,192,370	\$9,030,876	10.2%	Thomas	\$9,867,422	\$10,476,992	6.2%
Jefferson	\$14,281,683	\$15,222,988	6.9%	Trego	\$4,529,839	\$4,955,342	9.4%
Jewell	\$4,665,461	\$4,846,694	3.9%	Wabunsee	\$7,013,436	\$7,445,367	6.2%
Johnson	\$668,928,915	\$721,925,721	8.2%	Wallace	\$2,839,325	\$2,958,179	4.2%
Keary	\$5973560.78	\$8142163.34	13.6%	Washington	\$7,475,669	\$7,964,470	5.2%
Kingsman	\$9,772,070	\$10,402,087	8.5%	Wichita	\$4,454,038	\$4,537,479	1.9%
Lincoln	\$5,212,440	\$6,234,782	20.2%	Wilson	\$7,071,753	\$7,599,587	7.5%
Labette	\$15,480,737	\$16,368,520	5.3%	Woodson	\$3,568,063	\$3,756,940	5.4%
Lane	\$3,540,006	\$3,384,161	7.0%	Wyandotte	\$157,034,282	\$163,605,204	3.3%
Leavenworth	\$80,379,005	\$83,968,379	7.1%				
Lincoln	\$4,768,073	\$5,118,715	7.0%				
Lin	\$13,991,546	\$14,392,441	2.1%				
				Total	\$2,778,207,194	2,963,344,650	6.7%

Appendix F:

Total Amount State Sales Tax Collections by County							
5.3% state sales tax rate:							
County	FY2004	FY2005	Percent Change	FY2004 Per Capita	FY2004 PC Rank	FY2005 Per Capita*	FY2005 PC Rank*
Allen	\$5,897,666	\$5,983,999	1.5%	\$424.08	41	\$428.99	46
Anderson	\$2,832,975	\$2,898,906	2.3%	\$345.15	63	\$353.91	68
Atchison	\$6,750,559	\$7,520,066	11.4%	\$403.24	46	\$446.35	43
Barber	\$2,659,230	\$2,774,841	4.3%	\$528.25	21	\$555.08	23
Barton	\$17,528,045	\$18,491,403	5.5%	\$638.15	11	\$675.68	12
Bourbon	\$6,016,045	\$6,352,975	5.6%	\$398.78	48	\$421.68	47
Brown	\$5,611,718	\$4,087,054	13.2%	\$345.88	62	\$394.43	55
Butler	\$24,092,082	\$25,368,641	5.3%	\$394.13	50	\$410.31	51
Chase	\$763,031	\$739,713	-3.1%	\$245.58	90	\$242.11	95
Chautauqua	\$927,746	\$936,840	1.0%	\$221.68	99	\$224.23	103
Cherokee	\$4,980,435	\$5,200,589	4.4%	\$228.30	97	\$236.93	97
Cheyenne	\$976,598	\$865,886	-11.3%	\$530.49	69	\$290.66	83
Clark	\$577,047	\$612,772	6.2%	\$247.34	89	\$261.53	90
Clay	\$3,314,479	\$3,391,875	2.3%	\$386.62	54	\$394.54	54
Cloud	\$5,093,650	\$5,676,601	11.4%	\$516.65	23	\$580.49	18
Coffey	\$3,457,085	\$3,606,375	4.3%	\$392.18	52	\$411.73	50
Comanche	\$808,804	\$857,959	6.1%	\$422.35	42	\$450.85	41
Cowley	\$14,713,853	\$14,831,281	0.8%	\$410.31	44	\$414.61	48
Crawford	\$18,161,621	\$18,918,208	4.2%	\$472.98	32	\$497.06	29
Decatur	\$845,218	\$877,712	3.8%	\$256.52	86	\$268.09	87
Dickinson	\$8,181,375	\$8,797,424	7.5%	\$424.90	40	\$459.83	39
Doniphan	\$1,595,858	\$1,954,596	22.5%	\$195.83	103	\$242.45	94
Douglas	\$60,944,886	\$64,154,030	5.3%	\$591.80	16	\$624.15	15
Edwards	\$913,729	\$965,484	5.7%	\$279.00	83	\$291.86	81
Elk	\$796,627	\$830,908	4.3%	\$251.54	88	\$266.57	88
Ellis	\$22,849,200	\$24,145,014	5.7%	\$839.67	3	\$892.28	3
Ellsworth	\$1,953,984	\$2,113,851	8.3%	\$307.86	74	\$333.20	75
Finney	\$24,768,136	\$24,995,156	0.9%	\$632.23	12	\$636.48	13
Ford	\$19,371,661	\$19,813,228	1.2%	\$592.87	15	\$595.39	17
Franklin	\$12,309,209	\$12,202,056	-0.9%	\$481.96	29	\$468.43	37
Geary	\$13,287,102	\$14,321,831	7.8%	\$504.96	27	\$570.34	20
Gova	\$1,319,814	\$1,367,929	3.6%	\$453.54	34	\$480.82	33
Graham	\$1,233,608	\$1,379,425	11.8%	\$439.32	37	\$502.52	28
Grant	\$4,523,195	\$4,373,753	-3.3%	\$564.01	17	\$569.13	21
Gray	\$1,740,478	\$1,815,398	4.3%	\$287.07	77	\$303.58	79
Greeley	\$545,738	\$540,939	-0.9%	\$384.32	56	\$382.29	59
Greenwood	\$2,018,835	\$2,122,039	5.1%	\$269.72	85	\$281.51	85
Hamilton	\$911,315	\$953,932	4.7%	\$341.83	65	\$359.43	65
Harper	\$2,767,218	\$3,020,563	9.2%	\$445.89	36	\$484.22	32
Harvey	\$16,302,923	\$16,490,776	1.2%	\$486.63	28	\$488.34	31
Haskell	\$1,405,835	\$1,499,562	6.7%	\$331.10	68	\$351.02	69
Hodgeman	\$436,620	\$480,905	10.1%	\$202.98	101	\$230.21	99
Jackson	\$5,039,956	\$5,450,814	8.2%	\$387.18	53	\$413.91	49
Jefferson	\$3,607,695	\$3,976,728	10.2%	\$191.92	104	\$210.34	104
Jewell	\$690,301	\$779,847	13.0%	\$201.08	102	\$227.89	101
Johnson	\$431,171,107	\$447,090,615	3.7%	\$886.24	1	\$900.14	2
Kenny	\$1,038,303	\$1,073,203	3.4%	\$226.16	98	\$237.70	96
Kingman	\$2,678,443	\$3,002,698	12.1%	\$319.55	71	\$357.89	66
Kiowa	\$1,248,994	\$1,384,019	10.8%	\$396.25	49	\$448.77	42
Labette	\$8,576,667	\$8,584,148	0.1%	\$385.31	55	\$385.48	58
Lane	\$578,891	\$634,019	9.5%	\$297.48	76	\$325.14	76
Leavenworth	\$24,516,971	\$25,756,462	5.1%	\$342.67	64	\$355.56	67
Lincoln	\$827,838	\$796,683	-3.8%	\$236.66	93	\$233.22	98
Linn	\$2,329,750	\$2,438,111	3.8%	\$239.64	92	\$247.38	92
Logan	\$1,371,575	\$3,301,213	-5.1%	\$480.41	30	\$460.28	38
Lyon	\$18,753,734	\$19,217,593	2.5%	\$525.77	22	\$538.05	25
Marion	\$3,761,826	\$3,917,631	4.1%	\$282.87	81	\$301.12	80
Marshall	\$4,615,909	\$4,874,189	5.6%	\$435.92	39	\$468.38	36

Appendix F (Continued):

Total Amount State Sales Tax Collections by County

5.3% state sales tax rate.

County	FY2004	FY2005	Percent Change	FY2004 Per Capita	FY2004 PC Rank	FY2005 Per Capita*	FY2005 PC Rank*
McPherson	\$15,955,362	\$16,873,449	5.8%	\$543.70	19	\$573.67	19
Meade	\$1,297,945	\$1,317,041	1.5%	\$278.41	84	\$286.81	84
Miami	\$12,782,425	\$13,468,643	5.4%	\$437.95	38	\$453.31	40
Mitchell	\$3,628,368	\$3,643,078	0.4%	\$540.98	20	\$555.01	24
Montgomery	\$17,795,594	\$18,524,654	4.1%	\$509.41	24	\$529.65	27
Morris	\$2,114,497	\$2,204,912	5.2%	\$352.71	61	\$372.25	60
Morton	\$1,571,624	\$1,562,390	-0.6%	\$473.81	31	\$477.94	34
Nemaha	\$3,771,117	\$4,079,915	8.2%	\$359.15	60	\$390.12	57
Neosho	\$9,526,966	\$9,884,636	3.8%	\$574.61	18	\$597.08	16
Ness	\$1,943,638	\$2,087,856	7.4%	\$615.46	14	\$677.88	11
Norton	\$2,162,914	\$2,128,808	-1.6%	\$373.17	58	\$367.10	61
Osage	\$3,879,403	\$4,156,029	7.1%	\$231.14	94	\$243.17	93
Osborne	\$1,638,959	\$1,601,514	-2.3%	\$392.19	51	\$390.61	56
Ottawa	\$1,345,885	\$1,390,203	3.3%	\$217.89	100	\$225.13	102
Pawnee	\$2,453,386	\$2,483,705	1.3%	\$361.00	59	\$365.81	62
Phillips	\$2,276,566	\$2,249,360	-1.2%	\$402.43	47	\$402.89	53
Pottawatomia	\$16,287,617	\$17,673,868	8.5%	\$870.34	2	\$936.56	1
Pratt	\$6,766,910	\$6,844,215	1.1%	\$717.06	5	\$726.79	7
Rawlins	\$729,234	\$771,788	5.8%	\$256.50	87	\$279.13	86
Reno	\$39,829,680	\$40,406,358	1.4%	\$623.98	13	\$634.36	14
Republic	\$1,764,870	\$1,883,950	6.7%	\$332.56	67	\$360.63	63
Rice	\$3,209,899	\$3,531,329	10.0%	\$308.29	75	\$336.39	72
Riley	\$27,907,947	\$30,042,430	7.6%	\$448.03	35	\$476.34	33
Rooks	\$2,224,639	\$2,381,843	7.1%	\$410.68	45	\$442.23	44
Rush	\$783,573	\$796,178	1.6%	\$229.25	96	\$229.71	100
Russell	\$3,184,471	\$3,426,547	7.6%	\$461.05	33	\$491.05	30
Saline	\$43,598,193	\$44,292,974	1.6%	\$811.33	4	\$821.11	4
Scott	\$2,429,571	\$2,630,499	8.3%	\$505.53	26	\$560.75	22
Sedgwick	\$330,033,418	\$343,198,175	4.0%	\$713.02	6	\$739.97	6
Seward	\$16,155,575	\$15,870,093	-1.8%	\$699.65	9	\$682.97	10
Shawnee	\$121,271,467	\$124,116,893	2.3%	\$709.60	7	\$722.80	8
Sheldahl	\$909,416	\$941,011	3.5%	\$341.63	66	\$359.99	64
Sheridan	\$4,333,695	\$4,461,413	2.9%	\$690.41	10	\$717.50	9
Smith	\$1,365,752	\$1,404,793	2.9%	\$326.66	70	\$336.16	73
Stafford	\$1,461,774	\$1,520,035	4.0%	\$318.54	72	\$336.89	71
Stanton	\$687,322	\$734,603	6.9%	\$285.91	78	\$309.44	77
Stevens	\$2,047,603	\$2,228,005	8.8%	\$379.96	57	\$403.62	52
Summer	\$7,157,532	\$7,348,305	2.7%	\$283.40	80	\$290.77	82
Thomas	\$5,619,840	\$5,916,437	5.3%	\$708.41	8	\$758.42	5
Trego	\$1,262,394	\$1,370,585	8.6%	\$406.83	45	\$434.00	45
Wabaunsee	\$1,154,810	\$1,259,268	9.0%	\$170.65	105	\$181.50	105
Wallace	\$497,748	\$546,279	9.8%	\$307.06	75	\$345.97	70
Washington	\$1,487,707	\$1,607,823	8.1%	\$242.65	91	\$263.28	89
Wichita	\$694,986	\$792,831	14.1%	\$284.02	79	\$335.95	74
Wilson	\$2,826,720	\$3,044,753	7.7%	\$280.43	82	\$306.13	78
Woodson	\$838,778	\$926,885	10.5%	\$231.00	95	\$260.87	91
Wyandotte	\$79,673,410	\$83,168,151	4.4%	\$507.18	25	\$531.47	26
Total Counties	\$1,647,554,383	\$1,711,408,775		\$604.94		\$625.63	
Miscellaneous	\$7,001,552	\$6,380,263					
Grand Total	\$1,654,555,935	\$1,717,789,038	3.8%				

*Population based upon figures certified to the Secretary of State by the Division of the Budget on July 1, 2005.

Figures might not add from rounding.