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Business Taxes and Costs
A Cross-State Comparison

by

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The opinions expressed in this report are solely those of the authors.

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EXECUTIVE SUMMARY

Study Overview

- The study focuses on ten states. We begin by looking at Kansas and the nearby states of Colorado, Iowa, Missouri, Nebraska, and Oklahoma. We then turn our consideration to several large industrial states: California, Illinois, New Jersey, and New York.

- We compare basic tax rates, tax incentives, and business costs for these states in Chapters 1-8 of the report. In Chapter 9, we examine the results from a model that simulates the taxes and costs that would be faced by representative firms on a state-by-state basis.

- We also include four appendices that address special issues in state and local finance: fees and regulations, tax elasticity, tax incidence, and the effect of taxes on growth.

Tax and Spending Trends and Comparisons

- Since the early 1980s, responsibility for the provision of government services has shifted from the federal government to the states and localities. During the thirteen years between 1981 and 1994, real per capita general federal spending, exclusive of transfers to the states, grew by 12.9 percent, or only about 1.0 percent per year. During these same years, real per capita state and local spending increased by 36.3 percent, or about 2.8 percent per year.

- The shift in responsibility has had important consequences for state and local finance. State tax collections have risen 37.1 percent from 1981-1994. Additional funding for the growth in state expenditure has come from federal government transfer payments and from charges and fees (such as university tuition).

- For the U.S. as a whole, state and local taxes claim about 10.8 percent of personal income (as of 1994). The ratio is similar for Kansas–11.1 percent. In terms of taxes as a share of personal income, Kansas appears to be a fairly average state. It ranks in the middle of the region and 18th highest in the nation.

- Kansas is also fairly typical in the sources from which it collects its taxes. As of 1996, general sales taxes provided the single largest source of state-level tax revenue in the U.S. (33.3 percent), followed closely by the individual income tax (32.0 percent). Kansas generally follows the national pattern, but puts somewhat more emphasis on the sales tax (providing 35.2 percent of state tax revenues), and the individual income tax (providing 34.6 percent of tax revenues).

- On one measure, the share of state tax revenue from the corporate income tax, Kansas stands out among the states in the region. On average, the states in the region receive about 4.5 percent of their tax revenue from corporate income taxes. In Kansas, corporate taxes comprise 6.4 percent of revenue (as of 1996) compared to the national average of 7.0 percent.

Individual Income Tax

- Forty-three states impose a tax on the income received by households. Individual state and local income taxes affect businesses in two ways. First, businesses are often organized as partnerships or sole proprietorships, and hence pay taxes at individual rather than corporate rates. Second, income taxes affect the business location decisions of corporate planners who are considering expansions or relocations. Taxes affect the cost of living for employees. High income employees may be reluctant to relocate to a high tax area unless their pay also increases.

- States differ widely in their tax rate structures. A key to these differences is the degree of progressivity of the tax systems; that is, the extent to which tax rates increase as income increases. All states in this study, with the exceptions of Colorado and Illinois, implement progressive rate structures.

- Most states allow standard or itemized deductions of various expenses and allow exemptions for taxpayers and their dependents. However, deductions and exemption amounts generally are *not* the same as those under federal law, and even definitions of income may differ.

- The effective individual income tax rate, defined as ratio of taxes paid by a representative household to federal adjusted gross income, is an appropriate comparison measure for state tax systems. By this measure, the estimated Kansas rate, 2.98 percent, falls within the middle group of states and is similar to that found in Colorado and Illinois. Kansas income tax rates for the family are significantly lower than rates in the nearby states of Missouri, Oklahoma, and Iowa (Table Exec-1).

Table Exec-1
Effective Individual Income Tax Rates
Kansas and Comparison

State	Effective Rate	State	Effective Rate
Colorado	3.00%	Oklahoma	4.74%
Iowa	5.55%	California	2.18%
Kansas	2.98%	Illinois	2.76%
Missouri	3.75% plus local	New Jersey	1.36%
Nebraska	2.60%	New York	3.33% plus local

Calculated for a family of four with federal adjusted gross income of $50,000.

Corporate Income Tax

- Corporate income taxes are imposed in forty-four states (all states except Texas, Wyoming, Washington, South Dakota, Nevada, and Michigan). In recent years, the tax has contributed between 6.5 and 7.5 percent of state tax revenues for the U.S. as a whole. Kansas generally collects a share close to the national average: in 1996, Kansas collected 6.4 percent of taxes from the corporate income tax, compared with 7.0 percent nationally.

- For the nation as a whole, these taxes now comprise a significantly smaller share of state tax revenues than they did in the early 1980s. Kansas has followed the national trend, roughly speaking. The growth of economic development incentives and the growth of other types of taxes, (esp. sales and individual income), which expand total state collections, help to explain this trend.

- State corporate tax rates in the U.S. typically range from 5 to 10 percent. About two-thirds of the states that impose a corporate income tax impose a flat tax, while the remaining third have a graduated rate system. Kansas charges a tax of 4 percent on the first $50,000 of income, and 7.35 percent thereafter.

- The most challenging issues in state corporate taxation involve the division of income for firms that do business in several states (and nations). The individual states retain considerable freedom to decide how to claim income as their own, and hence there is no assurance that exactly 100 percent of income (no more and no less) will be taxed overall by the states in which a firm operates. Depending on the firm's circumstances, multiple states may claim the right to tax the same income.

- Key concepts in the division of income include:
  1) Nexus. Does the state have the legal authority to tax the income of the firm?
  2) Unitary businesses. Should a group of corporate affiliates be treated like a single firm for the purposes of taxation?

3) Apportionment. What kind of formula does the state apply to decide what share of income of the the multi-state firm is taxable?
4) Allocation. Can the state identify and claim specific income streams that belong to that state alone, and hence are not divided?

- Historically, apportionment formulas based on evenly-weighted averages of three factors, payroll, property, and sales, have been the norm. Such a formula is contained in model legislation known as UDITPA (Uniform Division of Income for Tax Purposes Act.)

- More recently, many states have switched to formulas that give extra weight to the sales factor. Such formulas are advantages to export-oriented firms that locate their property and payroll in a state, but make most of their sales out-of -state.

- Within the area close to Kansas, Missouri, Nebraska, and Iowa offer a sales-only apportionment formula.

- Kansas relies primarily on an evenly-weighted three-factor apportionment formula. However, the state started to move away from the exclusive use of such a formula in 1988. At that time, Kansas offered a new option by which a taxpayer could choose to drop payroll from the apportionment formula. The option remains open to taxpayers for whom the payroll factor is at least twice the average of the property and sales factors. In 1996, the state began to offer a very limited sales-only apportionment option.

- Economic development incentives, particularly job and investment credits, can make a large difference to the bottom-line taxes owed by a firm.

- Kansas offers three alternative job and investment tax credits:
  1) Small credits: $100 per job, $100 per $100,000 investment credits for firms in each of 10 years that they remain eligible. There are very few restrictions on the types of firms that qualify.
  2) Larger one time job and investment credits: $1,500 per job ($2,500 in nonmetro areas) and $1,000 per $100,000 investment. The restrictions for qualification are slightly more stringent than for the first program.
  3) 10 percent investment credit for "high performance" firms. The program is intended to promote high quality jobs and work processes.

Sales Tax

- The state sales tax is an important component of tax structures in 45 states. Shifts in state and local tax structures occurred during the mid 1980s. At that time, sales taxes

started to comprise a larger share of total state and local tax collection, both in the region and the nation.

- Since the mid 1980s, the sales tax share of state and local tax revenue has hovered around 26-27 percent regionally and 24 percent for the nation. The Kansas sales tax share rose sharply between 1986-1987, and again between 1992 and 1993. Sales tax collections in Kansas comprised 26.4 percent of total state and local tax revenue as of 1994.

- Sales taxes affect the prices of consumer goods, investment goods (machinery, equipment, and building supplies), and production inputs (utilities, materials, fuels, business services). The impact of such taxes on firms depends on the individual state's sales tax exemptions.

- Kansas has in place a basic sales tax exemption for machinery and equipment used directly in manufacturing, assembling, processing, warehousing, or in-plant distribution of goods intended for resale. Labor services for new construction (whether or not in manufacturing) are also exempt, but building supplies and labor services used in remodeling are not. For qualifying new or expanding firms, the exemptions are much broader. They extend to all property, including machinery, equipment, and building supplies, and services used in constructing, expanding, or remodeling a facility.

- Kansas also exempts electricity, gas, and industrial fuels used in most production processes.

- States vary widely in the extent to which they include services in their sales tax bases. A recent survey conducted by the Federation of Tax Administrators found that Kansas taxed 76 out of a possible 164 services purchased by households and businesses. For comparison, Iowa taxed 94 services, while Colorado taxed only 14.

Property Taxes

- The property tax is primarily a local tax. In most states it is the single largest source of local revenue. Nationally, property taxes have comprised a fairly stable 74-76 percent of local revenues since the early 1980s.

- In Kansas, the property tax share of local tax revenues has dropped by about 10 percent during this period, from about 92 percent to 82 percent of local tax revenue. The difference has been made up by the local sales tax.

- The concept of *effective property tax rates* provides a key to understanding property taxation and to comparing taxes across states. The definition of an effective tax rate

is straightforward: it is the annual tax bill divided by the true market value of a piece of property. Effective rates vary not only among states but also among the major categories of property: residential real estate, commercial real estate, business machinery and equipment, and inventories.

- Table Exec-2 shows effective property tax rates for various property types in Kansas and the comparison states. Note that Kansas tax rates on machinery and equipment are the highest among the states studied. Several states, including Iowa, Illinois, New Jersey, and New York, exclude machinery and equipment from the property tax base.

Table Exec-2
Estimated Effective Property Tax Rates in Kansas and Comparison States

State	Residential Real Estate	Commercial, Industrial Real Estate	Machinery, Equipment	Inventories
Colorado (1996)	0.91	2.41	2.41	0.00
Iowa (1996)	1.60	2.88	0.00	0.00
Kansas (1997 est.)	1.17	2.64	2.85	0.00
Missouri (1996)	1.10	2.19	1.97	0.00
Nebraska (1996)	2.19	2.24	2.33	0.00
Oklahoma (1997)	1.08	1.05	1.16	1.16
California (1995)	1.06	1.06	1.06	0.00
Illinois (1994)	2.74	2.74	0.00	0.00
New Jersey (1995)	2.39	2.39	0.00	0.00
New York (1996)	2.89	2.89	0.00	0.00

- It is common for state and local governments to abate property taxes for economic development purposes. The percentage of a tax abatement and the requirements for eligibility vary widely from state to state. Some state governments–for example, Missouri–limit abatements to state-designated enterprise and urban redevelopment zones. Some states (New York) offer more generous benefits in enterprise zones than in other areas of the state.

- Kansas allows local governments to abate up to 100 percent of property tax liabilities for 10 years for new and expanding industries. Abatements are limited to property used in manufacturing, research and development, and warehousing. Kansas law also allows most property financed with industrial revenue bonds to be exempt from local property taxes for up to ten years. Taxes may be abated on land, buildings,

improvements, machinery, and equipment. These abatements offer significant savings to firms.

Unemployment Insurance and Workers Compensation

- The average unemployment insurance tax is much lower in Kansas than in most other states. The reason is clear to see. In light of huge balances in the Kansas unemployment insurance trust fund, the Kansas Legislature in 1995 declared a moratorium on unemployment taxes for approximately 44,000 Kansas businesses with positive unemployment compensation account balances.

- The unemployment insurance moratorium has been extended through 1998. Annual benefits per employee now exceed annual tax collections, so the trust fund is gradually being spent down. However, the fund still had one of the highest balances per employee of any state as of the end of calendar year 1996.

- Workers compensation in Kansas underwent reform in 1995. At that time, the Kansas Legislature passed the comprehensive Worker Compensation Reform Act that aimed at eliminating fraud, preventing accidents, and increasing competition in the Kansas market.

- Kansas worker compensation rates stood at 101 percent of the national average in 1994; by 1997 the rates had dropped to 83 percent of the national average.

Basic Business Costs

- In general, Kansas offers a competitive climate in terms of basic business costs. Labor costs, the most important of the costs that we consider, are slightly below the regional average and are well below costs in the large comparison states or in the nation as a whole.

- Land costs in the region as a whole are well below the national average. For specific Kansas locations, Wichita stands out as having some of the lowest land costs in the country.

- Construction costs fall 16 percent below the national average.

- Industrial gas prices are well below the national average, while industrial electricity prices are approximately equal to the national average.

Results from the IPPBR Tax and Cost Simulation Model

- As is obvious from the above discussion, a state's business climate is a multi-faceted concept. Tax rates, definitions of tax bases, incentives, and basic business costs such as labor and energy all affect the profits that a firm can realize by doing business in a particular location. The IPPBR tax and cost model is designed to estimate the interplay of these various dimensions.

- The model looks at representative firms in each of several export-oriented industries, including electronics, medical drugs, wholesaling, and research and development.

- The model results show that for a firm seeking to make a new investment, the overall Kansas cost and tax climate appears moderately favorable in comparison with other states in the region. Estimated profits per employee exceed the regional average. Tax incentives, particularly property tax abatements, give Kansas a competitive advantage.

- The model also shows that from the point of view of a mature firm, property taxes make Kansas the highest taxed state in the region. To some degree, moderate costs for labor and utilities mitigate the impact of high taxes, placing Kansas in the mid-range of the region in terms of overall costs. Still, overall profits per employee fall short of the regional average by about two to five percent for most industries, with the exception of data processing (See Table Exec-3).

Table Exec-3
Profits per Employee: Full Model Including Cost Variations
Existing Firms Receiving No Credits or Abatements

Location	Manufacturing				Services		
	Medical Drugs	*Plastic Products*	*Electronics, Components*	*Mot. Vehicles and Parts*	*Data Processing*	*Wholesale Trade*	*Research and Devel.*
State Averages							
Colorado	$22,401	$8,983	$11,759	$16,162	$7,281	$5,982	$7,476
Iowa	29,621	13,559	17,447	23,093	12,284	10,540	12,567
Kansas	25,679	11,168	14,564	19,214	10,460	8,501	10,479
Missouri	23,739	10,050	13,138	18,156	9,236	7,519	9,293
Nebraska	28,034	12,706	16,165	22,009	11,910	9,779	12,106
Oklahoma	27,816	12,468	16,244	21,672	10,656	9,579	11,701
California	17,630	5,955	8,346	11,892	4,571	3,346	4,278
Illinois	19,954	7,509	10,253	14,258	5,460	4,148	5,128
New Jersey	13,628	3,519	5,565	8,618	1,931	699	1,238
New York	13,419	3,857	5,630	8,017	956	16	437
Reg. Av. (Co, Ia, Mo, Ne, Ok)	26,322	11,553	14,951	20,218	10,274	8,680	10,629
Kansas as % of Reg. Av.	97.56%	96.67%	97.41%	95.03%	101.81%	97.94%	98.59%

NOTE: Under the assumptions of the full model, taxes and other costs (labor, land, energy, etc.) vary by location.
SOURCE: Calculated by IPPBR

Overall Conclusions

- The descriptive part of our study shows that, in most respects, Kansas has a fairly average tax structure. Most of the basic costs of doing business (labor, utilities, etc.) are also moderate. Kansas registers a "negative" in only a few tax categories: property taxes on machinery and equipment are very high, and Kansas relies heavily on a three-factor formula for allocating income of multi-state businesses.

- The problem is that these two negatives have an important impact on mature Kansas export-oriented firms. These firms tend to be capital intensive, and hence are strongly affected by property taxes. Mature firms do not receive tax abatements unless they expand their operations, so they feel the full force of the property tax. Also, export-oriented firms must pay corporate income taxes allocated on the basis of their payroll and property (as well as sales) in state. This may put them at a competitive disadvantage in an environment where other states strategically offer a "sales only" apportionment formula as an economic development incentive.

CHAPTER 1: AN OVERVIEW OF STATE AND LOCAL TAXATION

The Increasing Importance of State and Local Expenditures

Since the early 1980s, responsibility for the provision of government services has shifted from the federal government to the states and localities. During the thirteen years between 1981 and 1994, real per capita general federal spending, exclusive of transfers to the states, grew by 12.9 percent, or only about 1.0 percent per year.[1] During these same years, real per capita state and local spending increased by 36.3 percent, or about 2.8 percent per year. State and local per capita general spending stood $1,031 higher in 1994 than in 1981, when measured in real, inflation-adjusted 1992 dollars (Figure 1-1).

This growth in state and local spending has been financed from three primary sources: increases in state and local taxes, increases in intergovernmental transfers from the federal government, and increases in miscellaneous charges and fees, such as university tuition and local hospital fees. For the nation as a whole, real state and local tax revenues rose by $610 per capita, transfers rose by $151, and charges rose by $243. A small amount of additional revenue growth resulted from increases in interest earnings and property sales.

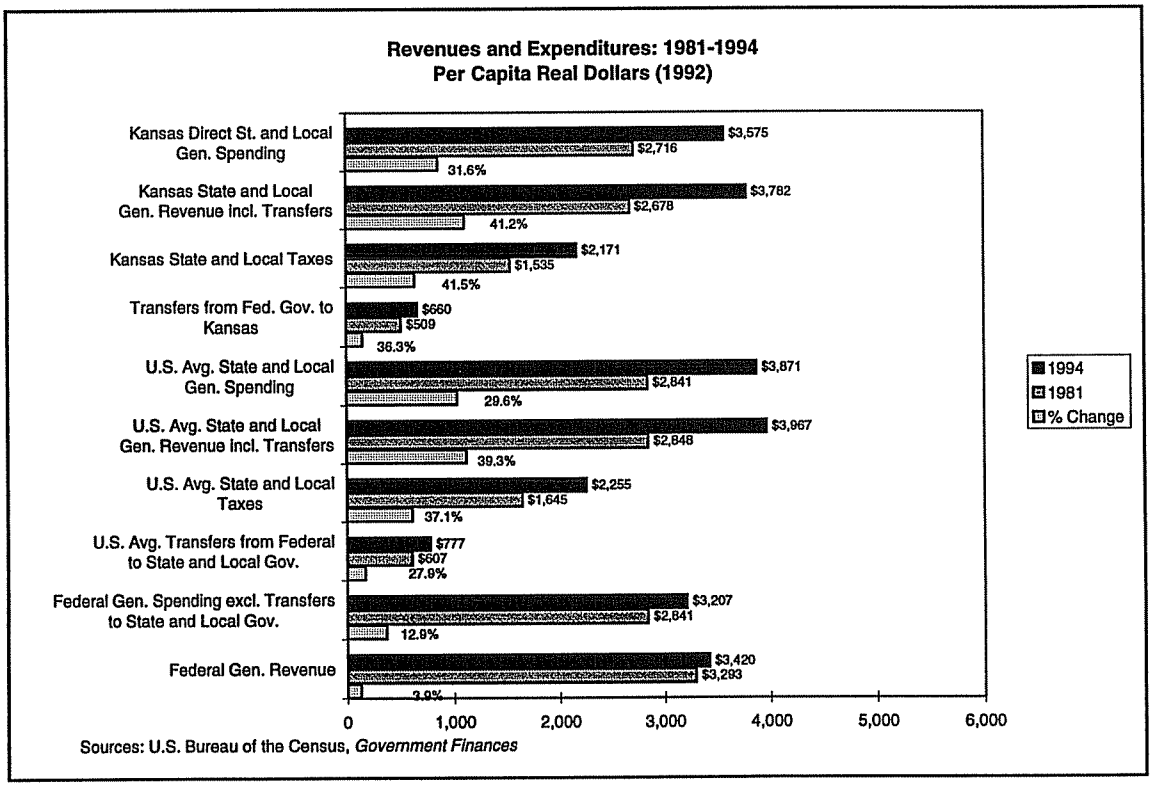

Figure 1-1

[1] General spending excludes spending from trust funds such as social security and state unemployment funds. See section below for data sources.

In Kansas, state and local spending grew somewhat more slowly than the national average; between 1981 to 1994 it grew by 31.6 percent overall. State and local taxes rose somewhat more rapidly: by 41.5 percent (Figure 1-1).

On average, state and local taxes provide a little more than half of the revenues available to state and local governments: about 57 percent, both nationally and in Kansas. As the level of per capita spending has risen in the states, so has the per capita level of taxation (Figure 1-2). Taxation has been a primary concern in state legislatures. Although the states share the common problem of financing government services, they differ substantially in the choices that they make in order to raise revenue. In other words, individual states and localities employ a variety of tax structures.

Our study provides a description of state and local expenditures and tax structures in order to gain an understanding of the overall intensity of spending and taxation in each state. The study identifies patterns and trends in state and local taxation.

The study focuses on ten states. We begin by looking at Kansas and the nearby states of Colorado, Iowa, Missouri, Nebraska, and Oklahoma. We then turn our consideration to several large industrial states: California, Illinois, New Jersey, and New York. The larger states are included in the analysis to add a richness of comparison that would be lost by considering national averages alone.

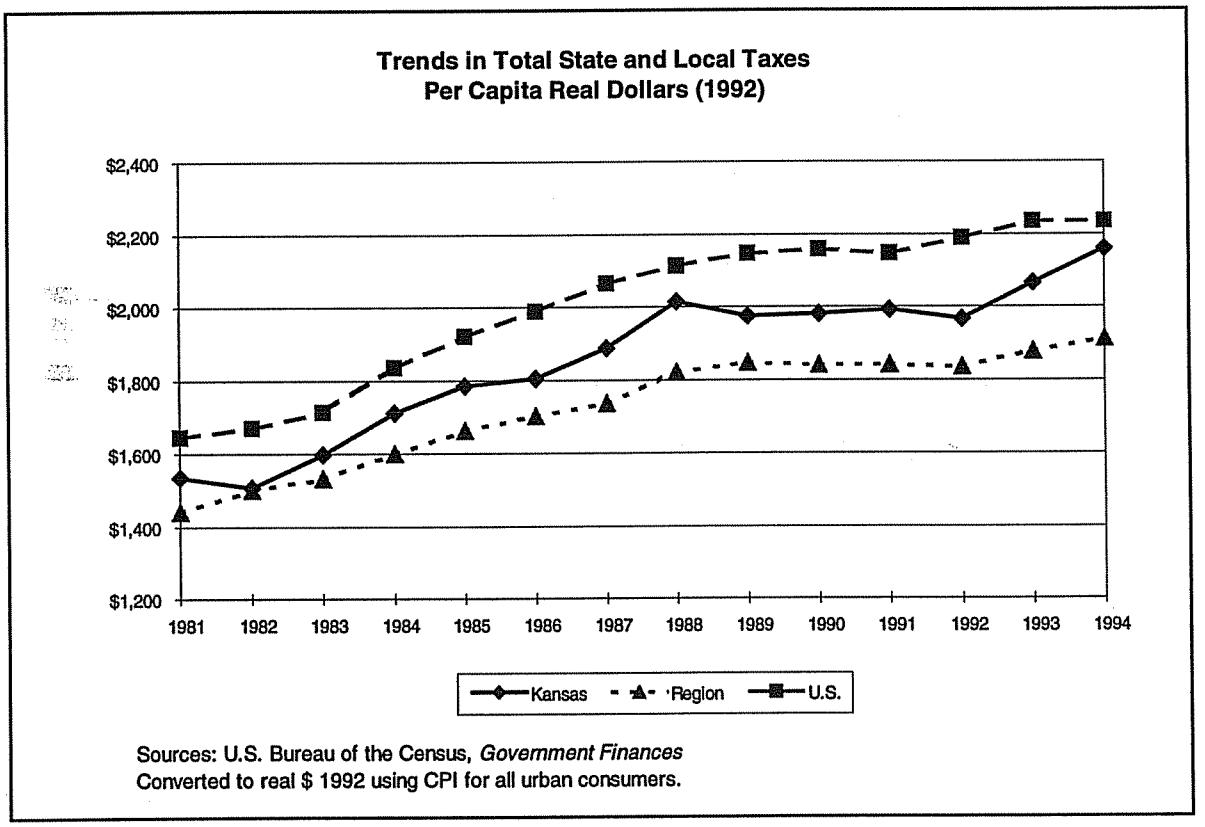

Figure 1-2

Data Sources

Two U.S. Bureau of the Census data series provide the core of information in this section. The first series includes the Census estimate of federal, state, and local government expenditures and revenues. It is available in printed format through 1992 as *Government Finances*, and is available on the Census web site in electronic format for 1993 and 1994 as *State and Local Government Finance Estimates* and *Summary of Federal Government Finances*. The second main series includes state-level tax data only. It is available in printed format as *State Government Tax Collections* through 1991, and is available electronically as *State Tax Collections by State* for 1992-1996. The data in these publications are compiled in a consistent manner for all fifty states. Where possible, state, local, and federal definitions are brought into conformity. Our report supplements these data with population and personal income numbers from the U.S. Bureau of Economic Analysis, State Personal Income series. Inflation-adjusted values were calculated using the consumer price index for all urban consumers, published by the U.S. Bureau of Labor Statistics.

Comparisons of Tax Revenues

Per capita tax collections serve as a general indicator of the level of taxation in a state. At the same time, the per capita figures provide some information about the availability of the funding for state and local services, since taxes are the largest source of state and local government revenue. Figure 1-3 shows that (as of 1994) the states in this region fall into two groups with respect to tax collections. The higher taxed states–Colorado, Iowa, Kansas, and Nebraska–collect revenues of about $2,200 to $2,300 per capita. Kansas, with tax revenues of $2,314 per capita, ranks 23rd highest in the nation, 9.6 percent below the national average of $2,403 per capita. The lower taxed states in the region, Missouri and Oklahoma, each collect less than $1,900 per capita; they rank 43rd and 44th in the nation, respectively. Missouri collections per capita consistently have ranked among the lowest ten in the nation throughout the period covered by this report (1981-1994). The situation differs somewhat in Oklahoma, where total collections depend heavily upon oil and gas severance taxes. Oil and gas severance taxes peaked in 1983, yielding Oklahoma $778 million, or about one-third of total state-level revenues. By 1994, severance taxes had declined to $373 million. Oklahoma has failed to replace these revenues from other sources. Per capita taxation in all four large comparison states–California, Illinois, New Jersey, and New York–is substantially higher than in the region surrounding Kansas.

Another indicator of the general level of taxation is the ratio of taxes to personal income (Figure 1-4). For the U.S. as a whole, state and local taxes claim about 10.8 percent of personal income. The ratio is similar for Kansas–11.1 percent. In terms of taxes as a share of personal income, Kansas ranks in the middle of the region, and ranks 18th highest in the nation. With the exception of New York, the ratios for the large comparison states fall near the U.S. average. Only New York stands out as an exceptionally high-taxed state by this measure–it has the highest ratio of taxes to income among all the states.

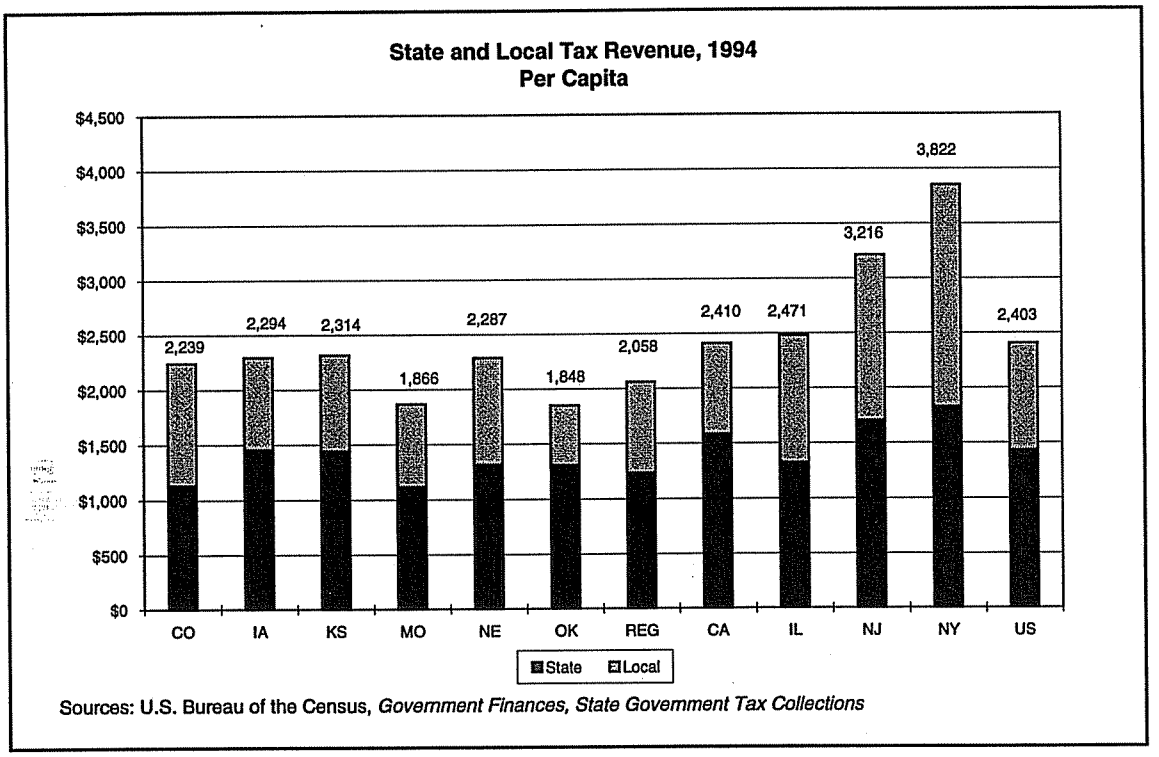

Figure 1-3

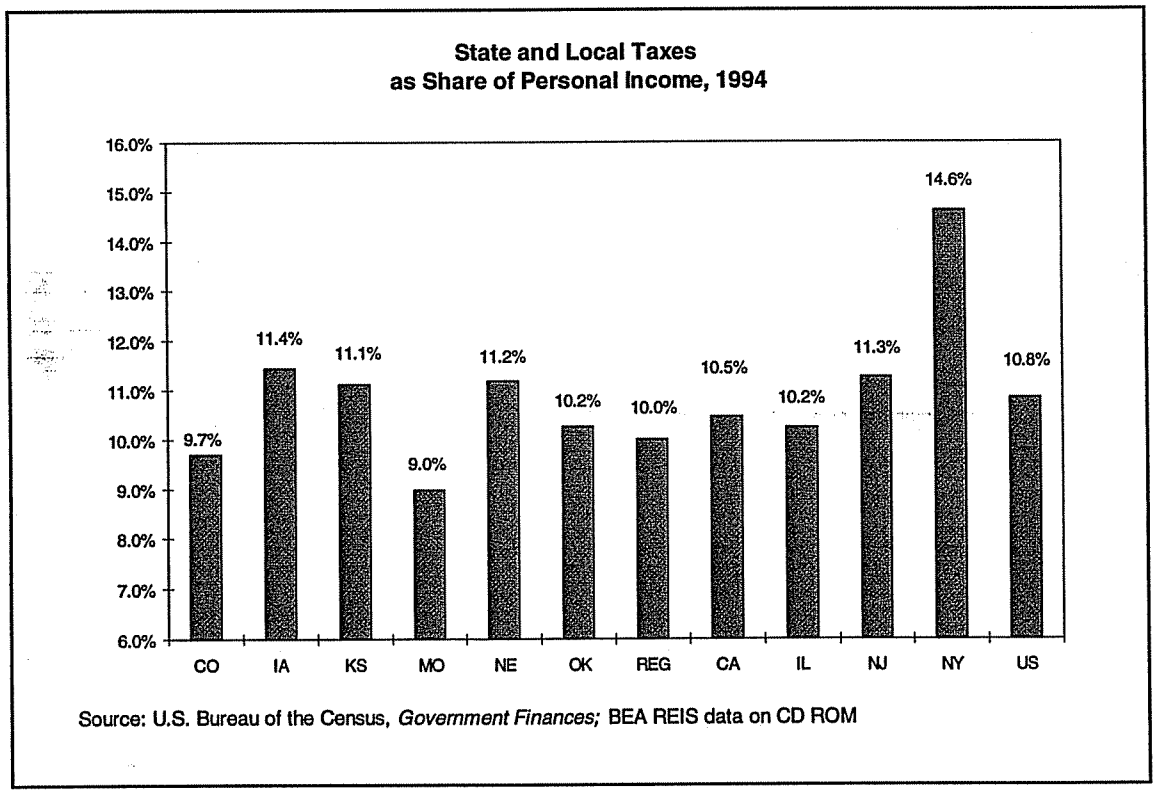

Figure 1-4

State and Local Taxes

In addition to the state government itself, many different local governments are empowered to collect taxes. Counties, cities, school districts, and other special districts impose their own sets of tax rates. For the nation as a whole, local taxing authorities collect about 40 percent of total revenue. Within the region surrounding Kansas, Oklahoma at one extreme collects only 29.1 percent of total taxes locally, while Colorado collects 49.3 percent. Kansas collects 37.7 percent of taxes at the local level (as of 1994).

However, there is no simple relationship between the amount of funds collected at the local level and the degree of support for locally provided services. All of the states in this study redistribute a substantial amount of funds from state to local jurisdictions, primarily to support education, and secondarily to support public welfare programs. In 1994, the local government units of Kansas received almost $2 billion from the state, an amount almost equaling their local level tax collections.

Composition of State-Level Taxes

Not only do the states differ in the breakdown between local and state taxes, but they also differ in the importance of various taxes within the state-level tax structure. As of 1996, general sales taxes provided the single largest source of state-level tax revenue in the U.S. (33.3 percent), followed closely by the individual income tax (32.0 percent). Kansas follows the national pattern, with the sales tax providing 35.2 percent of state tax revenues, and the individual income tax providing 34.6 percent. On average, the states in the region receive about 4.5 percent of their tax revenue from corporate income taxes. Kansas stands out in the region with corporate taxes comprising 6.4 percent of revenue in 1996, close to the national average of 7.0 percent. Most of the states in the region surrounding Kansas impose severance taxes on natural resource extraction. However, only in Oklahoma does this provide a large share of state finances.

The makeup of state taxes has shifted over time. Figure 1-5 compares the years 1981 and 1996. During these years, the nation as a whole saw a significant increase in the share of collections from individual income tax (27.3 to 32.0 percent) and a small increase in the share of collections from the general sales tax (31.0 to 33.3 percent). At the same time, the share of revenue from corporate income and severance taxes fell. In Kansas, the share of taxes due to the individual income tax also increased significantly, from 29.8 to 34.6 percent. The general sales tax share rose by almost 3 percent. The contribution of the severance tax increased from 0.1 to 1.8 percent, while the contribution of corporate income taxes fell from 10.8 to 6.4 percent.

Caution must be exercised in interpreting these changes in tax shares. As shown in Figure 1-6, the rise in the sales tax share for the U.S. as a whole has been fairly smooth over the last several years. The rise in the income tax share has been less steady, but the overall share of revenues provided by the tax is clearly higher in the 1990s than in the 1980s.

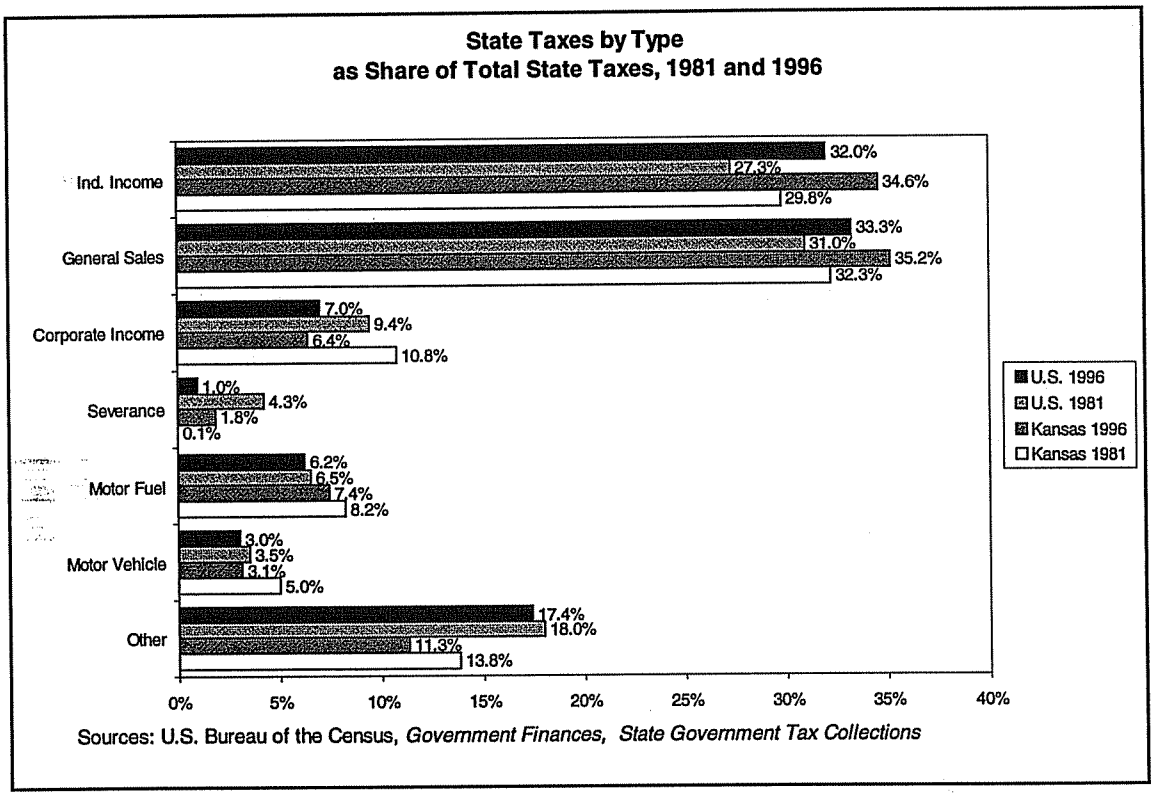

Figure 1-5

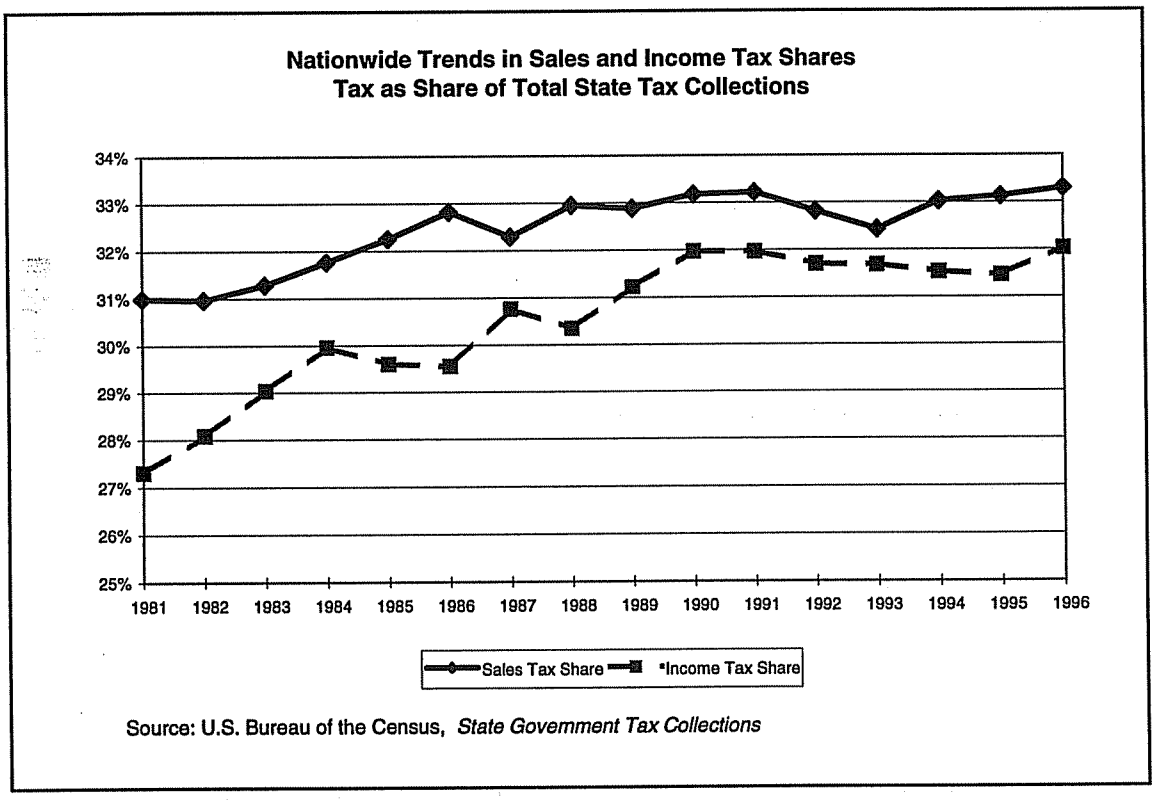

Figure 1-6

The pattern in Kansas has been much more ragged (Figure 1-7). The sales and income tax have been subject to several legislated rate and base changes. In addition, these taxes are sensitive to the ups and downs of the business cycle.

Composition of Local-Level Taxes

Local governments depend primarily on property taxes for financing, as illustrated in Figure 1-8. Within the region, the share of property taxes in local tax revenues runs from a high of almost 95 percent in Iowa to a low of about 56 percent in Oklahoma. Within the large comparison states, the share of property taxes ranges from over 98 percent in New Jersey to about 62 percent in New York. As of 1994, property taxes provide 81.6 percent of local revenue in Kansas. This compares with a national average of 74.8 percent (1994). Since the mid-1980s, the share of property taxes in total local tax revenue has remained relatively constant for the nation as a whole. In Kansas, the share has declined from 91.4 percent in 1981 to the current level.

A second major source of local tax revenue is the general sales tax. Nationally, sales taxes comprise about 10 percent of local tax revenue, a share that has held fairly constant over the last decade. Within the region, the states show very different patterns of reliance on the sales tax. Oklahoma collects close to 38 percent of local tax revenues in the form of local sales taxes, while Iowa collects only about 2 percent from this source. Among the large comparison states, shares range from 0 percent in New Jersey to 15.5 percent in New York. Kansas collects 11.7 percent as of 1994, up from 3.4 percent in 1981. Kansas clearly shows increased reliance on the local sales tax.

Consequences of State and Local Tax Structures

Raising revenue for public services is the goal of any state and local tax system. However, the composition of state and local taxes has important consequences for the efficiency of the system, stability and long-run growth of the system, and for the distribution of the tax burden among social groups. We sketch out the issues here, and expand upon them further in Appendixes B and C.

In general taxes distort the prices of goods and services, and hence change economic incentives. For example, a tax on labor income (such as the personal income tax) decreases the returns that a person realizes for working, and arguably reduces work incentives. Any real-world tax system distorts prices away from what they would be in a purely competitive economy. In general, the price distortions impinge on consumption and production decisions. The real income losses that result from such distortions are usually larger than the real income collected in taxes. Economists refer to the difference between the amount of taxes collected and the income lost as a loss in efficiency or as a deadweight loss. While such losses cannot be totally eliminated, they can be considered as a criterion in planning tax changes.

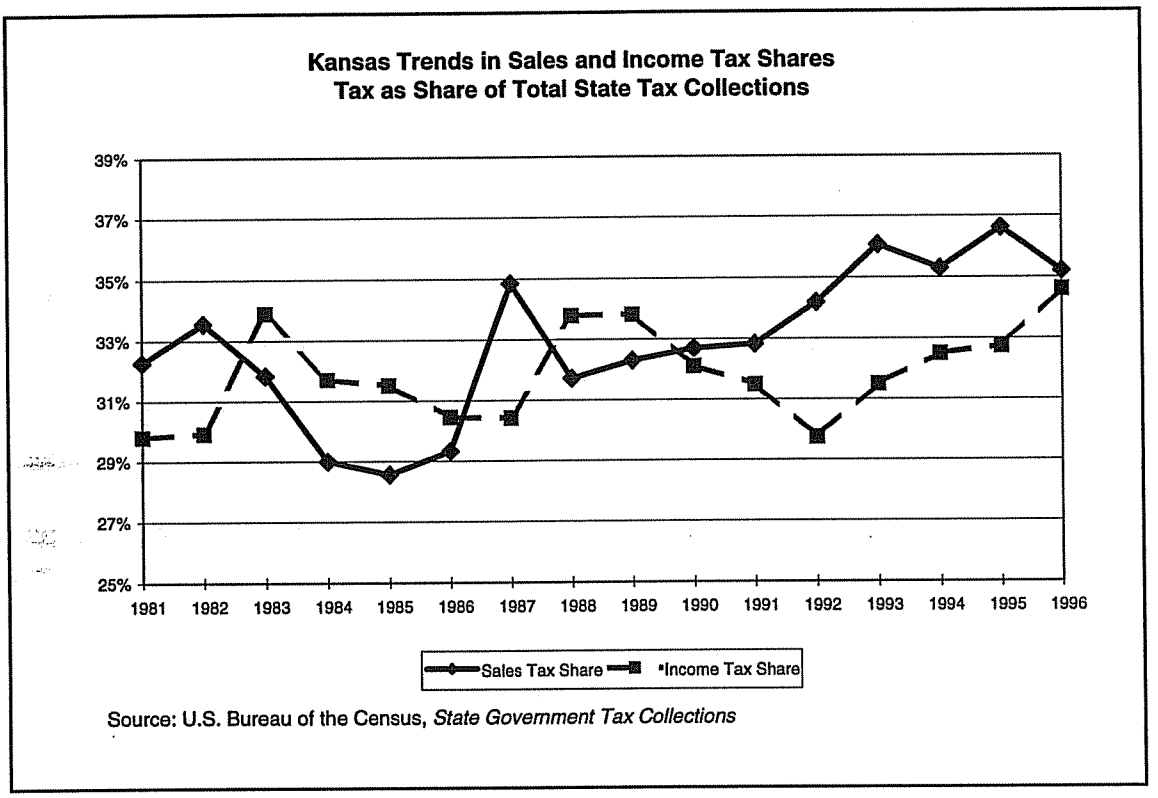

Figure 1-7

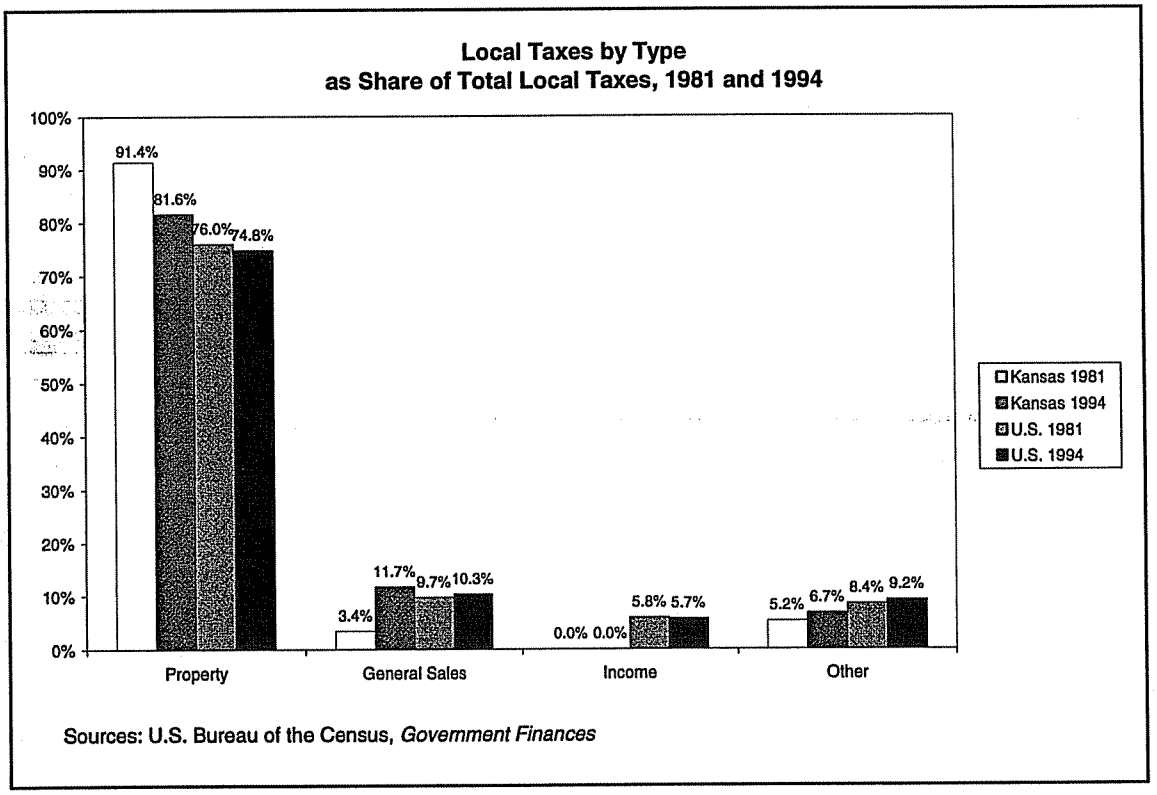

Figure 1-8

Stability has two meanings: we refer to the stability of individual taxes and to the stability of systems as a whole. An individual tax, such as the property tax, is stable if it exhibits only small fluctuations in its revenue generating ability between periods of recession and expansion. In a study of Georgia state-level revenues, White [1983] ranked taxes in terms of stability. Tobacco and sales taxes proved to be the most stable elements of the system, while income taxes, both corporate and personal, proved highly unstable. White formulated the problem of state tax structures in terms of a trade-off between growth potential and instability. He found that although income taxes were among the least stable in the system, they also provided the greatest possibility of long-term revenue growth. This is referred to as the long-run elasticity of the tax–does it grow more slowly, the same, or more rapidly than personal income? White proposes that states balance their tax systems by including high-growth and high-risk taxes along with more stable elements.

The issue of long-run elasticity is often discussed with regard to the sales tax. The tax is probably experiencing an erosion of its base. Stated simply, the share of disposable income spent on services has been rising in the U.S. Yet, until recently, the sales tax has rarely applied to service industries. Hence, the tax base for the sales tax has failed to keep pace with the growth of the economy. The issue of tax base erosion is a serious justification for applying the sales tax to selected consumer services.

At the local level, property tax revenues are stable in the sense that community-wide assessed property valuations respond slowly to changes in business conditions.[2] They are also stable in another sense–tax rates are set after the tax base is known, rather than before, and tax rates are revised each year. Therefore, a given level of revenue can be maintained with certainty. Reliance on sales taxes at the local level is likely to introduce an element of instability into local finance systems in two ways. First, local sales tax collections fluctuate to some extent with employment and income; second, local sales tax revenues are more difficult to forecast than are property tax collections. Local income taxes introduce a further source of instability.

Equity is an independent standard from stability for evaluating state and local tax systems. It is important to determine how the tax system affects families of different income levels. Under a progressive tax, lower income families pay a smaller percentage of their total income in taxes than do higher income families. Lower income families pay out the same percentage of their incomes as higher income families under a proportional tax; they pay out a greater percentage under a regressive tax. Many authors have examined the progressivity of individual taxes and of state and local tax structures [Musgrave and Musgrave, 1986; Pechman, 1985]. A 1985 study done by Joseph Pechman of the Brookings Institution reached several important conclusions:

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[2] Of course, mass reappraisal can lead to dramatic changes in assessed values. While appraised values reflect general market trends, they do not reflect short-term fluctuations caused by the business cycle.

1. Combined state and local taxes are much less progressive than are federal taxes. Depending on the assumptions made, they appear to be regressive or at best mildly progressive.
2. Income taxes are progressive. Although Pechman examines combined federal-state income taxes, it is likely that his results carry through for state systems, particularly where rates are graduated according to income class.
3. Whether property taxes are progressive or regressive depends critically on whether the property owner can pass the tax on in terms of higher prices. Under the assumption that property owners absorb costs due to taxes, Pechman finds that the tax is progressive, since property owners tend to be in higher income classes. Under the alternative assumption that owners pass on the tax to renters and consumers, Pechman finds that the tax is proportional for most income groups, but takes a disproportionate share from low income families.
4. Sales taxes are regressive. This conclusion holds up under a variety of different assumptions.

Many states attempt to mollify the regressive aspects of the sales tax. For example, almost all states exempt prescription medicines. Within the region, Colorado, Iowa, and Nebraska also exempt food, and Missouri taxes it at a reduced rate. Clearly, the states have a difficult balancing act to perform in providing stable revenue sources while maintaining a tax system that is perceived as fair.

Summary

Based on two key indicators of the overall level of state and local taxation, the Kansas tax load appears to be in the average range for the nation. Kansas ranks as the 23rd highest state when comparing state and local taxes per capita ($2,314 in 1994). It ranks 18th highest looking at state and local taxes as a percent of income (11.1 percent in 1994).

An examination of the composition of taxes at the state level shows Kansas' state government to be more dependent on general sales taxes than is the nation on average. Kansas collects 35.2 percent of total revenue from this source versus the national average of 33.3 percent. The share of revenue collected from income taxes equals 34.6 percent, which is 2.6 percent higher than the national average (as of 1996). At the same time, Kansas is significantly less dependent on miscellaneous other taxes and fees than is the nation as a whole. At the local level, Kansas depends more highly on property taxes than does the nation on average, even after Kansas tax reforms of recent years. Sales taxes provide the second largest source of local tax revenues.

States face a difficult challenge in designing tax systems that meet three criteria: that they produce sufficient revenue for the finance of state and local government services; that they meet politically acceptable levels of revenue stability; and that they are perceived to be "fair" in their treatment of taxpayers at different income levels.

CHAPTER 2: THE INDIVIDUAL INCOME TAX

Introduction

Forty-three of the 50 states impose a tax on the income received by households. Individual state and local income taxes affect businesses in two ways. First, businesses are often organized as partnerships or sole proprietorships, and hence pay taxes at individual rather than corporate rates. Second, income taxes affect the business location decisions of corporate planners who are considering expansions or relocations. The taxes affect the cost of living for employees. High income individuals may be reluctant to relocate to a high tax area unless their compensation increases. Because of the link between economic development and individual taxes, we include them in this study.

On average, state governments depend on individual or personal income taxes for close to one-third of their tax revenue (32 percent in 1996). Among the states included in this study, income taxes provide the largest or second largest source of state-level taxes, ranging from a low of 32.8 percent in Oklahoma to a high of 50.9 percent in New York. Kansas is less dependent on the individual income tax than most other states in the region; the tax currently provides 34.6 percent of state tax revenue (Figure 2-1).

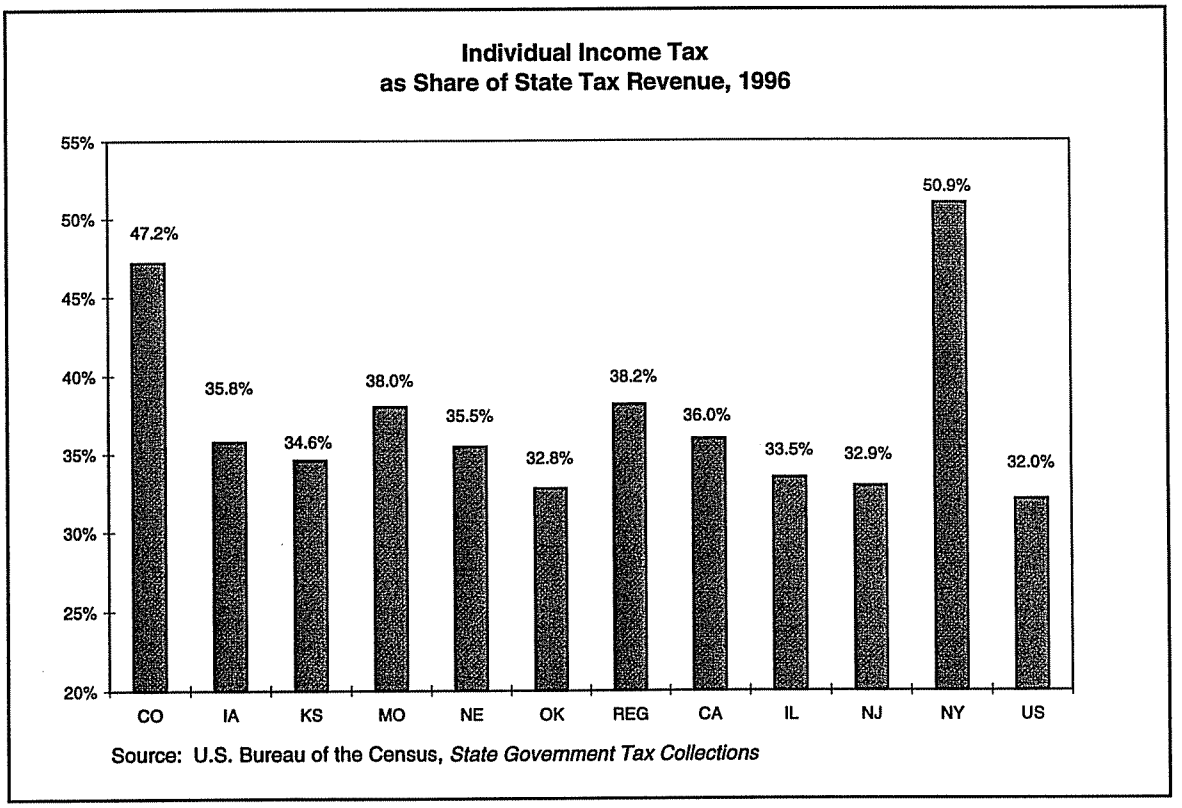

Figure 2-1

In some states, local governments are also authorized to impose income taxes. Of the states included in this study, such taxes are found in Iowa, Missouri, Illinois, and New York. But only in Missouri and New York do they contribute a significant share of local tax revenue (in 1994, those were 6.1 and 16.6 percent, respectively).

Description of Income Taxes

States differ widely in their tax rate structures. A key to these differences is the degree of progressivity of the tax systems; that is, the extent to which tax rates increase as income increases. All states in this study, with the exceptions of Colorado and Illinois, implement progressive rate structures. In some states, the highest rate bracket starts at such a low level of income that most working families will be subject to it. For example, the highest bracket applies for incomes over $9,000 in Missouri and for incomes over $24,000 (married taxpayer) in Oklahoma. In other states, the highest bracket becomes effective only at higher income levels. In California, the highest bracket becomes effective at $65,832 (single taxpayer), and in New Jersey at $150,000. Kansas rates reach the highest bracket for married taxpayers with incomes over $60,000 and single taxpayers with incomes over $30,000.

In addition to the rate schedules, it is important to consider the deductions and exemptions that a state allows. Where allowed, deductions for federal income taxes paid provide a substantial reduction in taxable income. Nationally, nine states allow some form of federal reduction. Among the states covered by this study, Iowa allows a full deduction, Missouri allows a full deduction up to a maximum of $10,000 for married taxpayers filing a joint return. Oklahoma allows a deduction as an option. Most states allow standard or itemized deductions of various expenses and allow exemptions for taxpayers and their dependents. However, deductions and exemption amounts generally are *not* the same as under federal law.

Recent Developments

Several states have cut their personal income tax rates in the last three years. In California, very high rates (up to 11 percent) on upper income levels have been removed. Nebraska has reduced its personal income tax rates (1997) and has increased its personal exemptions. New York has reduced its upper bracket rate, which stood at 7.85 percent in 1994, down to 6.85 percent in 1997. Starting with the 1996 tax year, New Jersey has added to its tax structure a large property tax deduction/credit benefit. In addition, New Jersey has lowered rates in all brackets; in the highest bracket, rates have gone from 7 percent in 1994 to 6.37 percent in 1997. Kansas has started to lower tax rates for single taxpayers, with the goal of bringing them into line with those for married taxpayers by the year 2000.

None of the states in this study has explicitly raised personal income tax rates over the last few years. However, as income levels rise, increasingly more taxpayers find them-

selves in the upper tax brackets. When this is due to inflation, it is referred to as "bracket creep"; when it is due to natural income growth, it is simply a consequence of progressivity. We can see suggestions of this if we look at some Kansas data. Rates for both single and married taxpayers increased in 1992 and then remained in place largely unchanged from 1992 to 1996. During that period, real per capita income rose a total of 5.9 percent, while income tax collections rose 6.1 percent.

Comparison of Income Taxes across States

The differences in state taxable income definitions, deductions, and credits present challenges for comparing state income tax systems. One possibility is to look at the tax situation faced by a representative family. To construct comparison measures, we focus on a family of four, consisting of a married couple with two dependent children, with federal adjusted gross income of $50,000, all from wages and salaries.[1] Our results are presented in Figure 2-2.

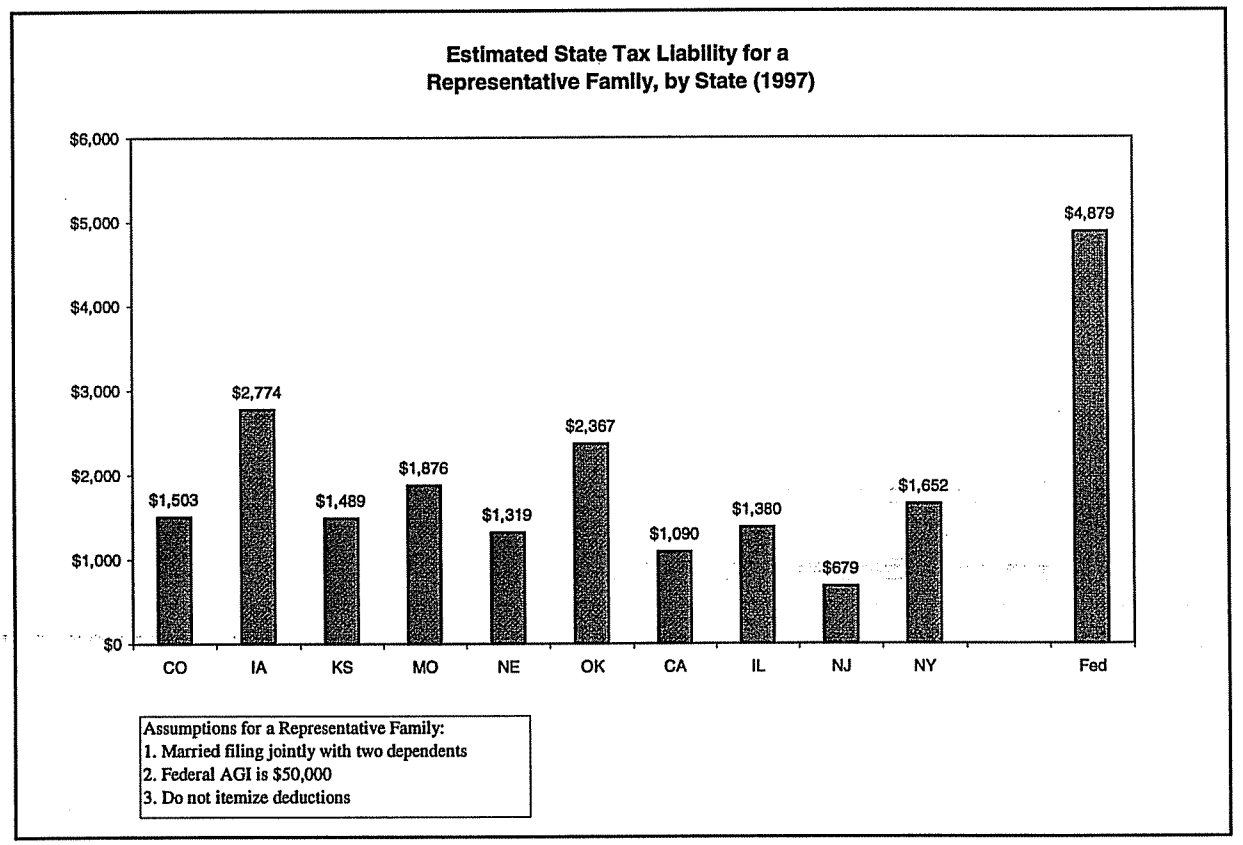

Figure 2-2

[1] The latest figures from the U.S. Bureau of the Census estimate median income for a family of four at $49,687 (Median Income for 4-Person Families, By State, 1995). So in this sense, our family with income of $50,000 represents a middle income family.

To estimate state-level individual income taxes, we first filled out a federal tax form for the family, assuming that the taxpayers filed jointly, took the standard deduction ($6,900 in 1997), and claimed four exemptions (an exemption is $2,650 in 1997). We estimated the family's federal tax liability at approximately $4,900. We then filled out 1997 state tax forms for the family in each of ten states covered by our study. Our assumption was that the family did not claim any special credits (such as child care). Because our hypothetical family had an income of $50,000, it was generally too well-off to qualify for property tax credits in the states where these were offered. The exception occurred in New Jersey, where large property tax credits and deductions are available to most homeowners and renters. We account for this in our tax rate estimates by assuming that the median income household in New Jersey has a home valued at $125,000. Such a home would be taxed at about $3,000 per year, based on New Jersey statewide effective property tax rates (see Chapter 5 of this report).

As a result of these calculations, we estimated effective average state tax rates for each of the ten states. We defined the effective average state tax rate as the estimated state income tax liability divided by federal adjusted gross income. We found that the effective tax rates range from a low of 1.36 percent of adjusted gross income in New Jersey to a high of 5.55 percent in Iowa. When local taxes were included, New York City posts the highest income tax rate of the locations examined–an effective rate estimated at 5.9 percent for the representative family. The estimated Kansas rate, 2.98 percent, falls within the middle group of states and is similar to that found in Colorado and Illinois. Kansas income tax rates for the family are significantly lower than rates in the nearby states of Missouri, Oklahoma, and Iowa (Table 2-1).

The representative family approach provides a broad indicator of whether a state provides a high or low-taxed environment for individuals. However, some individual families in these states may face a very different tax environment. For example, families that have put most of their assets into housing will find favorable treatment in a state like New Jersey that gives large property tax deductions. Families with child care expenses will be advantaged in states where these trigger a tax credit. Families with an income much higher than the median income will pay relatively higher taxes in states such as Iowa and New Jersey that employ high marginal tax rates for taxpayers in the upper tax brackets. Similarly, single taxpayers will pay relatively higher taxes in states in which exemptions are allowed only for dependents, or where the rate brackets for singles are at much lower levels than those for married taxpayers.

Another qualification of our results is that the level of income chosen for comparison, $50,000, has not been adjusted for the differences in the cost of living across locations. Unfortunately, the U.S. Bureau of Labor Statistics includes only about 30 cities in its area estimates of the consumer price index. There do not exist specific state-level price adjustors.

Table 2-1
State Individual Income Tax, 1997

State	Rate	Federal Deductibility	Estimated Comparison Rate (1997) [1]
Colorado	5% flat rate on taxable income.	no	3.00
Iowa	Graduated in 9 stepped increments from 0.4% to 9.98%. Highest bracket effective at $50,040.	yes	5.55
Kansas	Graduated with three brackets each for married and single taxpayers. Marginal rates for married joint filers begin at 3.5% for incomes below $30,000 and end at 6.45% for incomes over $60,000. Rates for single filers begin at 4.1% for incomes below $20,000 and end at 7.75% for incomes over $30,000. By year 1999, rates for singles will begin at 3.5% for incomes under $15,000 and end at $6.45% for incomes over $30,000.	no	2.98
Missouri	Graduated in 10 stepped increments from 1.5% to 6%. Highest bracket effective at $9,000.[2]	yes[3]	3.75 plus local
Nebraska	Rates for married couples filing jointly range between 2.51% of the first $4,000 of taxable income and 6.68% of taxable income over $46,750. Rates for single individuals range between 2.51% of the first $2,400 and 6.68% of taxable income over $26,500.	no	2.60
Oklahoma	Choice of two options. If federal income taxes are *not* deducted, eight increments graduated from 0.5% to 7%. Top bracket effective at $21,000 for married persons filing jointly, and $10,000 for singles. If federal income taxes are deducted, 11 increments graduated from 0.5% to 10%. Top bracket effective at $24,000 for married persons filing jointly, and $16,000 for others.	option	4.74
California	Graduated in 8 stepped increments from 1% to 9.3%. For single and for married filing separately, top bracket effective at $65,832. For married joint taxpayers and surviving spouses with dependents, top bracket effective at $32,916. For unmarried heads of households, top bracket effective at $44,803.	no	2.18
Illinois	3% flat rate on federal adjusted gross income.	no	2.76
New Jersey	Rates range from 1.4% to 6.37%. Top bracket effective at $75,000 for married individuals filing separately and singles and at $150,000 for married individuals filing jointly, heads of households and surviving spouses.	no	1.36
New York	Rates range from 4% to 6.85%. Top bracket effective at $40,000 for married individuals filing jointly and surviving spouses, at $30,000 for heads of households, and at $20,000 for singles and married individuals filing separately.[4]	no	3.3 5.9 if in NYC

[1] Comparison rate is for a married couple with two dependents, filing jointly, with federal adjusted gross income of $50,000.For New Jersey, home value summed to be $125,000. State tax liability (1997) calculated using state tax tables and forms. Comparison rate = (state taxes/fed. AGI).

[2] The cities of Kansas City and St. Louis, Missouri, impose a tax of 1% of earnings.

[3] First $5,000 of federal income tax for single filers and first $10,000 for joint filers is deductible.

[4] NYC imposes tax with rates from 3.08% to 4.46%. Yonkers imposes tax equal to 15% of NY state income taxes.

SOURCES: Information provided by state departments of revenue and finance (1997 personal income tax forms, instructions, and tax tables), and Research Institute of America, *All States Tax Guide*, 1997.

Summary

Individual income taxes form a cornerstone of state finance. Nationwide, individual income taxes provide close to one-third of total state tax revenue. Individual income taxes affect economic development through their effect on corporate managers and key employees, and through their effect on non-corporate businesses.

In order to make valid comparisons of tax levels across states, it is important to design a measure that takes rates and brackets, exemptions, and deductions into account. One such measure is the effective tax rate paid by a representative household. The representative household used for this study consists of a married couple with two dependents and annual AGI of $50,000. The effective rate at this income level ranges from a low of 1.36 percent in New Jersey to a high of 5.55 percent in Iowa, with Kansas in the middle at 2.98 percent. When local income taxes are included, New York City posts the highest income tax rate of the locations examined.

CHAPTER 3: CORPORATE INCOME TAX

Corporate income taxes are imposed in forty-four states (all except Texas, Wyoming, Washington, South Dakota, Nevada, and Michigan). In recent years, the tax has contributed between 6.5 and 7.5 percent of state tax revenues for the U.S. as a whole.[1] Kansas generally collects a share close to the national average: in 1996, Kansas collected 6.4 percent of taxes from the corporate income tax, compared with 7.0 percent nationally. Since 1992, 6.8 percent of Kansas tax revenues have come from this source, compared with 6.9 percent nationally. In contrast, other states in the region have collected only about 4.4 percent of tax revenues from corporate taxes during this time period. For the most part, the large comparison states are more reliant on corporate income taxes than are the nation or the region surrounding Kansas. This is shown clearly in Figure 3.1, using 1996 data.

Differences in the importance of the corporate income tax across states reflects many factors. First is state tax policy–states with very low rates and many exemptions will have low tax collections. Second is the importance of the corporate sector in the state–that is, how important are corporations in contrast with other kinds of business organizations. The third is the profitability of the corporate sector. This depends on, among other things, how the industries in which a state has specialized fare during national upturns and downturns.

State corporate income tax collections have shown an interesting trend in recent years (Figure 3-2). For the nation as a whole, these taxes now comprise a significantly smaller share of state tax revenues than they did in the early 1980s. Kansas has followed the national trend, roughly speaking.[2] The growth of economic development incentives and the growth of other types of taxes, (esp. sales and individual income), which expand total state collections, help to explain this trend. It does not appear that the diminished importance of the corporate tax is due to the business cycle, which has been on an upswing.

Tax Rates

State corporate tax rates in the U.S. typically range from 5 to 10 percent. About two-thirds of the states that impose a corporate income tax impose a flat tax, while the remaining third have a graduated rate system. Within the region surrounding Kansas, rates range from 4 to 12 percent. On the low end, Kansas applies a rate of 4 percent to the first $50,000 of income; on the high end, Iowa taxes corporate incomes over $250,000 at 12 percent. Among the large comparison states, rates range from 7.3 to 9.3 percent (Table 3-1).

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[1] Data in this section are from U.S. Bureau of the Census, *State Government Tax Collections.* These data are current through 1996.

[2] The Kansas data show more variability than do the national data. This is to be expected because the Kansas data to a large extent reflect the performance of a few hundred firms, while the national data reflect the performance of thousands of firms.

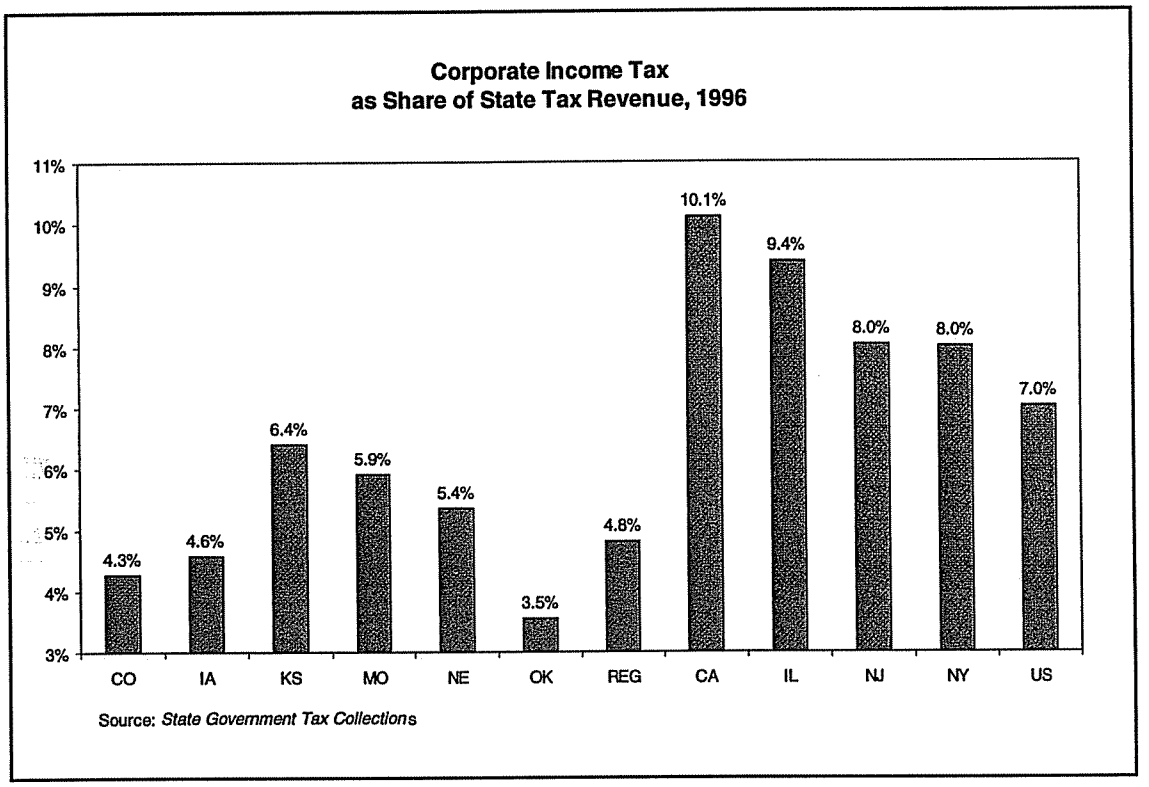

Figure 3-1

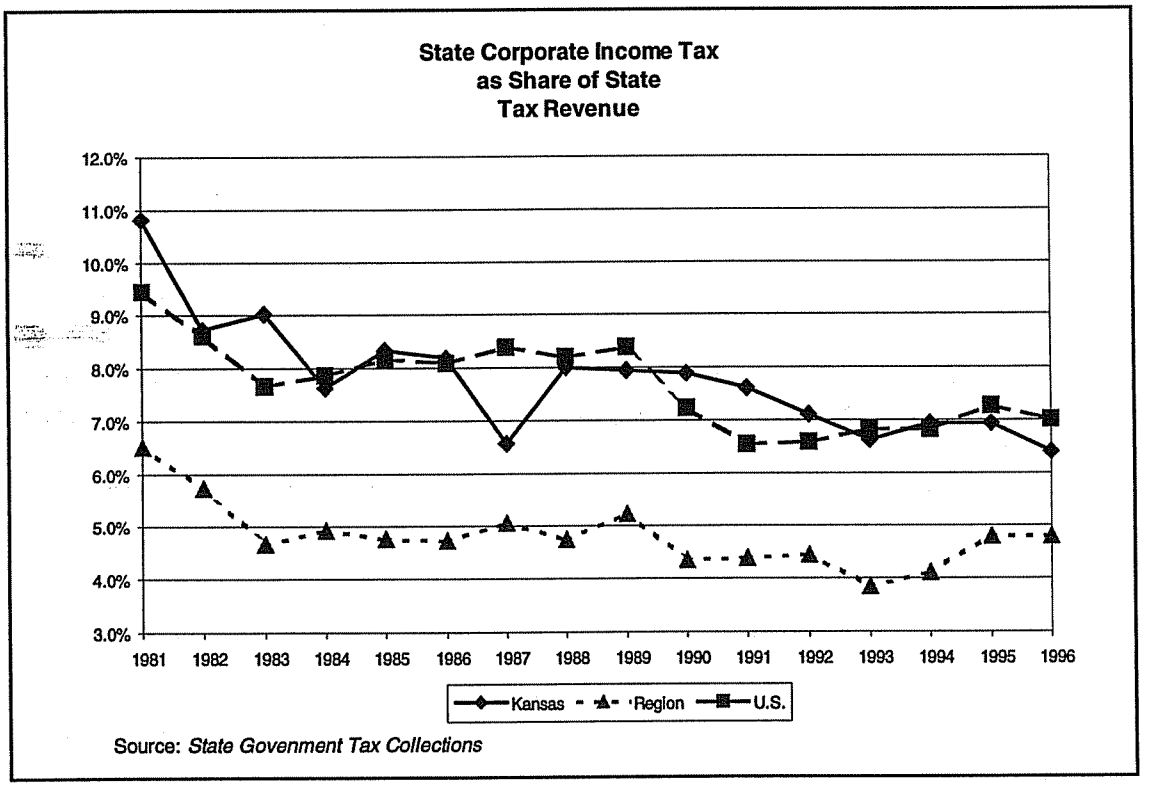

Figure 3-2

Table 3-1
State Corporate Income Tax Rates,
Federal Deductibility, and Effective Tax Rates

State	Rate	Adjusted Rate[1]	Federal Deductibility
Colorado	Flat 5%	5.0%	No
Iowa	First $25,000 -- 6% Next $75,000 -- 8% Next $150,000 -- 10% Over $250,000 -- 12%	4.95% 6.60% 8.25% 9.90%	50% of federal income tax is deductible
Kansas	First $50,000 -- 4.0% Over $50,000 -- 7.35%	4.0% 7.35%	No
Missouri	6.25% [2]	5.16%	50% of federal income tax is deductible
Nebraska	First $50,000 -- 5.58% Over $50,000 -- 7.81%	5.58% 7.81%	No
Oklahoma	Flat 6%	6.0%	No
California	Flat 9.3%	9.3%	No
Illinois	Flat 7.3% [3]	7.3%	No
New Jersey	Flat 9%	9.0%	No
New York	Flat 9% [2]	9.0%	No

[1] The calculation assumes a marginal federal tax rate of 35%.
MARGINAL ADJUSTED RATE = STATUTORY RATE x (1 - .35 x deductibility fraction).

[2] Additional tax of 1% of net profits in Kansas City and St. Louis. Tax of 8.85% of allocable income in New York City. Tax of $4 per employee per month in Cook County, Il. Tax of 1% of payroll in Newark, N.J.

[3] Includes the Illinois income tax of 4.8% and the personal property replacement tax of 2.5%.

SOURCES: Information provided by individual state departments of revenue; state statutes; Commerce Clearing House, *State Tax Guide*, 1997; Research Institute of America, *All States Tax Guide*, 1997.

Local governments also levy taxes on corporate income and related activities. Kansas City and St. Louis in Missouri, and New York City impose an additional income-based corporate tax on allocable income, Kansas City and St. Louis at 1 percent and New York City at 8.85 percent. Within Cook County, Illinois, a tax of $4 per employee per month is levied. In Newark, New Jersey, a tax of 1 percent is imposed on business payrolls.

Factors Affecting Corporate Income Taxes

It is necessary to look at more than corporate tax rates to see whether a state is putting a heavy burden on corporate income. There are considerable variations across states in allowable deductions, income apportionment methods, income allocation methods, and economic development incentives, all of which affect a corporation's bottom line tax bill. We examine some of these issues below.

Federal Definitions and Deduction for Federal Taxes

In general, state definitions of taxable income start with federal definitions. With the exception of California, all of the states in our study follow federal depreciation rules, and conform with the U.S. Internal Revenue Service code on expensing (single year deduction) of assets. Income after depreciation is then modified through additions and deductions. One major deduction is for federal taxes paid. Within the region surrounding Kansas, Missouri and Iowa each allow a deduction of 50 percent of federal taxes. The marginal federal rate on corporate income is currently 35 percent for firms in the highest bracket. So as an approximation, federal deductibility reduces a firm's state marginal tax rate by 35 percent times the percentage deductibility. Table 3-1 quantifies the impact of this deduction.

Division of Corporate Income

Perhaps the most challenging issues in state corporate taxation involve the division of income for firms that do business in several states (and nations). The individual states retain considerable freedom to decide how to claim income as their own, and hence there is no assurance that exactly 100 percent of income (no more and no less) will be taxed overall by the states in which a firm operates. Depending on the firm's circumstances, multiple states may claim the right to tax the same income. Key concepts in the division of income include:

- Nexus. Does the state have the legal authority to tax the income of the firm?
- Unitary businesses. Should a group of corporate affiliates be treated like a single firm for the purposes of taxation?
- Apportionment. What kind of formula does the state apply to decide what share of income of the the multi-state firm is taxable?
- Allocation. Can the state identify and claim specific income streams that belong to that state alone, and hence are not divided?

Nexus

Federal law guides the states in determining nexus. In particular, the Federal Interstate Commerce Law defines two activities that, in and of themselves, do **not** give a state the right to impose the income tax. These activities include a) the solicitation of orders for sales of goods in a state when those orders are approved and filled from a

location outside the state; and b) the maintenance of an office by an independent contractor who makes sales or solicits orders for sales of goods. Court cases have further defined the operational meaning of nexus, in determining how much activity can take place within the state before the corporate income tax is triggered.

Unitary businesses

For all multi-state businesses, the question of income apportionment arises. The question is difficult enough when it arises in the context of a single firm. But often a group of corporate affiliates is involved. Then the question becomes whether the group of firms does business in such a way that the activities in the various states are interrelated. If so, the group of firms is a *unitary business* and may be treated by a state as if it were a single firm for the purposes of income apportionment.

States show enormous differences in the way in which they treat the income of a unitary business. Among the states in our study, all except Iowa and New Jersey allow combined reporting (treating the entire group as a single entity), and most require it. Iowa requires that the affiliates that actually do business in the state file a consolidated return but does not allow their income to be "mixed" with income of other members of the group. New Jersey requires that each member of the group file as a separate entity.

Apportionment

For a single firm doing business in several states (or for a unitary group of businesses), it is generally not possible to say precisely in what state income is earned. The firm may have its labor force in one state, own property in a second state, and sell to customers in yet a third state. Because of the difficulty in deciding exactly where income was earned, states rely on formulas based on percentages of in-state property, wages, and sales.

States are free to choose their own apportionment formulas and definitions of sales. However, many states have voluntarily agreed to a set of standards known as UDITPA (Uniform Division of Income for Tax Purposes Act). UDITPA defines a formula based on evenly-weighted property, payroll, and sales factors, and provides clarification on how each factor should be calculated.

The example in Table 3-2 shows a simple case of a UDITPA-type taxable income calculation for a multi-state firm in Kansas. The firm has most of its production facilities in Kansas, 90 percent of payroll and property, but only 15 percent of sales. Applying even weights of 1/3 to each of the payroll, property, and sales factors results in an overall allocation factor of 65 percent; hence Kansas would tax 65 percent of the firm's income.

Table 3-2
Example of Income Apportionment

Factor	Amount in All States	Amount in Kansas	Share in Kansas
Sales	$2,000,000	$300,000	15.0%
Payroll	$1,000,000	$900,000	90.0%
Property	$1,500,000	$1,350,00	90.0%

In this example, UDITPA-type allocation results in an overall allocation factor of 65% = (15% + 90% + 90%)/3.

Allocation

Allocated income of a multi-state firm is defined as income assigned to one state rather than divided by an apportionment formula. Under UDITPA, income such as rents and royalties from tangible personal property utilized in the state, capital gains and losses from real estate, and interest and dividends of firms that are incorporated in the state are allocated rather than apportioned. Among the states in our study, Colorado, Iowa, Kansas, Missouri, Oklahoma, California, and Illinois follow UDITPA or similar rules for allocation.

Uniformity and alternative apportionment rules

Rules for the division of income across states are far from uniform, despite UDITPA. Many states to not use UDITPA-type apportionment rules, and even those that do may offer an alternative formula. Within the region, only Oklahoma uses a UDITPA-type apportionment rule, while Colorado, Kansas, and Missouri offer this as an option. Among the large comparison states, all use a formula that gives a double weight to sales rather than the evenly-weighted, three factor formula (Table 3-3). Because of differences in apportionment formulas, as well as differences in the definitions that states use in calculating what goes into the formulas, "non-taxed and double-taxed sales are almost inevitable" [Vandenbush and Worcester, 1990].

Most of the alternatives to UDITPA that have been adopted in the states weigh sales or receipts more heavily than other factors. Economic theory suggests that a state with a heavily-weighted sales factor will provide a locational advantage to firms that sell most of their products out-of-state. Take, for example, a firm that concentrates the bulk of its payroll and property in a single state, but that sells to a national market. The higher the weight that the state places on sales the lower will be the firm's overall in-state apportionment, and the lower its taxable income in the state. Of course, the firm will still be liable for taxes in other states, but these are largely independent of what goes on in the state where the firm has its production facilities.[3]

[3] The argument depends on the existences of differences in state tax systems. If other states in which the firm does business are using a three-factor formula, the state with a heavily weighted sales factor provides an advantage for the location of payroll and capital.

Table 3-3
Allocation Methods for Income of Multi-State Firms

Colorado	Choice of three-factor formula (1/3 each revenue, property, payroll), or two-factor formula (½ revenue, ½ property). For companies with no other Colorado activity except sales, with no owned or rented real estate in Colorado, and with gross sales under $100,000, an alternative is to pay 0.5% of gross receipts on sales in Colorado.
Iowa	Single-factor formula based on sales. Sales in Iowa defined as products shipped to or delivered to Iowa destinations.
Kansas	Three-factor formula (1/3 each sales, property, payroll). For firms with a payroll factor exceeding 200% of the average of the property factor and the sales factor, a two-factor formula based 50% on sales and 50% on property is an option. As of 1996, firms with payrolls exceeding $20 million, and which locate in counties that have been certified as sustaining negative impacts from state hospital closure, qualify to use a sales only formula for a 10-year period.
Missouri	Choice of single-factor formula based on a sales-only or a three-factor formula (1/3 each sales, property, payroll). When the sales-only formula is used, sales considered to be in Missouri include all sales with destinations and origins in Missouri, plus 50% of sales with destinations in Missouri and origins outside Missouri, plus 50% of sales with origins in Missouri and destinations outside Missouri.
Nebraska	Single-factor formula based on sales only. Nebraska sales are sales shipped to or delivered to Nebraska destinations.
California	Three-factor formula, with double weighted sales factor (property, twice sales, payroll). Evenly weighted three-factor formula may be elected by firms with over 50% of receipts from agricultural or extractive activities. Evenly weighted three factor formula must be used by banks and S&Ls.
Illinois	Three-factor formula, with double weighted sales factor (property, twice sales, payroll).
New Jersey	Three-factor formula, with double weighted sales factor (property, twice sales, payroll)..
New York	Three-factor formula, with double weighted receipts (property, twice receipts, payroll).
Oklahoma	Three-factor formula (1/3 each sales, property, payroll).

SOURCES: Information provided by individual state departments of revenue, state statutes, and Commerce Clearing House, *State Tax Guide*, 1997; Research Institute of America, *All States Tax Guide*, 1997.

Kansas started to move away from the exclusive use of a UDITPA-type formula in 1988. At that time, the state offered a new option by which a taxpayer could choose to drop payroll from the apportionment formula. The option remains open to taxpayers for whom the payroll factor is at least twice the average of the property and sales factors. In 1996, the state began to offer a very limited sales-only apportionment option. Firms with payrolls exceeding $20 million, and which locate in counties that have been certified as sustaining negative impacts from state hospital closure, qualify for a 10-year period.

Income Tax Based Economic Development Incentives

Types of incentives

The states in the region surrounding Kansas take an active role in trying to encourage new and expanding businesses. Some states have used tax incentives aggressively to recruit jobs and investment from out-of-state, while other states, including Kansas, have included tax incentives in their economic development strategies in order to "level the playing field."

To generalize, income tax incentives generally fall into one of four categories: research and development incentives; venture capital credits; job and investment credits; and enterprise zone incentives. The specific programs and policies of each state are presented in detail below.

Research incentives

Within the region, Colorado, Kansas, Iowa, and Missouri all offer income tax credits based on research and development expenditures (see Table 3-4).[4] In 1988, Colorado legislated tax credits for research and development expenditures made within enterprise zones. The law limits the credit to 3 percent of the amount by which research and development spending increases over its previous average. Kansas also focuses on the expansion of research and development activities, granting a credit of 6.5 percent of increased expenditures. Iowa allows a 6.5 percent credit on increased spending on qualified research activities; the credit increases to 13 percent in enterprise zones. Credits in excess of a firm's tax liability are refundable. Missouri's research credit stands at 6.5 percent of increases in research expenditures.

California has the most extensive credits of the states included in this study. In fact, changes initiated in 1997 make California's credits the highest in the nation. [California Trade and Commerce Agency, 1997]. California follows the federal Internal Revenue Code

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[4] Although Oklahoma and Nebraska do not specifically credit R&D expenditures, they do include research and development activities among the list of industries covered by other incentives. Nebraska grants incentives for research and development under its Employment and Investment Growth Act. Benefits include sales tax refunds and income tax credits for jobs and investment. Oklahoma includes research and development laboratories under its Quality Jobs Program.

closely in the design of its credits. The state allows a "qualified research expense" credit of 11 percent based on general increases in R&D expenses over the previous 4-year average. Additionally, and uniquely among the states in this study, California allows a 24 percent credit for expenses (not just increased expenses) for basic research, including research on product improvements, undertaken by qualified organizations such as a university.

New Jersey also bases its R&D credits on the IRS Code. The state offers a 10 percent credit for increases in qualified research expenditures over the last 4-year average, and a 10 percent credit for basic research by qualified institutions. New York adds an additional 4 percent to its usual 5 percent investment tax credit when the investment is for research and development property.

Venture capital incentives

Venture capital credits attempt to increase the pool of funds available for entrepreneurs to start or expand businesses. Investors in venture capital pools receive a credit for such investments against their income tax. In essence, the credits lower the cost of the investment. Two states in the region, Kansas and Oklahoma, offer direct income tax credits for contributions to state-authorized funds (see Table 3-5). A credit offered in Iowa was repealed in 1996. None of the large comparison states offers these credits. This may reflect the greater availability of venture capital from private sources in the larger states.

Kansas permits credits for financial investments in certified venture capital funds, and in the Kansas local seed capital pools. The tax credit equals 25 percent of the cash investment in the qualified fund, allowing any unused portion of the credit to be carried over to future tax years. Contributors to a Missouri venture capital fund are entitled to credits of 30 percent against Missouri income or franchise taxes. These credits may be transferred or sold, and any unused credits may be carried over for up to 10 years. Missouri also offers programs to support local business incubator funds (50% credit) and small business investments (40% credit, raised from 30% in 1996). Until 1999, investors in qualified Oklahoma venture capital companies may receive a tax credit of up to 20 percent. The purpose of the venture capital companies must be to establish or expand business and industry in Oklahoma.

Table 3-4
Research and Development Tax Credits

Colorado	Credit for research and experimental activities conducted in enterprise zones. The credit is equal to 3% of the increase in the taxpayer's expenditures on R&D. No more than one-fourth of the credit may be taken in any one tax year. Unused credits may be carried over.
Iowa	6.5% of the apportioned share of increases in qualifying research expenditure in Iowa. Increases to 13% for qualified firms in enterprise zones.
Kansas	6.5% credit for research and development expenditures in Kansas, based on amount by which such expenditures exceed the taxpayer's average actual expenditures for R&D in the taxable year and the two preceding taxable years. In any taxable year, the maximum deduction from tax liability is 25% of the earned credit plus carryovers. Any amount by which the allowed portion of the credit exceeds the taxpayer's total Kansas tax liability may be carried forward.
Missouri	6.5% credit on a firm's qualified research expenses in the state in excess of the average R&D expenditures for the previous three years.
California	Based on modified IRC Sec. 41. Non-refundable credit for qualifying research and development expenses conducted in California equal to 11% of the excess of qualified research expenses over an amount based on an average of the last 4 years. Basic research receives a 24% credit. As defined in California, basic research includes "scientific inquiry or original investigation for the advancement of scientific or engineering knowledge or the improved effectiveness of commercial products." Basic research must be conducted by a qualified organization such as a university.
New Jersey	Based on modified IRC Sec. 41. 10% credit for increases in qualified R&D expenses over an amount based on previous 4-year average. 10% credit for basic research conducted at universities and other qualified organizations.
Illinois	For costs incurred until 1999, a company is entitled to a non-refundable credit of 6.5% of qualifying expenditures made for the purpose of increasing research activities in Illinois. Qualifying expenditures are increases in the current year's activity over the average for the previous three years.
New York	Increase in investment tax credit, normally 5 percent, to 9 percent for research and development property.

SOURCES: Information provided by: individual state departments of revenue; state statutes and code, Commerce Clearing House, *State Tax Review*, 1997; Business Information Services, *State Tax and Financial Incentives*, 1997; and Research Institute of America, *All States Tax Guide*, 1997.

Table 3-5
Venture and Seed Capital Tax Credits

State	Income Tax Incentive
Iowa	10% credit was repealed effective 1-1-96.
Kansas	Credit of 25% for cash investments in certified Kansas venture capital funds, or Kansas local seed capital. At least 60% of a certified venture capital fund's investments must be in Kansas businesses, for the purpose of enhancing productive capacity. Local seed capital pools are funds for the use of small businesses for the following purposes: development of prototype products or processes; marketing or feasibility studies; business plans for the development of new products or processes.
Missouri	Credit of 30% against corporate income or franchise tax for cash investments in qualified Missouri venture capital funds. Unused portions may be carried forward for 10 years. Credit of 50% allowed against corporate income or franchise tax for investments in Missouri Small Business Incubator Fund. Credit of 40% of qualified investment in a Missouri small business (small business seed capital legislation).
Oklahoma	Until 1999, credit of up to 20% for cash investment in a qualified Oklahoma venture capital company. Purpose of company must be to establish or expand business and industry in Oklahoma.

SOURCES: Information provided by individual state departments of revenue; state statutes, Commerce Clearing House, *State Tax Review*, 1997; Research Institute of America, *All States Tax Guide*, 1997; Business Information Services, *State Tax and Financial Incentives*, 1997.

Job and investment credits

Job and investment credits are the most important of state credits against the corporate income tax. All of the states in the region and all of the comparison states offer job and investment credits in some form, both to attract new industries and, in some cases, to encourage the expansion of established firms (Tables 3-6 and 3-7). The amount of credit that a firm receives depends directly on the amount of new or expanded activity it undertakes in the state. In many states, credits may be claimed for several years, provided that a firm keeps its new employees and investment in place.

The nature of job and investment credits varies considerably from state to state. Credits can be analyzed along the following lines:

1. To what extent do the credits target high-quality jobs?
2. To what extent are the credits targeted toward particular industries?

3. Do the credits emphasize job creation, investment, or a combination of the two?

4. Are both new and established firms eligible for credits?

5. To what extent are the credits limited to particular geographic areas such as enterprise zones?

Note that there is one key difference between enterprise zone programs and other economic development programs: enterprise zones attempt to stimulate development in limited geographic areas and to bring jobs and investment to declining or disadvantaged regions.

Our discussion will provide a description of job and investment credits in Kansas and in selected other states in order to illustrate the range of incentive programs (details for all 10 states included in this study are found in Tables 3-6 and 3-7). Our analysis will focus on the five dimensions defined above.

Kansas

Kansas actually offers three alternative job and investment incentive programs. The first has been in existence since the early 1980s and offers a credit of $100 per employee and $100 per each $100,000 investment. The credit may be taken in each of 10 consecutive years in which employment levels are maintained.

The second program offers a one-time $1,500 for each job created, with an increase credit of $2,500 in nonmetro areas. In addition, firms are offered $1,000 for each $100,000 of new investment. Manufacturing industries must add two new employees to qualify, while non-manufacturing firms other than retail must add 5 employees., Most industries are eligible under this legislation. Retail firms qualify only if they add two jobs and locate or expand in a city with a population of 2,500 or less. Headquarters and back-office establishments that meet a threshold of 20 new jobs qualify for incentives, regardless of their business classification. Legislation passed in 1996 extends this program to businesses (insurance and banking) that pay privilege taxes rather than the corporate income tax.

This program clearly emphasizes total job creation. There is no specific targeting toward particular types of jobs, and only minimal targeting (in terms of differential thresholds) in terms of industries. The legislation contains an element of geographic targeting with its emphasis on rural areas. But unlike traditional enterprise zone legislation (which this replaces), the Kansas incentive defines the targeted geographic area very broadly.

Still a third Kansas incentive program offers incentives for Kansas "high performance" firms. Such firms are eligible to receive a 10 percent investment credit for investments over $50,000, a workforce training credit on training expenses exceeding 2 percent of payroll, and matching grants for consulting services provided by the Mid- America Manufacturing Technology Center or other approved consultants. To qualify, the firms

must pay wages that are above the industry average for the county in which they locate. This, along with the training and engineering-consulting grants, directs the program at firms that produce high-quality jobs. A firm must be a manufacturer, an export-oriented service firm, or the headquarters or back-office establishment of a national or multi-national firm; hence the credit is targeted toward industries that comprise the Kansas export base. Finally, the credit may be received by firms that invest without actually adding to their workforce. This incentive encourages firms that add capital as a means of enhancing productivity.

Missouri

In Missouri, job and investment incentives follow a more traditional pattern than found in Kansas. The state offers small annual credits for new and expanding firms and extends the credits for up to ten years. Credits are based on the amount of new investment and the number of new jobs. Credits are directed at basic industries (manufacturing, wholesaling and warehousing, mining, R&D, and inter-exchange telecommunications facilities). To qualify, firms must add two jobs and $100,000 investment, or invest $500,000 with no job requirement. Office facilities also qualify, but with a higher jobs threshold.

Missouri makes extensive use of enterprise zones. There are currently 50 zones distributed among urban areas, small cities, and county areas. Within the enterprise zones, job and investment credits are several times greater than in other areas of the state. Job credits begin at $400 per job per year, and can rise as high as $1,200 based on whether the employee is a resident of the enterprise zone, and whether the employee is classified as difficult to employ. In addition, Missouri enterprise zones offer a one-time job training credit of up to $400 per job. Investment credits are calculated as 10 percent of the first $10,000 investment, 5 percent of the next $90,000 investment, and 2 percent of any remaining investment within the zone. Minimum job and investment criteria are the same as those applying outside enterprise zones. Job credits extend over 10 years. For the first two years that credits are earned, firms may receive partial refunds for any credits that exceed the firm's tax liability from its new or expanded facility.

Missouri offers an additional tax credit in enterprise zones for firms that hire at least 30 percent of new employees from special categories such as "hard to employ." For qualified firms, 50 percent of taxable income attributed to the enterprise zone is exempt from the Missouri income tax.

In summary, Missouri's income tax credits are very modest outside enterprise zones, but very generous within the zones. Investment credits are typically linked to job creation, but can be granted even without job creation if investment meets a higher threshold. Missouri targets basic industries outside of enterprise zones but allows credits for almost all industries within a zone. Within enterprise zones, credits are targeted at creating employment for those who would otherwise have difficulty finding jobs.

Iowa

In 1994, Iowa implemented a new job and investment credit package intended to emphasize quality jobs. The credit is 1.5 percent of wages associated with new jobs, plus 10 percent of related investment. To obtain credits, firms must meet a number of qualifications. Most important of these are that the firm must add 50 new jobs, must pay 80 percent of employee health insurance, must pay wages of at least $11.42 per hour (or 130% of the average county wage, whichever is higher), must make an investment of at least $10.38 million, and must *not* reduce operations at another Iowa location. In addition, the firm must satisfy three out of a list of eight alternative qualifications, including that the firm offer a pension plan, produce high value-added goods or services, or invest in research and development. The Iowa program attempts to attract "good firms and good jobs."

Iowa takes the quality jobs concept a step further with its Quality Jobs Enterprise Zone program, also initiated in 1994. These are geographic areas in which interrelated clusters of firms may receive benefits. Within the zones, primary businesses must create at least 300 full-time jobs that pay an average of $15 per hour. Supporting businesses that supply property, materials, or services to primary firms also qualify. Benefits include a job credit of 1.5 percent of wages, a supplementary 1.5 percent credit for job training, plus a 10 percent credit for new investment.

In 1997, Iowa expanded its enterprise zone program and defined a new set of "Economic Development Enterprise Zone" benefits. To qualify, firms must a) create at least 10 new full-time jobs and sustain them for 10 years; b) pay 80 percent of health insurance; c) pay at least 90 percent of the average regional or county wage, but at least $7.50 per hour; d) make a capital investment of at least $500,000; and e) operate a business other than a retail establishment. Benefits include a 10 percent investment credit and a 3 percent job training credit.

Oklahoma

Oklahoma operates two alternative job and investment incentive plans. Under Oklahoma's long-standing job and investment incentive legislation, firms in manufacturing, processing, or computer services may receive benefits based on the number of new jobs and the amount of new investment. Job credits may be claimed for a total of 5 years. Within enterprise zones, job and investment credits double.

More interesting are the 1994 Oklahoma Quality Jobs Act and the Saving Oklahoma Jobs Act. Under this legislation, incentives are targeted to manufacturing and other export-based industries. Firms must offer health care coverage to qualify and must have an annual payroll of at least $1 million (firms with higher payroll levels may qualify for greater incentives). For firms with new payroll between $1 million and $2.5 million, Oklahoma offers an incentive payment of up to 2.5 percent of payroll for six years. The exact percentage payment depends on the results of a cost-benefit analysis. For firms with new

payroll over $2.5 million, the payments may range up to 5 percent of payroll for 10 years. For firms that save existing jobs and that create at least one new job for every job saved, incentive payments of up to 5 percent of payroll for 10 years are authorized. A similar program for small high-wage firms that add at least 10 employees was initiated in 1997.

The innovative aspects of the new Oklahoma legislation include the use of cost-benefit analysis to determine the level of incentives, and the application of incentives to firms that retain existing jobs as well as to firms that create new jobs.

Summary

Corporate income taxes comprise only a small percentage of total state tax revenues, about 7 percent nationally. They are nevertheless an important cost to businesses. Of taxes paid by firms to state and local governments, the corporate income tax generally ranks second in dollar amount after the property tax. Combined state and local income tax rates in the U.S. typically range between 5 and 10 percent of taxable income.

The income tax that will actually be paid by a firm depends not just on the tax rate, but also upon the method that the state uses to apportion income and on the types and amounts of credits for which the firm may qualify. An evenly weighted three-factor formula was, until recently, the most widely used method of allocating income of multi-state firms. However, formulas that give extra weight to sales seem to be gaining momentum. Export-oriented firms can gain an advantage by locating their property and payroll in states that allow a sales-only formula.

Economic development tax credits are abundant in all of the states examined in this study. Most important among these credits are those aimed at stimulating jobs and investment. Many states enhance these job and investment credits in geographically targeted enterprise zones. States are beginning to experiment with incentives targeted at stimulating the growth of high-quality jobs. Examples of this approach include Kansas and Iowa.

Table 3-6
New Job and Investment Tax Credits
(see Table 3-7 for Enterprise Zones)

State	Incentives	Limitations	Eligibility Requirements
Colorado	1% investment credit.	100% of tax liability up to $5,000, 25% of amount over $5,000. Excess credits may be carried forward up to 3 years and backward up to 3 years.	All industries residing in Colorado. Qualifying investments are defined by Internal Revenue Code investment tax credit rules in effect prior to 1986.
	$50 per new employee.	50% of tax liability. 9 year carry forward.	All industries.
Iowa	6% of taxable wages that employers are required to contribute to the state unemp. insurance fund times the increase in employees. For 1994, the credit is equal to $834 per new job.	Excess credits may be forwarded up to 10 years.	Must enter into an agreement with an area community college to train new employees. Must increase employment by 10%. All industries.
	Starting in 1994, in addition to the above, job credit of 1.5% of wages and 10% of investment related to new jobs.	7 year carry forward.	To be eligible, a business 1) must obtain approval from a community for start-up or expansion; 2) must not be an in-state relocation; 3) must pay 80% of health insurance for full-time employees; 4) must agree to pay a median wage of at least $11.42 per hour or 130% of average county wage, whichever higher; 5) must make an investment of at least $10.38 mil.; and 6) agree to create at least 50 FTE jobs and sustain them for 5 yrs. In addition, the firm must satisfy 3 of the following 7 requirements: 1) offer a pension plan or profit-sharing; 2) produce high value-added goods or services, or operate in an industry listed by Iowa as high value-added; 3) provide day-care; 4) invest at least 1% of pretax profits in R&D; 5) annually invest 1% of pretax profits in R&D; 6) have an active productivity and safety improvement program; or 7) occupy an existing facility with at least 20,000 sq. ft. of vacant space.

State	Incentives	Limitations	Eligibility Requirements
Kansas	1992 legislation: $1,500 per new job, $2,500 in designated nonmetro areas. $1,000 per $100,000 new investment.	50% of tax liability. One-time credit. The credit can be carried over until used provided employment remains at its increased level.	Manufacturing businesses must create at least 2 FT jobs. Nonmanufacturing must create at least 5 new FT jobs. Retail must add at least 5 new employees and operate in cities under 2,500 population. Headquarters and back-offices (that do not already qualify as "nonmanufacturing") must create 20 FT jobs.
	$100 per job and $100 per $100,000 investment.	50% of tax liability in year taken.	Firms must add 2 jobs. Cannot claim this credit and the credits described above. Most industries qualify.
	High Performance Incentives Program: 10% investment credit for investments over $50,000; workforce training credit on training expenses exceeding 2% of payroll; other benefits.	100% of tax liability. 10 year carryover provision.	Establishment must be a manufacturer, an export- oriented service firm, or the headquarters or back office of a national or multi-national firm. Establishment with 500 or fewer employees must pay above-average wages for their industry in the county. Firms with over 500 employees must pay above county industry average for large firms in the county.
Missouri	New firm: $75 per new job. $75 per $100,000 new investment. Expanding firm: $100 per new job. $100 per 100,000 new investment.	100% of tax liability. Credits may be claimed annually up to 10 years. The credit may be recalculated if jobs or investment change. Beginning of credit period may be delayed for 2 years.	Manufacturing, wholesaling and warehousing, mining, R&D, and inter-exchange telecommunications facilities qualify. New/expanding firms must create 2 jobs and invest $100,000, or invest $500,000 with no job requirement. Replacement facilities must create 2 jobs and invest $1 million. Office tenants must invest $100,000 and create 25 jobs by the fifth year in which the credit is taken.
Nebraska	***Small businesses***: $1,500 per new job, $1,000 per $75,000 new investment.	Cannot exceed 50% of tax liability in any taxable year, but credits can be carried over 5 years.	Firms must add 2 FT jobs and invest a minimum of $75,000. Most firms qualify, including research and development, data processing, telecommunications, finance, manufacturing, warehousing, transportation, wholesale trade, administration, livestock feeding, farming, ranching. Restaurants, contractors and repair persons, and most retailing firms do not qualify.

State	Incentives	Limitations	Eligibility Requirements
Nebraska cont.	***Large businesses:*** 1.a. Tax credit of 5% of compensation paid to each new employee. Firm can claim employment credit annually for 7 years. b. 10% tax credit for investment in qualified depreciable property. c. Refund of sales and use taxes for all purchases of qualified depreciable property.	Up to 100% of tax liability. Firm stays eligible for 7 years. Unused credits must be used within 15 years.	Firm must invest at least $3 mil. *and* create 30 new jobs. Industries that qualify are the same as for smaller firms, except that livestock feeding and farming do not qualify.
	2. In addition to above: a. Personal property tax exemption for 15 years for turbine-powered aircraft and mainframe computers. b. Personal property tax exemption for 15 years for equipment used in the manufacturing or processing of agricultural products.	Up to 100% of tax liability for 7 years. Excess credits may be used during a 15 year period.	Firm must invest at least $10 million and add 100 new jobs. Same industries qualify as above.
	3. Refund of sales and use taxes for all purchases of depreciable property.		Firm must invest at least $20 million.
	Jobs Tax Credit (1996) Credit of 5% of wages for jobs paying over $40,000 per year, 4% of wages for jobs paying $30,000-$40,000, and 2% for jobs paying $20,000-$30,000.	Allowed for each project year. A project is an agreement with the state to meet certain investment and job targets.	Firm must produce or process tangible personal property, conduct R&D for science, ag., or industry, or produce data processing, telecom, insurance, or financial services. Must invest $50 mil. and hire 500, or invest $100 mil and hire 250.
Oklahoma	Tax credit of 1% of investment in depreciable property, or $500 for each new full-time equivalent employee, whichever is greater. Investment must be at least $50,000 for property credit. Minimum salary must be at least $7,000 for jobs credit.	100% of tax liability for each of 5 years. Credits not used may be carried over for 9 years. Credits based on jobs can be claimed for 4 years subsequent to the initial year if employment levels are maintained.	Firm must be engaged in manufacturing or processing or aircraft maintenance. Computer services and R&D firms may also claim the job credit for up to 50 new employees, provided the salaries of those employees are at least $35,000.

State	Incentives	Limitations	Eligibility Requirements
Oklahoma cont.	Oklahoma Quality Jobs Act and Saving Oklahoma Jobs Act (1994). Qualified firms with new payroll in excess of $2.5 million may receive an incentive payment of up to 5% of payroll. The actual percentage incentive is determined by the results of a cost-benefit analysis. Firms with new payroll between $1 mil. and $2.5 mil. may qualify for an incentive payment of up to 2.5%. Incentive payments of up to 5% of payroll may be made to firms that save existing jobs and that create at least one new job for every job saved.	Firm may receive quarterly direct incentive payments for 10 years. Firms receiving incentive payments are ineligible for many other credits and exemptions, including regular job and investment credits. Incentive payments may be made for up to six years for firms meeting only the smaller payroll standards. Payments may be made for up to 3 years for firms that save existing jobs.	Eligible industries include manufacturing, central and administrative offices, research and development labs, warehousing (if 75% of goods shipped out-of-state) and selected business service industries (if 75% of goods sold to out-of-state customers). Firms must offer basic health care coverage. Firms must have minimum new payroll of $2.5 million for maximum credit of up to 5%. Firms must have payroll of at least $1 million and employ at least 1% of the labor force in a county to qualify for the lower level of credit of up to 2.5%.
	Small Employer Quality Jobs Act (1997). Similar to above program in benefits.	Companies receiving benefits under any other state incentive programs are not eligible.	For small companies that add at least 10 new employees. At least 80% of payroll must consist of high-paying (150% of average income in county) jobs. Same industries as above, but all industries, mfg. and service, must export at least 75% of their goods and services.
California	Job credit of up to $300 per employee expired 1994.		
Illinois	Investment credit of 0.5% and job credit of 0.5% of investment.	Credit may be carried forward 5 years.	Investment includes buildings, equipment, and machinery that are used by manufacturing, mining, or retailing. For job credit, employment must increase 1%.
	Additional investment credit of 0.5% for high impact businesses not in enterprise zones.	Credits may be carried forward for 5 years.	Firms must invest at least $12 million and create 500 FTE jobs, or invest at least $30 million and retain 1,500 jobs.
New Jersey	Credit of up to 10% of new investment. Exact % depends on kind of investment and number of new jobs.	Up to 50% of tax liability. Credit must be taken as 1/5 of total for 5 years. Credit partially refundable.	Creation of 5 new jobs for small firms, and 50 new jobs for others. New jobs must pay at least 27,000 per year.

State	Incentives	Limitations	Eligibility Requirements
New Jersey cont.	Alternative to above: credit of 2% for machinery and equipment used to produce tangible personal property. Plus additional 3% of investment up to $1,000 for each new job created	Up to 50% of tax liability. 7 year carry forward	Must be depreciable property with life of 4 yrs. or more. Must be used in mfg., processing, assembling, or refining.
New York	Investment tax credit of 5% (up to $350 mil. investment) and 4% of remainder. Credit is 9% for R&D property. In addition, an investment credit of up to 2.5% per year may be taken for two years after the initial investment.	10 year carry forward. New businesses may receive excess credits as a refund. To qualify for the additional 2.5% credit for 2 years, employment must be at least 103% of its base level. Smaller credit percentages are allowed for smaller employment increases.	Qualified property includes property principally used in producing goods by manufacturing, processing, assembling, refining, mining, extracting, farming, agriculture, horticulture, floriculture, viticulture or commercial fishing. Also includes industrial waste treatment facilities, air pollution control facilities, and R&D property. Also available to retail when building.

Except as noted, credits are one time only and are not refundable, but do carry over.

SOURCES: Information provided by individual state departments of revenue and commerce; state codes and statutes; Commerce Clearing House, *State Tax Guide*, 1997; Research Institute of America, *All States Tax Guide*, 1997; and Business Information Services, *State Tax and Financial Incentives*, 1997.

Table 3-7
New Job and Investment Tax Credits Within Enterprise Zones

State	Tax Credit	Limitations	Eligibility Requirements
Colorado	3% investment credit.	100% of liability up to $5,000 plus 25% of tax liability above $5,000. Excess may be carried forward 3 years and back 3 years.	Business must qualify under federal investment tax credit guidelines which existed in 1986. Business must reside in an enterprise zone for at least one year.
	For new businesses, a tax credit of $500/employee during the first year and $500/position created during subsequent years.	Up to 100% of tax liability. Excess credits are refundable.	For job credits, must be a new facility used to operate a revenue producing enterprise. Expansions may qualify if they result in 10+ new employees or add $1 mil. investment, or double the original facility investment.
	An additional $200/emp. during the first 2 years in the zone may be claimed for employees covered by a company-sponsored health insurance plan.	Up to 100% of tax liability. Not refundable, cannot be carried over.	
	Extra $500/new employee credit for processing agricultural products.	Up to 100% of tax liability. Excess refundable.	
Iowa	For qualified firms, new jobs credit equal to 1.5% of the gross wages paid by the eligible business, plus supplemental job credit of 1.5% for job training.	Credits may be carried forward for up to twenty years.	Iowa has created special "quality jobs" enterprise zones. To qualify for benefits, primary businesses must create at least 300 FT jobs paying an average of $15 per hour. Certain supporting businesses that supply necessary property, materials, or services to primary firms also qualify. For qualified firms, investment includes buildings and other improvements to real estate in the zone.
	Corporate tax credit of up to 10% of new investment.	Credits may be carried forward for up to twenty years.	
	Economic Devel. EZ (1997): credits of 3% of wages for training and 10% investment credit.		To qualify, firms must a) create at least 10 new full-time jobs and sustain them for 10 years; b) pay 80 percent of health insurance; c) pay at least 90 percent of the average regional or county wage, but at least $7.50 per hour; d) make a capital investment of at least $500,000; and e) operate a business other than a retail establishment.

State	Tax Credit	Limitations	Eligibility Requirements
Kansas	Job credits are $2,500 in designated nonmetro areas, versus $1,500 in rest of state (see job and investment credits).		Effective 1993, the geographic designation of zones became largely irrelevant for income tax credits.
Missouri	Basic enterprise zone credits are $400/new employee, and 10% of first $10,000 investment, 5% of next $90,000, and 2% of any remaining investment.	100% of eligibility for 10 years. 50% of excess refunded up to $50,000 in first year of operation and $25,000 in 2nd year. Basic job and investment credits can be claimed for 10 years, provided the firm continues to meet eligibility criteria.	To qualify, a new firm must invest $100,000 and an expansion must invest $100,000 or, if less than $500,000, 25% of original investment. In either case, 2 workers must be added. All revenue producing businesses except utilities are eligible, including residential rentals for low-income persons.
	50% of taxable income attributable to enterprise zone business is exempt from Missouri income tax.	Exemption extends for 10 years, provided firm continues to meet eligibility criteria. Beginning in 1996, unused credits may be refunded.	To be eligible for invest. credit or income exemption, 30% of firm employees must be zone residents or meet at least one of the following special employee criteria: a) when hired, employee was difficult to employ; b) when hired, employee had exhausted unemployment benefits and had been unemployed at least 3 months after end of benefits; c) when hired, employee had been eligible for AFDC or relief.
	Resident credit: $400 for each 12 month period the new business facility employee is resident of enterprise zone.	Continues throughout 10 year period.	Employee must be zone resident.
	Special employee credit: $400 for each 12 month period the new business facility employee meets special "hard to employ" criteria.	Continues throughout 10 year period.	Employee must meet at least one of a-c above.
	Training credit: up to $400 for each resident employee or "hard to employ" employee trained with company funds.	One-time credit.	Employee must be zone resident or difficult to employ.
Nebraska	No enterprise zones.		
Oklahoma	Tax credit of 2% of investment in depreciable property, or $1,000 for each new full time equivalent employee, whichever is greater.	100% of tax liability for each of 5 years. Credits not used may be carried over for 5 years.	Firm must be engaged in manufacturing or processing. Investment must be at least $50,000 for property credit. Minimum salary must be at least $7,000 for jobs credit.

State	Tax Credit	Limitations	Eligibility Requirements
California	Hiring credit is 50% of wages paid during the first year, and 40%, 30%, 20%, and 10% for the four subsequent years, respectively.	Credits not used may be carried over for as long as the enterprise zone designation is operative or for a maximum of 15 years.	Employers who conduct a qualified business inside a "designated program area" may claim the hiring credit for a portion of the wages paid to employees who, at the time of hire, were residents of a high-density unemployment area, and were unemployed for three months or more. Employers who conduct business in an enterprise zone may claim the credit for employees who were receiving subsidized training or other services under various federal and California programs.
Illinois	State investment tax credit of 0.5% is allowed a taxpayer who invests in qualified property in a zone (in addition to regular 0.5% investment credit and 0.5% credit for investments that increase jobs).	5 year carry forward.	Qualified property includes buildings, machinery, and equipment.
	$500 credit on Illinois income taxes for each job created in the zone for which a dislocated worker or economically disadvantaged individual is hired.	5 year carry forward.	Firm must hire five or more new employees. Eligible employees are dislocated or disadvantaged individuals.
New Jersey	A one-time credit of $1,500 for each new full-time permanent employee who meets specific eligibility criteria. A one- time credit of $500 for each new full-time permanent employee who does not meet criteria. Alternatively, firms may qualify for a credit of 8% of investment in zone.		For $1,500 credit, employee must be a resident of a zone city and must have been unemployed for at least 90 days immediately prior to employment by the taxpayer, or have been dependent upon public assistance as the primary source of income. Business must be engaged in active conduct of a trade or business in an enterprise zone and must agree to increase its number of full-time employees within the first year of certification. For investment credit, firm must employ fewer than 50 people and must arrange with city in advance of taking investment credit instead of employment credit.

State	Tax Credit	Limitations	Eligibility Requirements
New York	An investment tax credit of 10% is available based on investments in property located in an economic development zone. A second credit equal to 30% of the original investment tax credit is available for 3 additional years.	Excess credits carry over, and may be credited against tax or refunded.	The taxpayer must employ at least 101% of the average number of people that were employed before the investment tax credit was taken. Businesses must receive certification in order to receive benefits. Considerations for certification include a) whether jobs will be created or saved by the business, b) whether persons employed in these jobs will perform a substantial part of their activities in the zone, and c) whether the job opportunities will cause a shift in the composition of the workforce rather than create additional employment. Qualifying property includes research and development property, facilities used for industrial waste treatment or air pollution control, property used by manufacturing, processing, assembling, refining, mining, extracting, farming, agriculture, horticulture, floriculture, or commercial fishing.

Except as noted, credits are one-time only and are not refundable, but do carry over.

SOURCES: Information provided by individual state departments of revenue and commerce; state codes and statutes; Commerce Clearing House, *State Tax Guide*, 1997; Research Institute of America, *All States Tax Guide*, 1997; and Business Information Services, *State Tax and Financial Incentives*, 1997.

CHAPTER 4: SALES TAX

Overview

Sales taxes are essential components of most state and local tax systems in the United States. Forty-five state governments, including those of all ten states investigated in this study, impose a general *ad valorem* tax on retail sales. Local governments in 36 states, including the states in this study (with the exception of New Jersey), also impose some form of general sales tax [Research Institute of America, 1997].[1] Strictly speaking, the term *sales tax* applies to goods and some services sold within a state's boundary, while the term *use* tax applies to items purchased out of state but brought into state for their final consumption. However, sales and use taxes generally are applied at the same rate and to the same categories of goods and services. Therefore, summary data in the tables and graphs in this chapter combine both revenue sources.[2]

In real per capita terms, state and local sales taxes in the U.S. average about $538 annually in real 1992 inflation adjusted dollars[3]. They supply close to 24 percent of total state and local tax revenue. Within the region surrounding Kansas, sales tax collections range from $477 per capita in real dollars (Iowa) to $574 per capita (Colorado), and average $526 per capita. Sales taxes have exhibited a clear upward trend since the early 1980s in per capita terms (Figure 4-1).

Shifts in state and local tax structures are evident in the mid 1980's. During that time period, regional and national sales taxes both moved upward when measured as a share of total tax collections (Figure 4.2). Since then they have hovered around 26-27 percent regionally and 24 percent for the nation. The Kansas sales tax share rose sharply between 1986-1987, and again between 1992 and 1993. Both shifts corresponded to rate increases at the state level.

Three of the large comparison states (Illinois, New Jersey, and New York) rely significantly less on sales tax revenues than is average for the nation as a whole: each state collects less than 20 percent of tax revenue from this source. Kansas is somewhat more dependent on the sales tax than is the nation, but is slightly less dependent than the region; sales tax collections in Kansas comprised 26.4 percent of total state and local tax revenue as of 1994.

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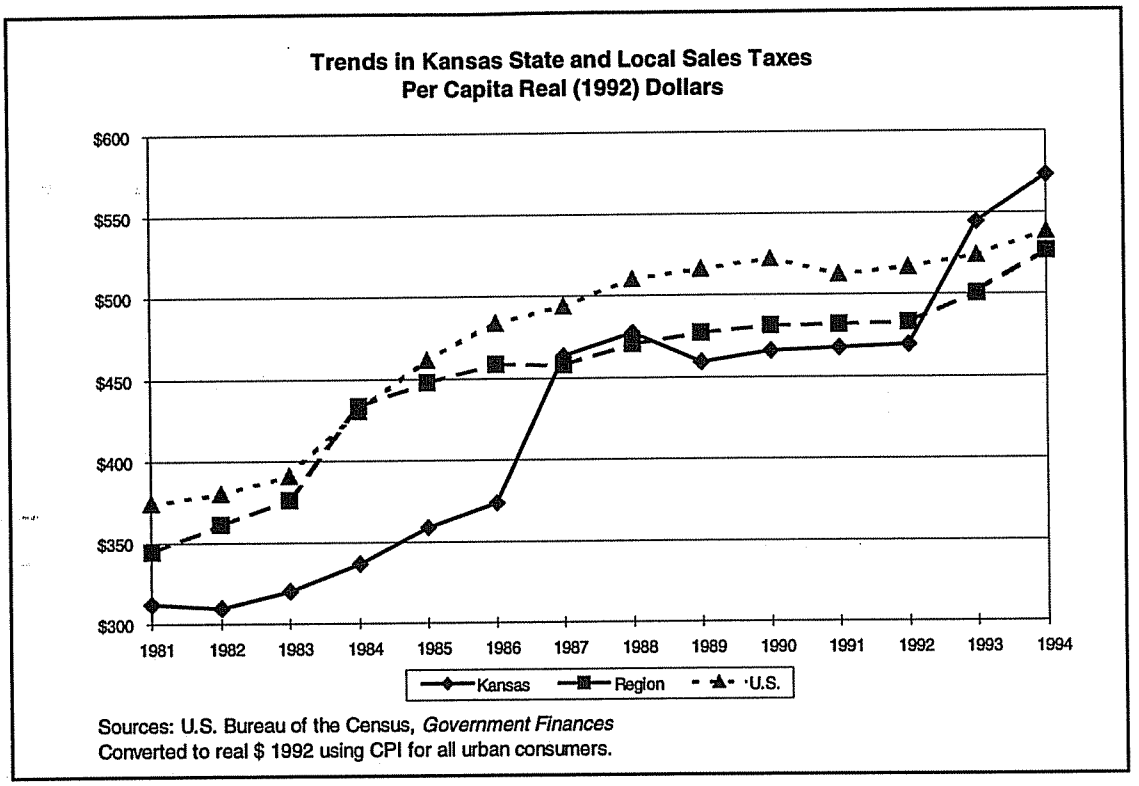
[1] In two of these 36 states, Idaho, and Pennsylvania, the tax is restricted to particular communities. In Hawaii, the tax is authorized but not actually used.

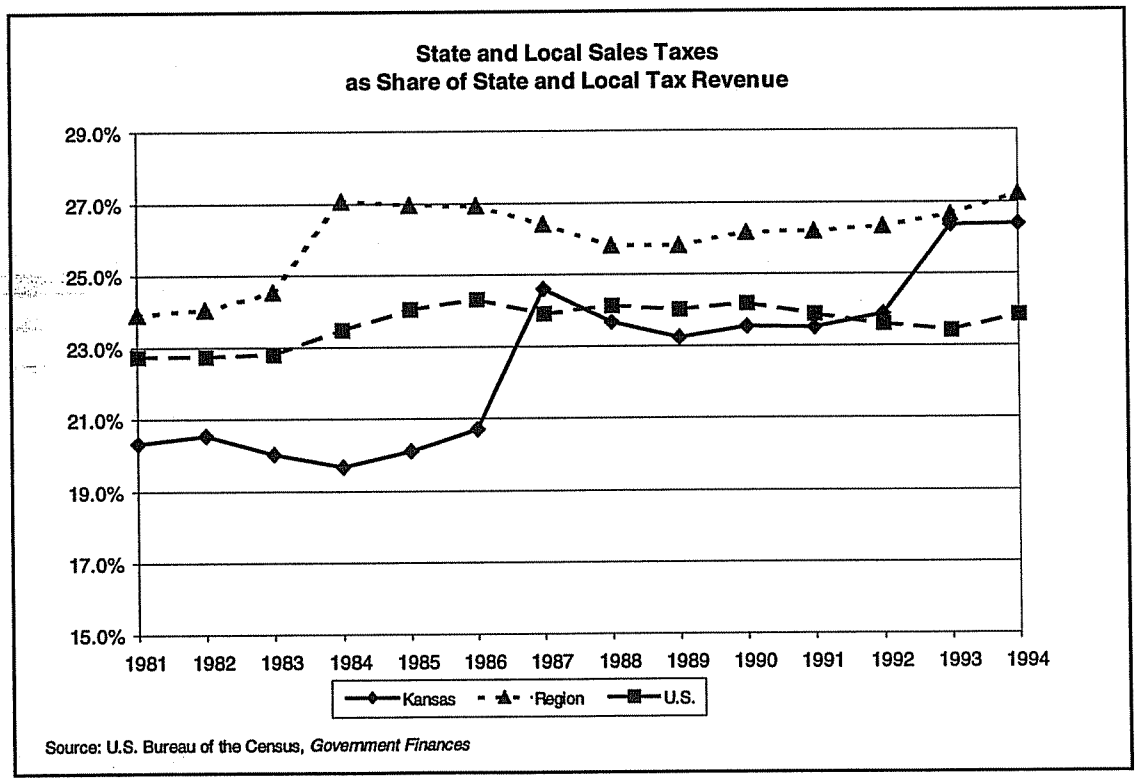
[2] In addition, most states impose special sales taxes on particular goods such as tobacco and alcohol. These are not included in our report.

[3] All data are as of 1994 unless otherwise indicated. AS of February, 1997, 1994 is the most recent year available in the U.S. Bureau of the Census, *Government Finances* series.



Sources: U.S. Bureau of the Census, *Government Finances*
Converted to real $ 1992 using CPI for all urban consumers.

Figure 4-1



Source: U.S. Bureau of the Census, *Government Finances*

Figure 4-2

Sales Tax Rates

State-level sales tax rates in the region fall within a narrow range, between a low of 3 percent in Colorado and a high of 5 percent in Nebraska (see Table 4-1). The large comparison states (with the exception of New York) tend to have higher state sales tax rates than in the region surrounding Kansas. Local sales taxes add to the tax bite, and in some jurisdictions rival or exceed state taxes in magnitude. For example, local taxes in Denver add a 3.5 percent levy in addition to the 3 percent state tax; New York City taxes add 4.25 percent to the 4 percent state tax. Within the immediate region, local taxes are imposed as follows: Kansas City, Missouri–2.375 percent; Kansas City, Kansas–2.0 percent; Overland Park (Johnson County, Kansas)–1.975 percent; Topeka–1.25 percent; and Wichita–1 percent.

Table 4-1

State and Local Sales Taxes 1997

State	State Sales Tax	Plus Local Sales Tax
Colorado	3.0%	Combined city and county rates range from 0.1% to 5.0%.
Iowa	5.0%	Up to 1%.
Kansas	4.9%	Current rates up to 2% city and 2% county. Max current combined rate is 2.75%.
Missouri	4.225%	Current rates up to 2.25% county and 2% city. Max combined city and county currently 4%.
Nebraska	5.0%	Up to 1.5%.
Oklahoma	4.5%	Current county rates up to 2% plus cities up to 4%. Current max combined rate is 5.1125%.
California	6.0%	1.25% base. Up to 1.25% additional in some communities.
Illinois	6.25%	Current rates up to 2.75%.
New Jersey	6.0%	Not authorized. However, 1% out of the 6% state tax is redistributed to localities.
New York	4.0%	4.25% in NYC. Other communities impose up to 4.5%.

Sources: Federation of Tax Administrators; Research Institute of America, *All States Tax Guide*, 1997; and information provided by individual states.

Sales Tax Base and Exemptions

Most states use a fairly broad concept of retail sales in defining their sales tax bases. In fact, the sales tax combines elements of a direct tax on consumption, a direct tax on investment, and a direct tax on production. The extent to which each of these three activities is taxed depends on state-specific rules for sales tax exemptions and inclusions (see Table 4-2 for sales tax bases and exemptions). Sales taxes also have a second round or indirect impact. For example, a tax on business inputs may increase the price of products purchased by households.

Consumption

States tax consumption directly when sales taxes are levied on purchases commonly made by households. Most tangible consumer products are included in the sales tax base, but states commonly make exceptions for food and drugs. Among the states in this study, Colorado, Iowa, Nebraska, California, New Jersey, and New York exempt groceries, and all except Illinois exempt prescription medications. In Illinois, both food and prescription drugs are subject to a tax rate much lower than for other items: only 1 percent. In 1997, legislation in Missouri lowered the state tax rate on food to 1.225 percent. States also include selected consumer services in the tax base–these may include residential utilities, telephone bills, restaurant meals (sometimes considered a good rather than a service), hotels, and personal services such as haircuts.

Investment

Sales taxes affect investment when states levy taxes on the purchase of machinery, equipment, tools, construction materials and construction services, or repairs (see Table 4-3 for investment and production-related exemptions). All of the states in this study make some provisions for machinery and equipment exemptions, and most make provisions for exemption of construction materials. The specific requirements for exemption vary widely by state. Criteria by which these exemptions can be compared include:

1. the extent to which exemptions are limited to certain industries, particularly manufacturing;
2. the extent to which exemptions are limited to direct use in the production processes and exclude auxiliary machinery and equipment;
3. the extent to which exemptions are limited to new firms; and
4. the extent to which exemptions are broadened in enterprise zones or other distressed areas.

We selected several states for detailed discussion, in order to illustrate the range of possibilities.

Table 4-2
State Sales Tax Base and Exemptions, 1997

State	Important Items Specifically Included	Important Items Specifically Excluded
Colorado	Sales of goods at retail plus selected services. –***Consumers***: telephone and telegraph services; restaurant meals; hotel and motel rooms. ***Businesses***: gas and electricity sold for commercial (not industrial) consumption.	***Consumers***: sales of prescription drugs; sales of electricity, natural gas, fuel oil, coal, and other energy sources to residences; sales of food. ***Businesses***: sales for resale; sales out of state; sales of goods which become ingredients or component parts of manufactured, compounded, or furnished goods; sales of electricity, natural gas, and fuel oil for use in processing, manufacturing, mining, irrigation, construction, communication, and all other industrial uses. All purchases of machinery, machine tools and parts used directly in manufacturing are exempt from sales tax. Exemption from local sales tax is a local option.
Iowa	Sales at retail plus enumerated services. –***Consumers***: gas and electricity; intra-state communications; water; amusements; repairs; barbers; dry cleaning; maintenance, and many other services. Businesses: intra-state communications, repairs, and maintenance.	***Consumers***: food (except for immediate consumption) and prescription drugs. ***Businesses***: sales for resale; sales out of state; building materials for resale; industrial machinery and computers; services connected with construction or remodeling; chemicals, fuels, and electricity used in processing; materials used in processing.
Kansas	Sales of goods at retail plus selected services. –***Consumers***: restaurant meals and drinks; telephone; hotel and motel rooms. ***Businesses***: computer software; installations; electricity; gas; water, unless consumed directly in production; repairs; and telecom.	***Consumers***: drugs, when prescribed; sales of gas, electricity, and heat to residential customers. ***Businesses***: sales for resale; sales of used farm machinery; all sales of tangible personal property or services used in constructing or enlarging a new or expanding qualified business facility; component parts of manufactured or produced goods or services; goods consumed in the production of tangible personal property or services; all sales of machinery and equipment used directly in manufacturing, processing, or storing goods. Gas, electricity, water (when consumed by manufacturing, mining, irrigation, or service producing processes), and construction services. Ad agency services.

State	Important Items Specifically Included	Important Items Specifically Excluded
Missouri	Sales of goods at retail plus selected services –*Consumers*: communications except basic phone charge, meals and drinks. *Businesses*: electricity, water, and gas unless otherwise exempted, and communications.	*Consumers*: water, natural gas, and electricity for domestic use; prescription drugs, basic phone. *Businesses*: sales for resale; materials and manufactured goods which, when used, become component parts of new goods; ingredients, machinery and equipment used to establish or expand manufacturing, mining, or fabricating plants, when the machinery is used directly in production; machinery and equipment replacements due to design or product changes; electrical energy used in the actual manufacturing, processing, or mining of a product, if the total cost of electricity so used exceeds 10% of total production costs; farm machinery; natural gas; machinery and equipment used to abate air pollution.
Nebraska	Gross receipts from sales of goods at retail plus selected services. –*Consumers*: admissions to events; restaurant meals, utilities, cable TV, and intra-state communications. *Businesses*: computer software, utilities unless otherwise exempt, and intra-state communications.	*Consumers*: prescription drugs; food products for human consumption (excluding prepared meals). *Businesses*: sales for resale; goods shipped out of state; electricity, coal, gas, and other fuels, when more than 50% of the amount purchased is used directly in processing, manufacturing, refining, irrigation, farming, or generation; goods which become an ingredient or component part of manufactured, processed, or fabricated goods; agricultural chemicals. Also, qualified new business facilities with at least $20 million investment or $3 million investment and 30 new employees are entitled to a refund of sales and use taxes paid on the purchase of property for the new investment.
Oklahoma	Sales at retail plus selected services. –*Consumers*: hotel and motel rooms; telephone and telegraph; restaurant meals; and admissions to events. *Businesses*: advertising; and sales of services and property used to develop or improve real estate, including materials, supplies, and equipment.	*Consumers*: electricity, water, and natural gas utility bills; sales of farm products directly to consumers; and prescription drugs. *Businesses*: sales for resale; sales out of state; goods which become a recognizable, integral part of manufactured, processed, assembled, or prepared products; goods consumed in the process of manufacturing, processing, assembling, or preparing goods for resale (includes gas and electricity); water; machinery and equipment used directly in the manufacturing process, including replacement parts; machinery and equipment used in computer services, provided 80% of revenues come from out-of-state; construction costs including architectural fees and building supplies for qualified firms in manufacturing and warehousing, Also, new or expanding firms in manufacturing and some service industries, can qualify for a sales tax refund on purchases of $2 million for data processing, computer, telecommunications, and related equipment.

State	Important Items Specifically Included	Important Items Specifically Excluded
California	Sales of goods by retailers, plus specified services. –*Consumers:* furnishing, preparing, or serving food, meals or drinks; newspapers and periodicals. *Businesses*: producing, fabricating, processing, printing, or imprinting personalty with customer-supplied materials.	*Consumers:* bottled water; water, electricity; gas; food products for human consumption; prescription drugs. *Businesses*: sales for resale; gas and electricity; for new manufacturers, 5% exemption for manufacturing property; in enterprise zones, tax credits for sales and use taxes paid on up to $20 million in qualified machinery.
Illinois	Sales of goods at retail and selected services. –*Consumers:* food prepared for immediate human consumption. *Businesses*: vehicles, aircraft, and vessels owned when relocation into Illinois occurs; and chemicals or fuel used in pollution control equipment.	*Consumers:* A reduced (1%) tax applies to food for consumption off-premises, medicine and drugs, materials for diabetics. *Businesses*: sales for resale; sales of machinery and equipment used primarily for manufacturing, or assembling, or graphic arts production; custom software; the purchase of pollution control facilities.
New Jersey	Sales of goods at retail plus selected services. –*Consumers:* admissions to events, restaurant meals; and installation and repair.. *Businesses*: advertising services (not in news-papers, magazines); catalogs; sales price lists; point of purchase advertising; sales pamphlets or handbills; and commercial advertising, and telecommunication services, installation and maintenance.	*Consumers:* gasoline; groceries; clothing and footwear, utilities including gas, electric, etc.; prescription drugs. *Businesses*: sales for resale; research and development materials; utilities, all fuels; insurance services; advertising in newspapers or magazines; ingredients, components, or equipment for use or consumption directly and primarily in the production of tangible personal property by manufacturing, processing, assembling, or refining; chemicals used in manufacturing; and custom software.

State	Important Items Specifically Included	Important Items Specifically Excluded
New York	Sales of tangible property plus selected services.–*Consumers:* rentals; most utilities; restaurant food and drinks; and admission charges to clubs, events. *Businesses*: printing, utilities, except as exempt, telephone and telegraph services; building cleaning; repairs; storage; and protective services.	*Consumers:* drugs for humans, clothing valued under $100, food for home use, electricity for residential use. *Businesses*: goods for resale, machinery and equipment used directly in producing tangible personal property, gas, electricity, refrigeration or steam; machinery parts; fuel; utilities, and utility service used or consumed directly and exclusively in the production for sale of tangible personal property; utilities used in R&D; goods used directly in research and development; pollution control equipment; and custom software.

NOTE: The basic tax base in most of the states is the sale of tangible personal property at retail plus sales of selected services.

SOURCES: Research Institute of America, *All States Tax Guide, 1997*; Business Information Services, *State Tax and Financial Incentives*; Federation of Tax Administrators, *Sales Taxation of Services: 1996 Update;* and information provided by individual states including state web sites.

Table 4-3
State Sales Tax Exemptions for Machinery, Equipment, Construction Materials and Services, and Utilities, 1997

State	Machinery and Equipment Exemptions	Construction Exemptions	Utilities Exemptions
Colorado	Machinery or machine tools and parts thereof are exempt when equipment is used directly and primarily in manufacturing. Within an enterprise zone, these items are exempt when used in refining and mining activities as well as in manufacturing. In enterprise zones, goods used to build machinery and machinery used to repair aircraft also qualify.	Construction labor is not taxable. Materials are taxable.	Electricity, gas, and industrial fuels used in manufacturing, mining, irrigation, communications, and transportation are exempt. Water is exempt. Intrastate telephone is taxed, interstate is exempt.
Iowa	Exemptions apply to industrial machinery, equipment, and computers, including replacement parts, when used directly in processing; R&D; manufacturing; data processing by insurance, financial, or commercial firms; or in recycling. Design and installation of new ind. machinery or equipment are exempt. Any other sales taxes paid on any tangible property except furnishings for use in an enterprise zone by a qualified business are refundable.	Construction labor is not taxable. Materials are taxable. Taxes paid by a contractor in relation to the construction of a qualified facility in a quality jobs enterprise zone are refundable to the primary or supporting enterprise zone business.	Electricity, gas, fuels, and water used in processing goods are exempt. Intrastate telephone is taxed, interstate is exempt.
Kansas	*New and expanding firms*: New or expanding manufacturing businesses that add at least 2 new jobs qualify for exemptions on all property and services used in constructing, expanding, or remodeling a facility. Nonmanufacturing firms other than retail qualify for the above if they add 5 jobs. Retail firms qualify if they add 2 jobs and locate or expand in a city of population of 2,500 or less. *Other*: Sales of machinery and equipment used directly and primarily for manufacturing, assembling, processing, finishing, warehousing, or distributing goods within a plant are exempt.	Materials and services used in construction are exempt for qualified new or expanding businesses (see previous column). For other original construction, materials are taxed, and labor is taxed at the rate of 2.5% (tax on construction labor repealed in 1995). Labor taxable for repair or remodeling construction.	Electricity, gas, fuels, and water exempt when consumed by manufacturing, mining, irrigation, or service producing processes. Both intrastate and interstate telephone are taxed.

State	Machinery and Equipment Exemptions	Construction Exemptions	Utilities Exemptions
Missouri	*New and expanding firms*: Machinery and equipment used directly in production are exempt when used to establish or expand manufacturing, mining, or fabricating plants. Replacement equipment may qualify if replacement is necessitated by design or product changes rather than by obsolescence. Pollution abatement equipment is exempt.	Construction labor is not taxable. Materials are taxable.	Electricity consumed in the manufacturing process is exempt if it exceeds 10% of production costs. Electricity or gas used in basic steel making is exempt. Water is taxed. Intrastate telephone is taxed, interstate is exempt.
Nebraska	*New and expanding firms*: Qualified business facilities with at least $20 million in new investment or $3 million in new investment and 30 new employees are entitled to a refund of sales and use taxes paid on the purchase of machinery, equipment and other property (except motor vehicles, aircraft, barges, and railroad rolling stock) related to the facility.	Construction labor is not taxable. Materials are taxable. Materials may qualify for a refund if purchased as investment in real estate improvements of a qualified new or expanding firm.	Water used exclusively for manufacturing purposes is exempt. Electricity, gas, and other fuels are exempt provided more than 50% of the energy is used directly in processing, manufacturing, or refining. Intrastate telephone is taxed, interstate is exempt.
Oklahoma	Machinery used directly in the manufacturing process is exempt. A refund is available for taxes paid on computers and telecommunications equipment purchased by computer services firms. These firms must sell 50% out of state (80% for SIC code 7374). Alternatively, these items may receive a tax when purchased by computer services and research and development firms that meet specific employment, wage, and out-of-state sales targets.	Construction labor is not taxed. Materials are taxable. *New and expanding firms*: Refunds on construction materials are allowed for new or expanded manufacturing facilities. The manufacturer must invest $5 million and add 100 new jobs, or invest $50 million and add 75 new jobs. Also applies to warehousing and distribution for OK manufacturers.	Electricity, gas, and other fuel used in manufacturing are exempt. Water is exempt. Both intrastate and interstate telephone are taxed.

State	Machinery and Equipment Exemptions	Construction Exemptions	Utilities Exemptions
California	For the first three years of operation of a new business, tangible personal property used primarily in manufacturing, processing, refining, or research and development is granted a partial (5% of purchase) exemption. Property includes machinery and equipment, devices to control machinery, replacement parts, and pollution control equipment. Commercial aircraft parts and repair are exempt. Manufacturing equipment purchased for use in the state by new and established firms triggers a 6 percent income tax credit (but the firm cannot use both the exemption and the income tax credit).	Construction labor is not taxed. Materials are taxable. For new businesses, materials for special-purpose manufacturing or research buildings and foundations are exempt.	Electricity, gas, and water are exempt. Other fuels generally taxed. Other fuels consumed in mfg. process are exempt during the first 3 years of operation of new firm. 0.72% tax imposed on intrastate telephone; interstate is exempt.
Illinois	Machinery and equipment used primarily in the process of manufacturing or assembling are exempt. Also exempt are machinery and equipment used in graphic arts production. Starting in 1995, manufacturers who make purchases under the above exemption also receive credits that can be applied to sales and use taxes owed on otherwise taxable production-related purchases of tangible personal property.	Construction labor is not taxed. Materials are taxable. Exemption is permitted on building materials used in an enterprise zone.	Separate gross receipts tax of 5% on gas, electricity, and both intrastate and interstate telecommunications. Firms that invest at least $5 million and create 200 jobs or that invest $20 million and retain 1000 jobs are exempt from taxes on gas, fuels, and electricity in enterprise zones.
New Jersey	Machinery and equipment for use directly in manufacturing, processing, assembling, or refining are exempt. Within enterprise zones, qualified businesses are eligible for exemptions on all tangible property and taxable services, with the exception of motor vehicles.	Construction labor is not taxed. Materials are taxable. Within an enterprise zone, materials used to build, repair, or otherwise improve facilities of qualified businesses are exempt.	Electricity, gas, fuels, and water are exempt. Intrastate and interstate telephone are taxed.

State	Machinery and Equipment Exemptions	Construction Exemptions	Utilities Exemptions
New York	Machinery and equipment used directly to produce for-sale goods or utility services are exempt. Goods used directly in research and development are exempt.	Construction labor is not taxed. Materials are taxable. Materials for constructing, expanding, or rehabilitating industrial or commercial property in an economic development zone may receive a tax credit or refund.	Electricity, natural gas, and other fuels are taxable. Water is exempt. Electricity, gas, and fuels used or consumed directly in the production of goods, gas, electricity, or used in R&D, are exempt. Intrastate telephone is taxed. Interstate is exempt.

Note: For more specific definitions of new and expanding firms and enterprise zone qualifications, see Chapter 3, Table 3-7.

SOURCES: Research Institute of America, *All States Tax Guide, 1997*; Business Information Services, *State Tax and Financial Incentives*; Federation of Tax Administrators, *Sales Taxation of Services: 1996 Update*; and information provided by individual states including state web sites.

Kansas

The basic investment exemption in Kansas applies to machinery and equipment used directly in manufacturing, assembling, processing, warehousing, or in-plant distribution of goods intended for resale. Labor services for new construction (whether or not in manufacturing) are also exempt, but building supplies and labor services used in remodeling are not.[4]

For qualifying new or expanding firms, the exemptions are much broader. They extend to all property, including machinery, equipment, and building supplies, and services used in constructing, expanding, or remodeling a facility. Firms in manufacturing industries must add two jobs to receive the "new or expanding" designation, firms in nonmanufacturing industries (any commercial enterprise other than manufacturing or retail) must add five jobs, and firms in retailing must add two jobs and locate or expand in a community of 2,500 or less. For a corporate headquarters, regardless of the firm's classification as a retail business, the sales tax exemption may be granted if it leads to the creation of at least 20 full time jobs.

The new or expanding firm designation augments the basic machinery and equipment investment exemption in three ways. First, construction materials and construction labor services receive an exemption. Ordinarily, all building materials would be taxed, as would any labor associated with remodeling or repair. Second, establishments such as corporate headquarters and service-oriented businesses not covered under the basic investment exemption may qualify. Finally, machinery and equipment of manufacturers that does not qualify under the "direct use" criterion may receive an exemption.

Iowa

The basic investment sales tax exemption in Iowa applies to machinery, equipment, and computers, including replacement parts, that are used directly and primarily in processing; research and development of new products; manufacturing; recycling; or data processing, when done by insurance, financial, or commercial firms. Design and installation of such equipment is also exempt. Most labor services related to new construction, remodeling, and restoration are exempt, but those related to building repairs are not.

Iowa offers two types of business incentive programs (Quality Jobs Enterprise Zones, and New Jobs and Income). For firms that qualify under either of these programs, businesses can receive a sales tax refund for all taxes paid on goods, including all equipment including building supplies (but not furniture), utilities, and labor services used to construct and equip an establishment.

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[4]A proposal before the 1998 Kansas Legislature would eliminate the tax on remodeling services.

Missouri

Missouri machinery and equipment exemptions apply primarily to new and expanding firms. For these firms, machinery and equipment used directly in production are exempt. Replacement equipment also qualifies for exemption if it is necessitated by product or design changes. More generally, construction labor is exempt, while construction materials are taxed.

Illinois

In Illinois, machinery and equipment used primarily (more than 50%) in the process of manufacturing or assembling is exempt. The exemption also extends to graphic arts producers. The exemption applies to new, expanding, and existing facilities. Furthermore, starting in 1995, purchases of machinery and equipment that qualify for exemption trigger further tax credits. Currently, firms earn a credit of 50 percent of the tax that would have been paid, which they then can apply to their sales taxes owed on purchases of otherwise taxable production-related goods. Assuming a tax rate of 6.25 percent, a firm making a qualified $100,000 purchase would earn a credit of $3,125 (.5 * .0625 * 100,000). This type of credit is unique among the states in our study.

Building materials are generally taxable in Illinois, but labor services are not part of the sales tax base.

Qualified firms that open a business or expand in an enterprise zone qualify for expanded sales tax benefits. A 5 percent state and 1.25 percent local tax credit is allowed for qualified firms that purchase tangible personal property used or consumed in a manufacturing process. This goes beyond the usual machinery and equipment exemption, in that it includes items such as hand tools, and protective clothing. A 5 percent state and 1.25 percent local tax exemption is allowed on building materials used in an enterprise zone.

Production

Production, in contrast to consumption or investment, is taxed to the extent that materials, utilities, fuels, business services, and other production-related purchases enter the sales tax base. All states with a sales tax include some items that are purchased by businesses. Examples often include office furniture, office supplies, and cleaning supplies. And all states exclude, to some extent, materials that become incorporated into new goods. For example, the hard drive that goes into a computer manufactured in a state is not taxable to the computer manufacturer. The extent to which states tax these "intermediate goods" varies. All states in our study exempt components, distinctly identifiable parts of the new good (such as the hard drive in the computer). Ingredients are also generally exempt, although whether a good is an ingredient is sometimes disputed. Laws covering products which are consumed or used up during production vary widely across the states. In Kansas and Oklahoma, consumables are clearly tax exempt. Iowa excludes materials used in processing. Colorado excludes materials which "enter into processing" of

manufactured products. Illinois generally taxes goods that are consumed during the process of production, but grants partial exemptions for qualified facilities in enterprise zones.

Laws covering taxation of energy also vary across states. All states in our study allow some exemptions for electricity, gas, and other energy. For most of the states in this study, electricity, gas, and other industrial fuels are exempt when used in directly in the manufacturing processes (Table 4-3). Several states extend exemptions beyond the narrow definition of manufacturing. For example, Kansas includes mining, irrigation, and service producing processes; New York includes research and development; California exempts electricity and gas for all businesses. On the other hand, some states provide an extremely narrow exemption. For example, Missouri exempts electricity only when it exceeds 10 percent of overall production costs; Missouri also exempts gas and electricity for steel producers. Illinois allows exemptions only for qualified firms (regardless of industry) that create at least 200 jobs or retain 1000 jobs within enterprise zones; Illinois has no general manufacturing utilities exemption.

Another business input that is frequently subject to the sales tax is telecommunications. Five of the ten states in this study tax intrastate telephone services but exempt interstate calls. Kansas, Oklahoma, and New Jersey tax both intrastate and interstate calls at the regular state sales tax rate. Illinois taxes both services at 5 percent rather than the usual 6.25 percent, and California taxes intrastate telephone services at 0.72 percent.

Taxation of services

As mentioned in the discussion above, many states include services sold to consumers and businesses in their tax bases. A recent study by the Federation of Tax Administrators [1997] provides a systematic overview of service taxation. The organization examined taxation of some 160 services, including utilities (business and household), consumer personal services, business services, and installation and repair. The study finds a great deal of diversity in the extent to which states include services in the sales tax base. Of the services covered by the FTA study, some states (New Mexico) tax almost all services, while others (California, Illinois) tax relatively few.

Among the states in the region, Iowa stands out as taxing a high number of services, including 94 services in its sales tax base (Table 4-4). Kansas also taxes a substantial number of services, but taxes only half as many business services as Iowa. On the other hand, Colorado limits its sales tax base almost exclusively to material products, imposing taxes on only 14 specific services.

Table 4-4
Sales Taxes on Services, 1996

State	Utilities	Personal Services	Business Services	Install, Repair	All Services
Total in Category	1	2	34	19	164
Number Taxed in					
--Colorado	4	0	2	3	14
--Iowa	1	1	18	14	94
--Kansas	1	1	9	16	76
--Missouri	8	1	2	0	28
--Nebraska	1	6	6	5	49
--Oklahoma	8	1	4	0	32
--California	5	2	3	0	13
--Illinois	1	1	1	1	17
--New Jersey	6	2	10	14	50
--New York	9	5	15	16	74

Source: Federation of Tax Administrators, *Sales Taxation of Services: 1996 Update*, p. 2

Summary

Sales taxes comprise a little over one-fourth of state and local tax revenue. The impact of the sales tax falls on consumption, investment, and production. States differ greatly in their definitions of the sales tax base and in the exemptions they allow for various goods and services. From the point of view of a state's competitiveness, exemptions on machinery and equipment, installation (construction) and repair, and energy stand out as providing significant cost savings to firms.

CHAPTER 5: PROPERTY TAXES

Introduction

Property taxes are taxes levied on the value of the assets of households and businesses. Depending on the jurisdiction, taxable assets may include land, buildings, business equipment, inventories, household durable goods, and intangible assets such as cash and bonds. In practice, few states tax household goods or intangibles. Property taxes are a much more important revenue source at the local level than at the state level; indeed, they provide the single largest source of local tax revenue for all states included in our study. Within the region, property tax shares range from 56 percent of local tax revenues in Oklahoma to 95 percent in Iowa.[1] Within the large comparison states considered by this study, the property tax share of local tax revenue ranges from 62 percent in New York to 98 percent in New Jersey.

All of the states in the region have reduced their reliance on the property tax since the beginning of the 1980s. In Kansas, the property tax share of local tax revenues has dropped by about 10 percent during this period. Kansas, Iowa, and Nebraska have shown a fairly steady downward trend in the property tax share; Colorado, Missouri, and Oklahoma have exhibited cyclical behavior. Nationally, property taxes have comprised as fairly stable share of local revenues, fluctuating between 74 and 76 percent. As of 1994, Kansas relied more heavily on th property tax than did the region or the nation , as shown in Figure 5-1.

Another picture emerges if we look at real (inflation adjusted) property taxes across states. As shown in Figure 5-2, real property taxes per capita showed a steady upward trend in Kansas, the region, and the nation throughout the 1980s.[2] The trend in Kansas leveled out slightly during the early 1990s, and then dropped sharply after 1992. Throughout this time period, Kansas property taxes per capita remained above the national and regional averages. The restructuring of Kansas taxes during the 1991 legislative session became fully apparent by fiscal year 1993. Thereafter, the level of property taxation fell substantially, by about $30 per capita in real terms. As of 1994, Kansas real per capita property tax collections stood slightly below the national average, but considerably above the regional average. Changes in Kansas property tax structure since 1994 will probably lead to further reductions in per capital taxation.

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[1] Data are taken primarily from U.S. Bureau of the Census, *Government Finances*. 1994 was the last year for which a complete set of comparable local tax data was available as of the writing of this report.

[2] Note that total local tax collections were expanding during this period, although the property tax *share* was falling.

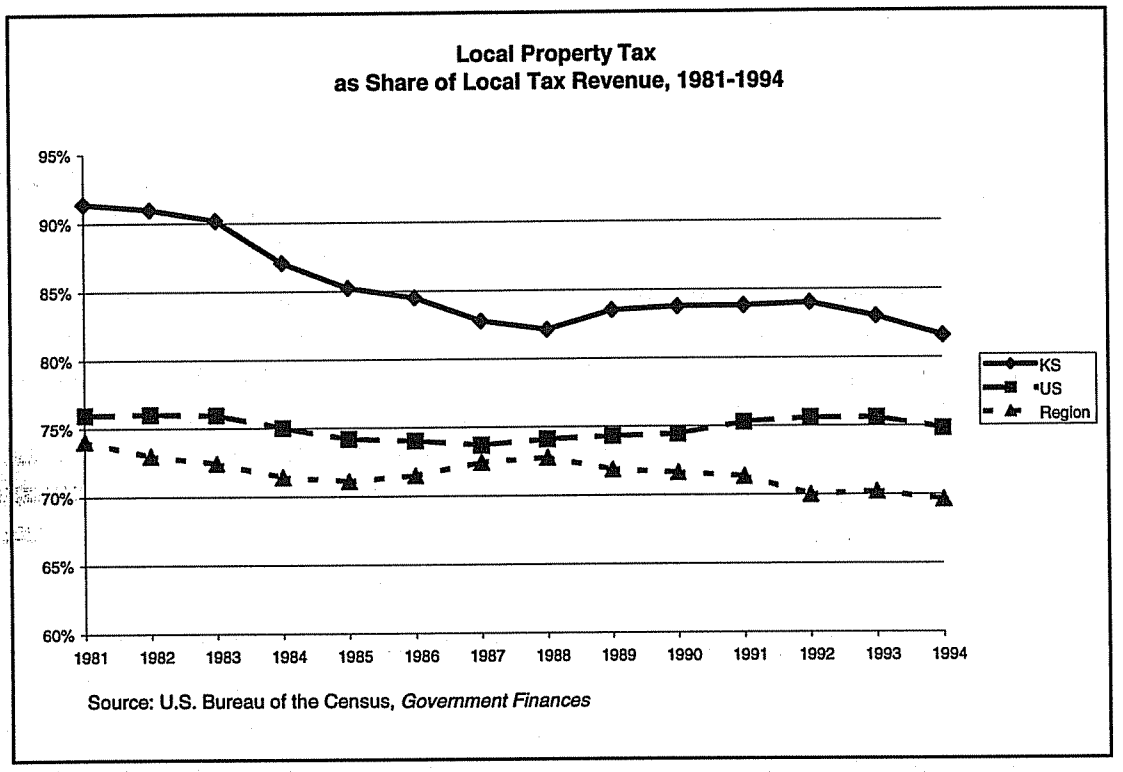

Figure 5-1

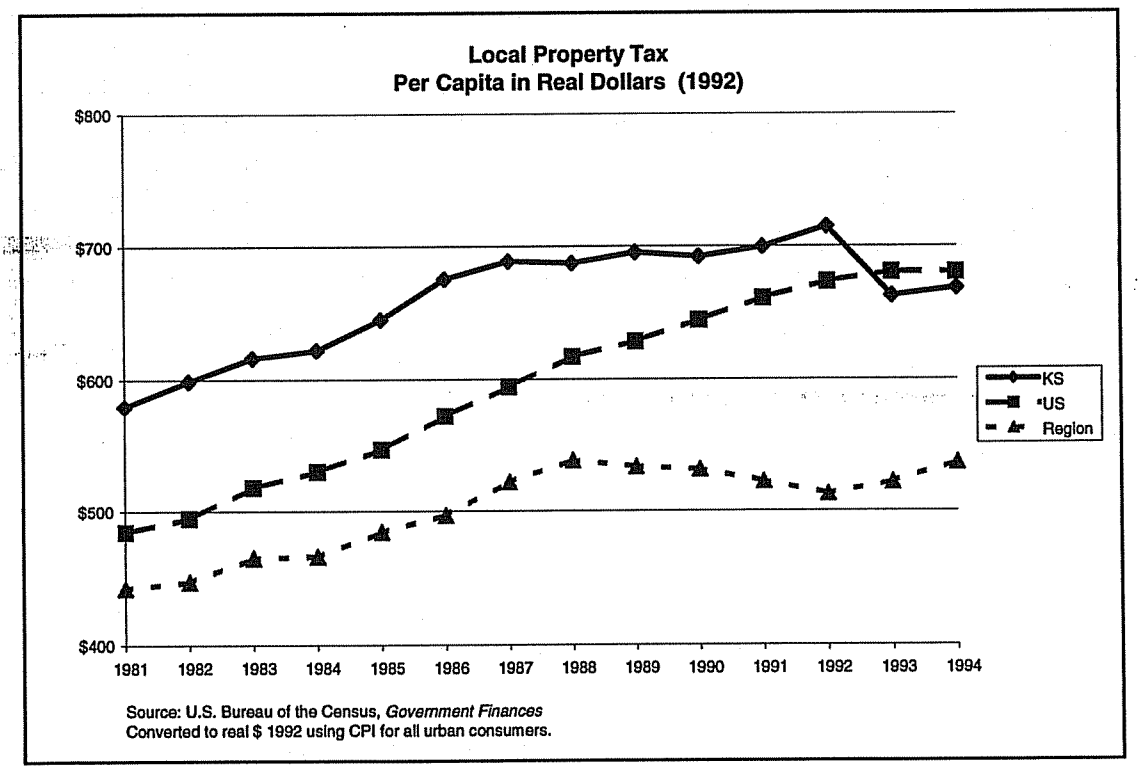

Figure 5-2

Comparing Property Taxes Across States

Per capita or other aggregate measures of property taxation, while interesting in their own right, reveal an incomplete picture of the level of property taxation facing an individual firm or homeowner. The actual tax paid by a property owner results from a complex interaction of tax rates, the types and amount of property owned, the definition of the tax base, assessment practices, and whether the property qualifies for any special tax incentives.

The concept of *effective property tax rates* provides a key to understanding property taxation and to comparing taxes across states. The definition of an effective tax rate is straightforward: it is the annual tax bill divided by the true market value of a piece of property. Effective rates vary not only among states, but also among the major categories of property: residential real estate, commercial real estate, business machinery and equipment, and inventories.

Components of the effective tax rate

Calculating an effective tax rate is easier in theory than in practice. In fact, any estimate of the rate must consider three components: the applicable mill levy, the statutory assessment ratio, and the relationship between appraised and market property values.

A mill levy is a tax rate expressed as the dollar tax per $1000 valuation. The total mill levy on a piece of property generally results from a combination of county taxes, city taxes, school district taxes, and taxes for special services such as sewers or fire protection. Within a single state, mill levies vary widely from location to location. The second column of Table 5.1 shows statewide average mill rates, calculated as total tax collections divided by total assessed valuation. It also shows aggregates for metropolitan and non-metropolitan areas within the states. Property tax levies are generally lower in non-metropolitan areas because the level of government-provided services (streets, libraries, police and fire protection, etc.) is generally lower.

Property tax mill levies are not directly comparable across states. One reason is that statutory assessment ratios differ. The statutory ratio defines the percentage of a property's appraised value which is entered on the tax rolls. Most states in the region apply different assessment ratios to different classes of property. In Iowa, new industrial equipment has a zero assessment ratio versus 100 percent for business real estate and about 59 percent for residential property. Kansas assesses residential property at 11.5 percent, commercial and industrial real estate at 25 percent, and industrial machinery at 25 percent. A 1982 constitutional amendment in Colorado requires that residential property provide no more than 45 percent of the tax base. In order to achieve this goal, assessment ratios of all other property are set at 29 percent and the residential ratio is adjusted by the legislature.

Table 5-1
Local Property Tax Rates and Ratios

State	Average Mills (dollars per $1000 assess. val.)		Statutory Assessment Ratios (%)		Estimated Actual Assessment Ratios (%) [2]		Statewide Effective Tax Rates (%) [3]	
Colorado (1996)	Statewide	82.98	Residential [1]	10.36	Residential	10.36	Residential	.91
	Metro	89.78	Commercial/Ind.	29.00	Commercial/Ind.	29.00	Commercial/Ind.	2.41
	Nonmetro	65.11	Mach./Equip.	29.00	Mach./Equip.	29.00	Mach./Equip.	2.41
			Inventories	0	Inventories	0	Inventories	0
Iowa (1996)	Statewide	30.35	Residential [1]	58.83	Residential	52.68	Residential	1.60
	Metro	32.95	Commercial/Ind.	100.00	Commercial/Ind.	94.74	Commercial/Ind.	2.88
	Nonmetro	30.35	Mach./Equip.[5]	0	Mach./Equip.	0	Mach./Equip.	0
			Inventories	0	Inventories	0	Inventories	0
Kansas (1996)	Statewide	118.16	Residential	11.50	Residential	10.73	Residential	1.27
	Metro	125.26	Commercial/Ind.	25.00	Commercial/Ind.	23.15	Commercial/Ind.	2.74
	Nonmetro	110.81	Mach./Equip.	25.00	Mach./Equip.	25.00	Mach./Equip.	2.95
			Inventories	0	Inventories	0	Inventories	0
Kansas [4] (1997 est.)	Statewide	114.00	Residential	11.50	Residential	10.73	Residential	1.17
	Metro	121.00	Commercial/Ind.	25.00	Commercial/Ind.	23.18	Commercial/Ind.	2.64
	Nonmetro	107.00	Mach./Equip.	25.00	Mach./Equip.	25.00	Mach./Equip.	2.85
			Inventories	0	Inventories	0	Inventories	0
Missouri (1996)	Statewide	58.99	Residential	19.00	Residential	18.62	Residential	1.10
	Metro	64.61	Commercial/Ind.	32.00	Commercial/Ind.	31.68	Commercial/Ind.	2.19
	Nonmetro	44.72	Mach./Equip.	33.33	Mach./Equip.	33.33	Mach./Equip.	1.97
	Surtax [6]	10.19	Inventories	0	Inventories	0	Inventories	0
Nebraska (1996)	Statewide	23.32	Residential	100.00	Residential	94.00	Residential	2.19
	Metro	25.26	Commercial/Ind.	100.00	Commercial/Ind.	96.00	Commercial/Ind.	2.24
	Nonmetro	21.72	Mach./Equip.	100.00	Mach./Equip.	100.00	Mach./Equip.	2.33
			Inventories	0	Inventories	0	Inventories	0
Oklahoma (1997)	Statewide	92.58	Residential [1]	11.33	Residential	11.31	Residential	1.08
	Metro	101.99	Commercial/Ind. [1]	11.33	Commercial/Ind.	11.63	Commercial/Ind.	1.05
	Nonmetro	74.24	Mach./Equip. [1]	12.51	Mach./Equip.	12.51	Mach./Equip.	1.16
			Inventories [1]	12.51	Inventories	12.51	Inventories	1.16

State	Average Mills (dollars per $1000 assess. val.)		Statutory Assessment Ratios (%)		Estimated Actual Assessment Ratios (%)		Statewide Effective Tax Rates (%)	
California	Statewide	10.63	Residential	100.00	Residential-new[7]	100.00	Residential	1.06
(1995)	Metro	10.70	Commercial/Ind.	100.00	Com./Ind.-new[7]	100.00	Commercial/Ind.	1.06
	Nonmetro	10.54	Mach./Equip.	100.00	Residential-aver.[7]	55.00	Residential-aver.[7]	0.58
			Inventories	0	Com./Ind.-aver.[7]	55.00	Com./Ind.-aver.[7]	0.58
					Mach./Equip.	100.00	Mach./Equip.	1.06
					Inventories	0	Inventories	0
Illinois	Statewide	82.16	Residential	33.33	Residential	33.32	Residential	2.74
(1994)	Metro	83.26	Commercial/Ind.	33.33	Commercial/Ind.	33.32	Commercial/Ind.	2.74
	Nonmetro	71.51	Mach./Equip.[8]	0	Mach./Equip.	0	Mach./Equip.	0
			Inventories	0	Inventories	0	Inventories	0
New Jersey	Statewide	28.01	Residential[9]	20 - 100	Residential	85.33	Residential	2.39
(1995)	Metro	28.01	Commercial/Ind.	20 - 100	Commercial/Ind.	85.33	Commercial/Ind.	2.39
	Nonmetro	N/A	Mach./Equip.	0	Mach./Equip.	0	Mach./Equip.	0
			Inventories	0	Inventories	0	Inventories	0
New York	Statewide	87.24	Residential	up to 100	Residential	33.14	Residential	2.89
(1996)	Metro	95.36	Commercial/Ind.	up to 100	Commercial/Ind.	33.14	Commercial/Ind.	2.89
	Nonmetro	49.14	Mach./Equip.	0	Mach./Equip.	0	Mach./Equip.	0
			Inventories	0	Inventories	0	Inventories	0

[1] Colorado adjusts the residential assessment ratio so that residential property forms a fixed percentage of the property tax base. Iowa adjusts the residential assessment ratio yearly. Oklahoma assessment ratios are determined locally within the range of 9% to 15% (statewide averages shown).

[2] Actual assessment ratios are based on information from statewide sales/assessed value studies where available (KS, MO, OK, NE, NY, NJ, IL, IA).

[3] The effective property tax rate is defined as the amount of taxes per $100 actual market value of property. In terms of this table, the effective tax rate is estimated by [statewide average mill levy/1000 * estimated actual assessment ratio].

[4] Kansas reduced the uniform school district property tax by 6 mills in 1997 (to 27 mills). However preliminary evidence shows that school districts have raised their local option levies. We estimate an overall reduction of 4 mills for 1997. Additionally, the first $20,000 of residential property is no longer subject to the uniform school district as of 1997. The residential rate shown is for a home valued at $100,000.

[5] Industrial machinery and equipment acquired after 1995 are not taxed. Other personal property exempt.

[6] The surtax applies to commercial and industrial real estate only.

[7] 100% ratio applies to new owners only. California allows property reassessment only when property changes hands or when it is substantially remodeled. According to the most recent study, properties are appraised at about 55% of market value. The appraisal for any particular property depends on how long it has been held by its current owners [O'Sullivan, Sexton, Sheffrin, 1994].

[8] Illinois businesses are subject to a personal property replacement tax, similar to the Illinois income tax.

[9] Property assessment ratios are locally determined in New Jersey.

SOURCES: Effective rates calculated by IPPBR. Basic data from state departments of revenue.

Missouri assesses residential property at 19 percent, commercial real estate at 32 percent, and machinery and equipment at 33.3 percent. In Oklahoma, a range of permissible rates is chosen by the legislature, and actual rates are chosen locally. In Nebraska, assessment ratios are uniform at 100 percent of true market value.

Among the large comparison states, California applies a statutory ratio of 100 percent and Illinois a ratio of 33.33 percent. In New Jersey and New York, the assessment ratios vary by taxing district. Significantly, Illinois, New Jersey, and New York exclude machinery and equipment from their tax bases, making the assessment ratios on these properties equal to zero. These ratios are shown in the third column of Table 5-1

Property appraisals often fail to indicate market property values correctly. When this occurs, actual assessment ratios vary from statutory assessment ratios. Eight states covered by this study, including Kansas, publish statistics on discrepancies between appraised and market values. The results of these studies have been included in our calculations of effective rates. The remaining states are Colorado and California. In Colorado, independent auditors examine every class of property each year. They compare sales values with county-appraised values and also conduct independent appraisals. Counties that are out of compliance must pay back state aid. Both the frequency with which appraisals are made and the sanctions for incorrect appraisals help to ensure that appraisals closely approximate market values. The situation is very different in California, where Proposition 13 limits increases in value to 2 percent annually, provided a property does not change hands or undergo substantial improvements. A recent study of four California counties [O'Sullivan, Sexton, Sheffrin, 1994] indicates that on average, properties are being appraised at only about 55 percent of their actual value. Actual assessment ratios, taking appraisal discrepancies into account, are shown in the fourth column of Table 5-1.

Effective tax rates in the region

Effective tax rates, that is, taxes as a percent of market value, are calculated in the fifth column of Table 5-1. These rates incorporate the state average mill rate, statutory assessment ratios, and an approximate ratio between the true and the appraised value for each class of property. The rates are a good measure of the property tax burden on various types of real estate and personal property; they are comparable across states. These rates do not account for the possibility that property taxes will be abated for economic development purposes. That issue is analyzed separately in the next chapter of this report.

Within the region surrounding Kansas, the states show a wide range of rates for various classes of property. For residential property, Oklahoma averages the lowest tax rate (1.08 percent) while Nebraska averages the highest (2.19 percent). For commercial real estate, Oklahoma again ranks lowest (1.05 percent) while Iowa ranks highest (2.88 percent). Kansas ranks in the mid-range of the region for residential property, with taxes averaging 1.17 percent (1997 estimate). Kansas ranks second highest in the region for commercial and

industrial real estate, taxing at an average of 2.64 percent. For machinery and equipment, Kansas posts the highest tax rate in the region, 2.85 percent. Colorado and Nebraska tax an average of 2.41 and 2.33 percent respectively. On the low end, Oklahoma taxes an average of 1.16 percent. Uniquely among the state in the region, Oklahoma includes inventories in its tax base, boosting property tax costs for businesses which find large inventories of raw material and finished goods essential.

Three of the four large comparison states have similar property tax structures. Illinois, New Jersey, and New York all concentrate taxation on real estate and omit machinery and equipment from the property tax base. Estimated average rates on real estate are also similar: 2.74 percent in Illinois, 2.39 percent in New Jersey, and 2.89 percent in New York.

In California, property taxes are limited to one percent of total assessed property values plus a small amount for local debt finance. After adjusting for various types of exemptions, rates on taxable assessed property average 1.06 percent. The effective rate of taxation (taxes/market value) in California is a function of the length of time the property has been with its current owner; the rate averages .58 percent. Due to the low effective rate, property taxes per capita in California are lower than those in Kansas, despite the much higher property values that prevail in California.

Changes in Kansas Property Taxes

In 1991, Kansas legislation on school finance resulted in a significant reductions in average mill levies. A subsequent constitutional amendment changed assessment ratios, and, in 1997, legislation reduced the state mill levy. Altogether, these changes have combined to create substantial changes in Kansas effective property tax rates over the last several years (see Table 5.2).

For residential property, the changes have amounted to about a 21 percent property tax decrease per dollar of market value for the state as a whole. For commercial and industrial real estate, the decreases have been even greater, about 29 percent on average. On the other hand, machinery and equipment has experienced a 14 percent increase in effective taxation, largely due to changes in the assessment ratio.

Table 5-2
Changes in Kansas Levies Since 1991

Description	1991	1997 (est)	% Change
Average Statewide Mill Levy	125.26	114.00	-9.0%
Statutory Assessment Ratio: Residential	0.12	0.115	-4.2%
Statutory Assessment Ratio: Comm./Ind.	0.3	0.25	-16.7%
Statutory Assessment Ratio: Mach./Equip.	0.2	0.25	25.0%
Est. Actual Assessment Ratio: Residential	0.119	0.1073	-9.7%
Est. Actual Assessment Ratio: Comm./Ind.	0.298	0.2318	-22.2%
Est. Actual Assessment Ratio: Mach./Equip.	0.2	0.25	25.0%
Estimated Effective Tax Rate: Residential	1.49	1.17	-21.4%
Estimated Effective Tax Rate: Comm./Ind.	3.73	2.64	-29.2%
Estimated Effective Tax Rate: Mach./Equip.	2.5	2.85	14.0%

Taking a longer term perspective, we trace the history of Kansas property taxes over the last decade, and ask how the share of taxes paid by various categories has changed over time.

In 1986, Kansas voters approved a constitutional amendment that required property to be reassessed, assigned different assessment ratios to different property classes (residential real estate, commercial and industrial real estate, etc.), and removed inventories form the tax rolls.. When the amendment was implemented in 1989, property taxes in Kansas underwent some major shifts. As a result, the share of taxes paid by residential property rose from about 30 percent to about 40 percent, where it has remained for the last several years.

In a sense, all non-residential property is business property. So the share of taxes paid by businesses (including agriculture, oil and gas, utilities, commercial and industrial real estate, and business machinery and equipment) fell from 70 percent to about 60 percent (largely due to the removal of the inventory tax). However this tax shift was not felt uniformly by businesses. In fact, machinery and equipment, which comprised 8.1 percent of valuation in 1996, up from 5.1 percent in 1986. This is in part due to increases in the assessment ratio for this type of property.

Table 5-3
Kansas Property Taxes and Assessed Value
1986-1996

Year	Total Property Tax ($mil)	Total Assessed Valuation ($mil.)	Total Tax Paid by Residential ($mil.)	Assessed Value, Residential ($mil.)	Residential Share of Tax	Resid. Share of Assessed Value
1986	1,279	11,104	381	2,702	29.8%	24.3%
1987	1,383	11,171	420	2,765	30.4%	24.7%
1988	1,480	11,352	456	2,854	30.8%	25.1%
1989	1,571	14,105	610	4,976	38.9%	35.3%
1990	1,655	14,254	648	5,013	39.2%	35.2%
1991	1,833	14,630	716	5,156	39.1%	35.2%
1992	1,608	14,601	629	5,246	39.1%	35.9%
1993	1,696	14,870	658	5,255	38.8%	35.3%
1994	1,830	15,502	718	5,548	39.2%	35.8%
1995	1,926	16,194	791	6,138	41.1%	37.9%
1996	1,974	16,704	821	6,504	41.6%	38.9%

Source: Kansas Department of Revenue, *Statistical Report of Property Assessment and Taxation*, various years. For 1986-1988, residential taxes are estimated from assessed value and mill levy data.

Property Taxes on Machinery and Equipment

The unusually high level of taxation on business machinery and equipment causes considerable concern in the business community. In a recent survey of Kansas businesses [*A Kansas Vision for the 21st Century*, Kansas, Inc., 1997, p.5-3], 80 percent of manufacturers said that the property tax on machinery and equipment in Kansas had a negative effect on their investment and expansion decisions. This tax adds to the "price" of owning machinery, and, according to the laws of supply and demand, discourages its use.

A survey of property taxation in all 50 states [*1992 Census of Governments*, U.S. Bureau of the Census] shows that, as of 1991, machinery and equipment was included in the property tax base in 41 states. During its 1995 legislative session, Iowa removed new industrial machinery and equipment from the property tax rolls. On the basis of a recent review of legislation, it appears that Iowa is the only state in the nation to enact major changes in the basic taxation of machinery and equipment in the last three years. However, a few states have enacted more generous property tax abatements. Significantly, several large industrial states such as Illinois, New York, New Jersey, and Pennsylvania do not apply property taxes to industrial machinery and equipment.

As shown in Table 5-1, effective rates on machinery and equipment in Kansas clearly are the highest in the region. As of our 1997 estimates, Kansas rates average 2.85 percent % of value. Effective rates in Colorado and Nebraska are estimated at 2.41% and 2.33% respectively. The effective rate is based on the assumption that the property is indeed taxed--that it has not been granted a property tax abatement.

Some qualifications apply to the effective rates listed in Table 5-1. While the numbers are accurate for new machinery and equipment, there are some problems in calculating and comparing effective rates for older equipment. Practices for evaluating business personal property vary across states. Some states appraise the current value of the equipment, while other states take as the basis the historical cost of the property when it was purchased. And states differ in the methods used to depreciate property once the basis has been established. In Kansas, machinery and equipment is assessed at 25 percent of market value when new, minus depreciation. Property in Kansas is depreciated using a 7 year straight line depreciation schedule. But while any property is still in use, its value is placed at no less than 20 percent of its original value when new. Machinery and equipment with a short life span (such as computers) is probably appraised at more than its true market value, while machinery and equipment with a very long life span may be appraised at less than market value.

Summary

Property taxes comprise an essential source of local revenues for all of the states examined by this study. Historically, Kansas has placed greater reliance on the property tax as a share of local revenue than the average for the U.S. or the region. That reliance on the property tax has declined somewhat due to changes in Kansas school finance initiated in 1991.

Kansas property tax rates per dollar market value of residential property are in the mid-range for the region, and have declined substantially since 1991. Tax rates on commercial and industrial real estate (before abatement) are on the high end for the region, but have also declined since 1991. Tax rates on machinery and equipment remain the highest in the region and have risen since 1991 due to changes in the assessment ratio.

CHAPTER 6: PROPERTY TAX ABATEMENT

Introduction

State and local governments frequently offer property tax abatements as an incentive to attract new firms and to encourage industry expansions. Arguably, property tax abatements provide the single most important tax incentive at the state and local level. Without abatements, property taxes often exceed state and local income taxes. When granted, tax abatements frequently amount to more than 50 percent of the tax liability. Thus, property tax abatements provide a substantial reduction in a large tax.

Theoretical Issues

Two theoretical issues arise concerning the use of property tax abatements. The first is whether tax abatements or other incentives actually attract new industry; research on this issue is mixed [Bartok, 1991; Grady, 1987; Pomp, 1986; Steinnes, 1984]. A second issue concerns the use of state and local discretion in granting abatements [Coffman, 1993]. In many states, abatements are not automatic but are rather the result of local decision-making. On one hand, the use of local discretion potentially avoids abatements that do not yield positive net benefits to a community. On the other hand, discretion may lead to what economists call "rent seeking" behavior. This simply means that firms will spend substantial resources in order to try to secure a favorable decision. From the point of view of the economy as a whole, such activities are an inefficient use of resources.

Comparison of Property Tax Abatements

In spite of issues of effectiveness and efficiency, property tax abatements are common throughout the region surrounding Kansas, and in most of the large comparison states. The percentage of a tax abatement and the requirements for eligibility vary widely from state to state. Some state governments, for example, Missouri, limit abatements to state-designated enterprise and urban redevelopment zones. Some states (New York) offer more generous benefits in enterprise zones than in other areas of the state. In still other states (Kansas), abatements may be granted at the discretion of local governments regardless of enterprise zone status. Property tax abatements may be targeted to particular industries such as manufacturing, or they may be more general, extending to services, wholesalers, and retailers (Table 6-1).

Within the region surrounding Kansas, all states except Nebraska offer significant property tax abatements. Under 1994 legislation, Iowa offers 100 percent abatements for up to 20 years on real estate and manufacturing equipment for firms that meet a strict set of qualifications. Missouri provides tax abatements as high as 100 percent for 25 years within enterprise zones and blighted areas. These abatements are limited to improvements to real estate, and do not include machinery or equipment. Almost any industry qualifies

for exemption in Missouri. Oklahoma exempts real estate improvements, machinery, and equipment for manufacturing establishments and selected service establishments. Oklahoma stands out among the states in this study in that the abatement is an entitlement under state law rather than a local decision.

Kansas allows local governments to abate up to 100 percent of property tax liabilities for 10 years for new and expanding industries. Abatements are limited to property used in manufacturing, research and development, and warehousing. Kansas law also allows most property financed with industrial revenue bonds to be exempt from local property taxes for up to ten years. Taxes may be abated on land, buildings, improvements, machinery, and equipment. In Kansas, communities must perform a benefit-cost analysis before granting abatements. However, there is no requirement that abatements be limited to situations for which the benefits exceed the costs.

Comparisons of business property taxation among the states in the region should consider two factors: 1) the effective tax rates on commercial and industrial real estate, machinery and equipment, and inventories; and 2) the probability of property tax abatement. With respect to the first factor alone, Kansas property taxes appear high, particularly for firms with a large percentage of their assets in commercial real estate. However, Kansas property tax abatements for new and expanding firms are among the most generous in the region. Many Kansas communities favor the use of abatements, although not necessarily at the 100 percent level. This allows new or expanding Kansas industries to avoid a large percentage of the property tax burden. The net impact may be to shift property taxes onto mature firms and households.

Summary

Property tax abatements are a frequently-used tool for economic development, despite concerns about their effectiveness and efficiency. Kansas tax abatements are very generous: Kansas allows abatements of up to 100 percent for 10 years on most types of business property and for most industries. In Kansas, as in most states, the decision to grant an abatement is made locally. While Kansas has a requirement for cost-benefit analysis of abatements, there are no absolute standards for whether the abatement should be granted.

Table 6-1
Property Tax Abatements

State	Extent of Tax Abatement	Eligibility Requirements
Colorado	Within enterprise zones, counties and municipalities may make "incentive" payments to firms based on the increase in value of property due on new or expanding business.	Must be a qualified new or expanding business facility located in enterprise zone.
	More generally, counties, municipalities, and school districts may abate up to 50% of taxes on personal prop. only for up to 4 years.	Must be new or expanding business.
Iowa	Local governments are allowed to abate local property taxes on value added to industrial real estate. Maximum abatement: YR 1: 75% YR 2: 60% YR 3: 45% YR 4: 30% YR 5: 15%.	Local option abatement limited to new construction of industrial real estate, research service facilities, warehouses, distribution centers. Note: new industrial equipment and machinery are not taxed in Iowa.
	A community may exempt 100% of the value added to real property associated with job creation for up to 20 years for firms that qualify under the New Jobs and Income Program. A full 20-year exemption applies to firms that qualify for Quality Jobs Enterprise Zones benefits.	To qualify under New Jobs and Income Program a business 1) must obtain approval from a community for start-up or expansion; 2) must not be an in-state relocation; 3) must pay 80% of health insurance for full-time employees; 4) must agree to pay a median wage of at least $11 per hour, indexed to 1993 prices, or 130% of average wage in the county, whichever is higher; 5) must make an investment of at least $10 mil.; and 6) agree to create at least 50 FTE jobs. In addition, the firm must satisfy 3 of the following 7 requirements: 1) offer a pension plan or profit-sharing; 2) produce high value-added goods or services, or operate in an industry listed by Iowa as high value added; 3) provide day-care; 4) invest at least 1% of pretax profits in R&D; 5) Invest at least 1% of pretax profits in worker training; 6) have an active productivity and safety improvement program; or 7) occupy an existing facility with at least 20,000 sq. ft. of vacant space. To qualify under the Quality Jobs Enterprise Zone program, the firm must locate in a zone designated by the Iowa department of Economic Development. A "primary" business must create at least 300 FT jobs paying an average of $15 per hour and invest at least 250 million. Certain supporting businesses that supply necessary property, materials, or services to primary firms also qualify.

State	Extent of Tax Abatement	Eligibility Requirements
Kansas	Local option to exempt all or any portion of buildings, land, added improvements, and machinery and equipment for new or expanding firms. Exemptions last for no more than 10 years after opening of new business or completion of expansion. Property financed with economic development revenue bonds may also be exempted for up to 10 years.	Abatements limited to property of new or expanding businesses used for 1) manufacturing; 2) research and development; or 3) storing goods or commodities which are stored or traded in interstate commerce. Until 1995, all industries were eligible for property tax exemptions on property financed with economic development revenue bonds. Effective January 1, 1995, retail firms are prohibited from receiving property tax exemptions.
Missouri	Under Urban Redevelopment programs: up to 100% of improvements to real property may be tax exempt for up to 25 years. Under Enterprise Zone programs: 50%-100% exemption on improvements to real property for up to 25 years.	Improvements to real property must occur in blighted areas of cities with populations over 4,000 in Jackson and St. Louis counties, 2,500 elsewhere in state. Improvement must be located in enterprise zone. In zone, firm renting or leasing residential property to low or moderate income persons also qualifies. Applied to real estate improvements only.
Nebraska	15-year tax abatement for agricultural processors investing at least $10 million and hiring at least 100 new workers.	Agricultural processing only.
Oklahoma	Qualifying facilities are 100% exempt from property tax for 5 years on any new, expanded, or acquired facilities, including facilities engaged in R&D. Included in exemption are land, buildings, improvements, structures, machinery, equipment, and other personal property used directly in the manufacturing process.	Investment cost of the construction, acquisition or expansion of the facility is must be $250,000 or more, and at least 15 FTE employees must be added. Included are firms in SIC 20-39 (manufacturing); firms in SIC 7372, 7373 (software and systems design), provided 50% of sales are to out-of-state customers; firms in SIC 7374 (data processing), provided 80% of sales are to out-of-state customers. Certain distribution centers may also qualify. Employees at the facility must be offered a basic health care plan.
California	No property tax abatements.	
Illinois	Any taxing district may vote to abate any portion of its taxes on commercial and industrial property, horse racing property, and auto racing property. Abatements allowed up to 10 years. Dollar limitations on amount of abatement allowed to a single firm. Taxes may also be abated within enterprise zones with fewer restrictions.	Generally limited to new firms, expansions, and relocations from out-of-state. In enterprise zones, abatements may be granted on any new improvements or existing improvements that have been renovated or rehabilitated.

State	Extent of Tax Abatement	Eligibility Requirements
New Jersey	Abatements or exemptions for commercial and industrial properties in areas in need of redevelopment are available under the following 5-year and 30-year schedules: 5-year: property tax abatements 1st year: no payment required; 2nd year: at least 20% of full prop. tax; 3rd year: at least 40% of full prop. tax; 4th year: at least 60% of full prop. tax; 5th year: at least 80% of full prop. tax. 30-year: payments in lieu of taxes 2% of total project costs or 15% of gross project income.	Any combination of modernization, rehabilitation, new construction, and/or alteration /repair /enlargement that increases the volume of a structure by more than 30 percent may be eligible for exemption or abatement.
New York	At the option of local taxing authorities, real property owners in rehabilitation areas and certified urban job enterprise zones may receive a 100% exemption on improvements to real property for up to 7 years, with decreased abatements for another 3 years.	Businesses must be certified to receive enterprise zone benefits. Criteria for certification include 1) whether jobs are expected to be created or retained by the business; 2)whether job activity is new employment, or a shift in employment from other locations; 3) whether employees will perform a substantial amount of their activities in the zone.
	Commercial and industrial facilities are eligible for a 50% tax abatement on the increase in value to real property in the first year, declining by 5% for each successive 9 years.	Cost of investment must be at least $10,000. Must be commercial or industrial facility.

SOURCES: Business Information Services, *State Tax and Financial Incentives, 1997.* Information also provided by individual state departments of revenue and commerce and by individual state statutes.

CHAPTER 7: UNEMPLOYMENT INSURANCE AND WORKER COMPENSATION

Introduction

For most firms, labor costs constitute the single largest factor payment. Total labor costs include wages, benefits, social security and other federal taxes, and two important state-mandated programs: unemployment insurance and worker compensation. Firms are legally obligated to participate in unemployment insurance and worker compensation; hence this study treats them as taxes. As shown in this chapter, the costs of these two programs vary substantially across states.

Unemployment Insurance

Unemployment insurance compensates a worker for wages lost while he or she is involuntarily unemployed but able and willing to work. Employers pay both federal and state taxes to fund unemployment insurance, but the state tax is by far the larger. Although the federal government establishes broad regulations, the details of the system are state-specific. Federal regulations exist to ensure that reserves are adequate to maintain the solvency of the state programs. The states define the fundamentals such as employee eligibility rules, rates, tax bases, and benefit provisions. Each state has a wage limit, referred to as the taxable wage base, beyond which unemployment taxes are no longer collected. Collections are placed in an unemployment insurance trust fund from which benefits are drawn.

The unemployment insurance tax rate assigned to an employer depends both on the firm's own unemployment experience record and on state conditions. Each firm accumulates a contribution-benefit balance based on what it has paid into the fund in relation to the benefits its previous employees have drawn. Firms with positive balances are charged relatively low rates in comparison to firms with negative balances. New firms with no experience are charged a "new employers" rate, which, in most states, depends on the industry in which the firm operates.

Four major factors affect the overall level of unemployment insurance rates in a state. First, the average benefits paid to an unemployed worker; second, the duration of the payment; third, the percentage of the work force making unemployment insurance claims; and fourth, trust fund balances. States with a high level of benefits are likely to have high rates, as are states with volatile employment. Unemployment insurance rates are quite unstable, changing with employment conditions. States with high trust fund balances are able to weather periods of unemployment without increasing tax rates.

Table 7-1 provides a comparison of state unemployment insurance systems. The most important indicator is the average tax per $100 payroll. This measures the average insurance cost. By this indicator, Kansas has by far the lowest rates in the region. The

reason is straightforward. In 1995, the Kansas Legislature declared a moratorium on unemployment taxes for approximately 44,000 Kansas businesses with positive unemployment compensation account balances. The moratorium has been extended through 1998. Annual benefits per employee now exceed annual tax collections, so the trust fund is gradually being spent down. Note, however, that the fund still had one of the highest balances per employee of any state as of the end of calendar year 1996.

The condition of state unemployment systems varies considerably across states (Table 7-1). In the region surrounding Kansas, rates tend to be much lower than in the large industrial states, and, in fact, are all below the national average of 2.52 percent. With the exception of Missouri, all of the trust funds in the region could sustain benefits for over 2.5 years even without additional tax inflows. In the large industrial states, trust fund balances are much smaller. In Kansas, Iowa, Nebraska, and Illinois annual benefits exceed annual tax collection; hence we would expect that rates would have to rise at some future date to stabilize the trust fund at some desired level.

Table 7-1
Unemployment Insurance Benefits and Net Worth, 1996

State	Covered Emp. (1000)	$ Average Weekly Benefit	$ Annual Benefits/ Covered Emp	$Annual Collection per Covered Emp	$ Avg Tax per $100 Payroll	$ Trust Fund Balance /Covered Emp.	Months Remaining
Colorado	1,803	210	102	104	1.14	274	32.1
Iowa	1,319	203	145	102	1.03	509	42.1
Kansas	1,166	204	126	37	0.39	536	50.9
Missouri	2,418	154	114	153	2.13	110	11.6
Nebraska	793	162	65	54	0.91	236	43.2
Oklahoma	1,267	174	80	100	1.16	443	66.5
California	12,747	152	222	284	4.40	207	11.1
Illinois	5,448	215	231	218	2.78	256	13.2
New Jersey	3,455	255	372	419	3.14	541	17.4
New York	7,625	206	251	291	4.87	23	1.0
US Average	115,362	189	183	200	2.52	310	20.3

Note: Kansas has imposed a tax moratorium for 1995, 1996, 1997
Source: U.S. Department of Labor, UI Data Summary, May, 1997.

Workers Compensation

Workers compensation laws provide benefits to injured workers or to families in the event of a worker's death. States require that firms buy insurance to provide compensation payments. Insurance is supplied by private companies. The National Council on Compensation Insurance, an industry group, performs actuarial work and suggests industry-specific rates for most states. In some states, these rates are pure premiums (called advisory loss costs) based on expected losses, while in other states they include estimates of insurance company administrative expenses. In the past, rates suggested by NCCI were often approved by the states as "monopoly" rates that all insurance firms would charge. But increasingly, these NCCI rates serve as only as guidelines in a market where actual rates are decided by competitive firms.

Several factors determine the worker compensation rate schedule for a state. The amount of benefits paid to injured workers, decided by state law, exerts a primary effect. Other factors include the safety records of various industries and occupations within the state and state regulations that limit rate increases. As mentioned above, worker compensation has been increasingly deregulated. States have started to allow price competition among firms, encouraging firms to keep administrative costs low. Both Kansas and Missouri have been a part of this trend. Within a single state, the rate paid by an individual firm also depends on firm-specific factors as well as on industry and occupation. A firm's payments are modified depending on its individual safety record and on whether it qualifies for a volume discount.

The best comparative data on statewide comparisons of worker compensation systems comes from a private actuarial firm, Actuarial and Technical Solutions.[1] The firm constructs a measure of average benefits and average costs for each state, and then indexes them to nationwide norms (Table 7-2). In other words, the data show the ratio of costs or benefits in a state to those in the nation.

The benefits measured in Table 7-2 depend on the wage rate in individual states, on state policies that set the amounts that injured workers can recover, and on the duration of a worker's injury. In practice, benefits in a state also reflect the degree of danger in the industries that predominate in the state. However, the indexes have been adjusted for industrial mix. They show, as well as possible, the differential effects of state policies and of claim costs. In 1997, benefits in Kansas were about 16 percent below the national average.

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[1] Actuarial and Technical Solutions. *Workers Compensation State Rankings* (1992-1997).

Table 7-2
Worker Compensation Comparative Costs, 1997

State	Index of benefits	Index of costs
Colorado	1.342	1.072
Iowa	1.086	0.654
Kansas	0.833	0.916
Missouri	0.853	1.009
Nebraska	1.079	0.715
Oklahoma	0.853	1.620
California	0.666	0.898
Illinois	1.267	0.943
New Jersey	0.616	0.880
New York	1.280	1.287
US average	1.000	1.000

Source: Actuarial and Technical Solutions

Similarly, the cost measured in Table 7-2 has also been adjusted for industrial mix. It reflects the competitiveness of the worker compensation system in the state, as well as the cost of claims. By this measure, costs in Kansas are also well below the national average. In other words, worker compensation costs should not present a barrier to firms wishing to locate or expand in Kansas.

Worker compensation systems have been under pressure to increase their competitiveness and to lower costs. In early 1995, the Kansas Legislature passed a comprehensive Worker Compensation Reform Act that aimed at eliminating fraud and preventing accidents. It also redefined benefit schedules for various types of injuries. In addition, Kansas moved to a "loss cost" method of determining rates (effective June, 1995). Insurance companies will now add their own administrative costs to the pure loss rate in order to determine final rates. Previously, administrative costs were built into basic regulated rates. In light of this development, it is interesting to trace the path of rates over the last several years. We compare Kansas and Missouri with the U.S. average (Figure 7-1).

Figure 7-1 shows a steep increase in rates in the early 1990s. Changes in Kansas and Missouri were more pronounced than for the nation as a whole. Reform measures have been effective at lowering costs recently. Rates in both Kansas and Missouri are now very competitive in comparison with the national average.

Summary

As a result of the moratorium on unemployment insurance premiums and worker compensation reforms, Kansas now offers a very favorable environment with respect to both taxes.

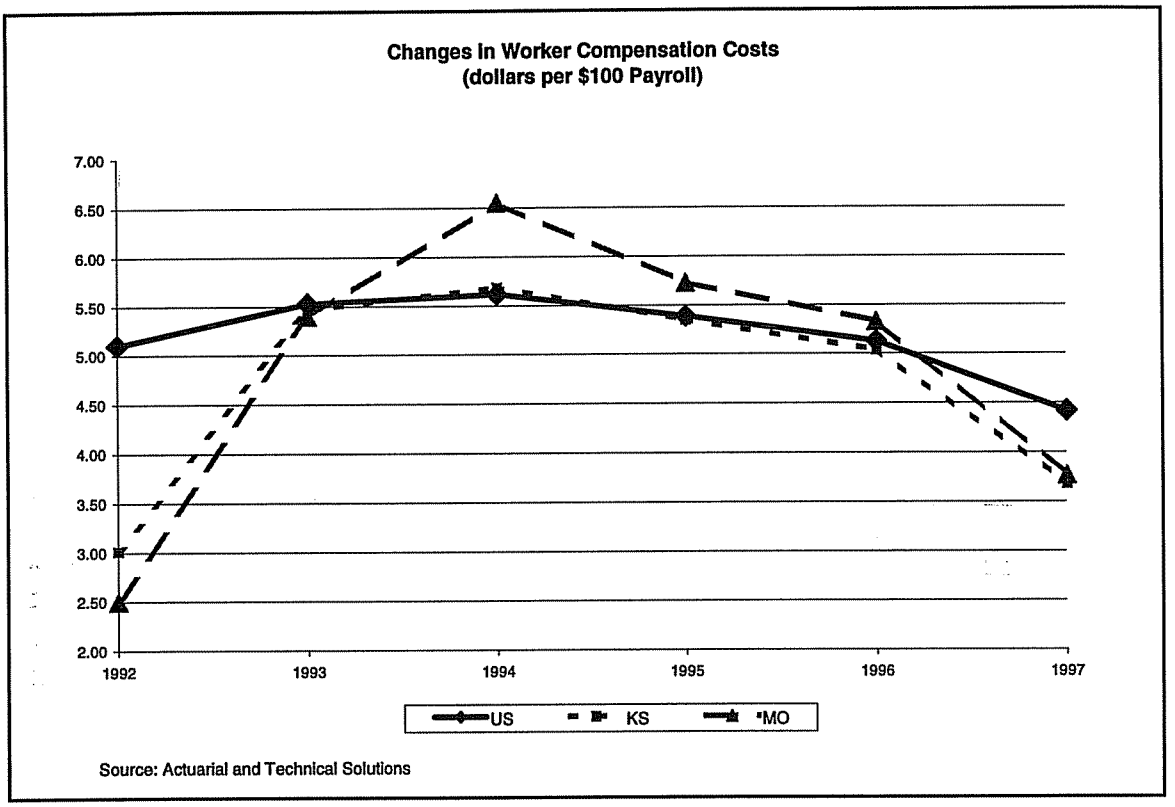
Changes In Worker Compensation Costs
(dollars per $100 Payroll)
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1992
1993
1994
1995
1996
1997
US
KS
MO
Source: Actuarial and Technical Solutions

Figure 7-1

CHAPTER 8: BASIC BUSINESS COSTS

Introduction

Our previous focus on taxes masks the fact that taxes are only one of a number of costs that can affect a firm's bottom line, and hence its business location decision. In this chapter, we turn the discussion to basic business costs: in particular, costs of labor, energy, land, and construction.

Labor Costs

Labor costs are the most important of the business costs that we consider in this report. They contribute a significant portion of the value of goods and services. Wages and salaries account for about 15 percent of the value of goods produced in manufacturing; once social security, benefits, and other labor costs are added, the total comes to about 19 percent [1] [U.S. Bureau of the Census, *Annual Survey of Manufactures, 1995*]. Payments to labor (excluding benefits) comprise about 42.1 percent of the value of total output in service industries [U.S. Bureau of the Census, *Census of Service Industries, 1992*]. Given their importance in overall costs, it is reasonable to assume that labor costs have a very large influence on business location decisions.

To get a sense of how labor costs vary across states, we examine data on average wages and salaries per employee (see Table 8-1). We look at individual states, the region, the large comparison states, and the nation as a whole. First, the states as a whole exhibit a great variation in wage costs. In 1996, $13,192 separated the state with the highest wage costs (New York) from the state with the lowest wage cost (Iowa); this amounts to about 46 percent of the nationwide average of $24,482. Even within the region surrounding Kansas, wages show substantial state-to-state variation: the difference between Colorado (with average annual wages of $28,114) and Iowa amounted to $5,040 in 1996. The variability in wages across states is a major contributor to differentials in the total cost of doing business.

Wage growth during the 1990s has by no means been constant across states. Among the states in our study, we observe the highest growth rate of 24.9 percent in New York and the lowest rate of 14.3 percent in Oklahoma. Kansas wages and salaries have grown by 21.3 percent during the 1990s, which is slightly below the growth rates in the region surrounding Kansas (21.7 percent) and the nation as a whole (21.6 percent).

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[1] The remainder of the value of output is due to the cost of materials and purchased services, taxes, and profits.

Table 8-1
Average Annual Wages, 1990 and 1996

	1990	1996	Percentage Change
Colorado	$22,557	$28,114	24.6%
Iowa	18,881	23,074	22.2%
Kansas	19,868	24,093	21.3%
Missouri	21,286	25,938	21.9%
Nebraska	18,918	23,384	23.6%
Oklahoma	20,201	23,087	14.3%
Region	20,597	25,066	21.7%
California	26,239	31,260	19.1%
Illinois	25,158	30,797	22.4%
New Jersey	28,315	35,289	24.6%
New York	29,036	36,266	24.9%
Large States	27,047	32,943	21.8%
All 10 states	$25,664	$31,092	21.1%
U.S.	$23,430	$28,482	21.6%

SOURCE: U.S. Bureau of Economic Analysis, State Personal Income CD ROM, Tables SA07 and SA27.

A similar pattern emerges when we confine the discussion of wages to manufacturing (Table 8-2). Average manufacturing wages for the states in our study ranged from a high of $44,088 in New Jersey to a low of $29,150 in Nebraska, a difference of close to $15,000 per employee. Within the region surrounding Kansas, manufacturing wages in the high state (Colorado) and the low state (Nebraska) differed by close to $8,000 per employee. As it turns out, manufacturing wages are closely correlated to non-manufacturing wages for the states in this study; in other words, those states that have high manufacturing wages also tend to have high wages in other industries, and vice versa. The calculated correlation coefficient is .97 (where 1 indicates perfect correlation).

If we look at the percentage changes in average manufacturing wages between the years 1990 and 1996, it appears that the highest growth rate, 27.9 percent, is found in New Jersey, the state that had the highest labor costs both in 1990 and 1996. The lowest rate of 13.0 percent is observed in Oklahoma. In 1996, Kansas experienced a growth rate of 24.7 percent, which exceeds the growth rates for the region and nation.

Table 8-2
Average Annual Manufacturing Wages, 1990 and 1996

	1990	1996	Percentage Change
Colorado	$29,914	$37,002	23.7%
Iowa	26,916	32,003	18.9%
Kansas	26,394	32,913	24.7%
Missouri	27,460	34,255	24.7%
Nebraska	23,307	29,150	25.1%
Oklahoma	26,763	30,251	13.0%
Region	27,155	33,095	21.9%
California	32,325	39,761	23.0%
Illinois	30,786	38,300	24.4%
New Jersey	34,476	44,088	27.9%
New York	34,048	41,947	23.2%
Large States	32,680	40,401	23.6%
All 10 states	$31,492	$38,632	22.7%
U.S.	$29,316	$36,328	23.9%

SOURCE: U.S. Bureau of Economic Analysis, State Personal Income CD ROM, Tables SA07 and SA27.

For Kansas, wage rates offer a competitive advantage. Annual wages for all industries in Kansas average $24,093 per employee, significantly below the national average ($28,482) and slightly below the regional average ($25,066). Kansas wages rank 34th highest out of the 50 states. For manufacturing industries, Kansas wages average $32,913, which is $3,415 below the national average and slightly below the regional average of $33,095.

Energy Costs

Energy is an important business input, particularly in manufacturing industries. According to the most recent data available to us at the time of this study, [U.S. Bureau of the Census, *Annual Survey of Manufactures, 1995*], manufacturers spent $60,236 million on electricity and fuel; this constitutes about 1.7 percent of the value of output, and about 3.2 percent of purchased materials. For some industries, the ratios are much higher; the primary metals industry spends close to 6 percent of the value of output and 9 percent of total materials costs on energy.

Energy prices show substantial variation across states. For example, average industrial electricity rates for the states in this study range from 3.7 cents per kwh (Nebraska) to 8.2

cents per kwh (New Jersey), a ratio of over 2 to 1. Average industrial gas rates range from $2.23 (Kansas) to $4.69 (New York) per thousand cubic feet, again about a ratio of 2 to 1 (Table 8-2).

Our discussion focuses on energy industrial prices, since they apply to manufacturing, and manufacturing tends to be more energy-intensive than service industries. Kansas ranks lowest in the region for industrial gas prices, but highest in the region (although not by much) in terms of industrial electric prices. The Kansas price for gas is well below the national average; the Kansas price for electricity is about equal to the national average. In comparison with the large states, Kansas fares well, as do most of the states in the region. It should be pointed out that energy prices vary within a state as well as across states; therefore, comparisons of averages may not accurately reflect the cost differentials between specific locations within the states.

Table 8-3
State Energy Prices, 1995, 1996

State	Electric cents per kwh 1996		Natural Gas $ per 1000 cubic ft. 1995	
	Commercial	*Industrial*	*Commercial*	*Industrial*
Colorado	5.90	4.40	4.23	2.86
Iowa	6.60	4.00	4.14	3.23
Kansas	6.70	4.70	3.93	2.23
Missouri	6.20	4.60	4.39	3.48
Nebraska	5.60	3.70	3.96	2.79
Oklahoma	6.00	3.80	4.48	2.27
Region	6.17	4.20	4.19	2.81
California	10.00	7.20	6.21	3.70
Illinois	8.10	5.30	4.42	3.57
New Jersey	10.50	8.20	5.76	3.11
New York	12.30	5.70	6.10	4.69
Large States	10.23	6.60	5.62	3.77
All 10 states	7.79	5.16	4.76	3.19
U.S.	7.70	4.60	5.05	2.71

Source: U.S. Energy Information Administration, data on web site; U.S. Department of Energy, *Natural Gas Annual*, 1995.

Land

For this study, we made use of data on land prices from a recent survey of industrial and commercial realtors [Society of Industrial and Office Realtors, 1996]. The data were collected from real estate professionals in approximately 200 markets in metropolitan areas throughout the country. A range of prices (low and high) was reported for prime industrial sites in each market. Where available, data were listed separately for central city versus suburban areas.

To summarize the data, we grouped the markets into nine regions as defined by the U.S. Bureau of the Census. We calculated the average price for each region, reported in Table 8-4 below. We also calculated a nationwide average. It should be pointed out that land is not a standard commodity, so there may be differences in the quality of the sites reported by the survey respondents.

Cities in the West North Central region, which includes Kansas, Nebraska, Iowa, and Missouri, generally reported land prices that were at or below the national average. Land prices averaged $2.18/sq. ft. in central city locations, compared with a national average of $2.93/sq. ft. For suburban locations, prices averaged $1.37/sq. ft., versus $2.12 nationwide.

Table 8-4
Land Prices by Region

State	Central City Average $ per sq. ft.	Suburban Average $ per sq. ft.
New England	2.80	1.85
Mid-Atlantic	3.49	1.39
East N. Central	1.16	1.29
West N. Central	2.18	1.37
--Kansas City area	1.88	2.38
--Wichita	2.00	0.35
--Des Moines	2.00	2.25
--St. Louis	1.60	2.00
South Atlantic	1.48	1.91
East S. Central	2.16	1.24
West S. Central	2.52	1.54
Mountain	2.88	1.60
Pacific	5.66	4.40
US average	2.93	2.12

Source: Society of Industrial and Office Realtors, 1996.

Two Kansas locations were among the cities in the survey: Wichita and the Kansas City area. For central locations in Wichita, costs of $2.00/sq. ft. ran about two-thirds of the nationwide average for similar sites. For suburban locations, costs in Wichita for $.35 /sq. ft. were among the lowest for all cities. Kansas City central sites (such as those in Kansas City, Kansas) also were much less expensive than the national average. Suburban Kansas City sites appear to be about 10 percent more expensive than the national average, probably because of the prominence of prime sites in Johnson County.

Construction Costs

The final cost that we investigate is the cost of constructing a new facility. Data from *Means Square Foot Costs* show construction costs indexes for major cities in all states. These indexes are based on local materials and construction labor prices. An index of 1 indicates construction costs equal to the national average. All of the states in the region have cost indexes below the national average, while all of the large comparison states have indexes above the national average. Indexes for Kansas cities range from .78 to .94, and average .84. Kansas offers construction costs well below the national average and in the mid-range for the region; Kansas is quite competitive in terms of this production factor.

Table 8-5
Construction Cost Indexes, 1997

State	Cost Index	State	Cost Index
Colorado	.89	California	1.14
Iowa	.85	Illinois	.99
Kansas	.84	New Jersey	1.10
Missouri	.92	New York	1.15
Nebraska	.80		
Oklahoma	.81	U.S.	1.00

Source: *Means Square Foot Costs 1997, 18th Annual Edition*

Summary

In general, Kansas offers a competitive business cost climate. Labor costs, the most important of the costs that we consider, are slightly below the regional average and are well below costs in the large comparison states or in the nation as a whole. Land costs in the region as a whole are well below the national average. For specific Kansas locations, Wichita stands out as having some of the lowest land costs in the nation. Construction costs fall 16 percent below the national average. Industrial gas prices are well below the national average, while industrial electricity prices are approximately equal to the national average.

CHAPTER 9:
ESTIMATES OF THE COST OF DOING BUSINESS FOR SELECTED INDUSTRIES

Introduction

Since 1987, the Institute for Public Policy and Business Research has worked with Kansas, Inc. to develop and apply a cost and tax simulation model. This model provides a flexible method for comparing costs of doing business across states. It produces estimates of key variables that might affect a new firm's location decision: the cost of inputs such as labor and energy, the cost of assets such as land and buildings, and the amount of a firm's federal, state, and local taxes. In addition, the model provides a means to evaluate the cost and tax climate facing existing Kansas businesses.

It is important for Kansas to be able to track costs and taxes within the region and nation, particularly in view of the recently reformulated state economic development plan that includes the following goal:

> Create a positive, competitive business climate that encourages investment and growth [*A Kansas Vision for the 21st Century*, Kansas, Inc. p.3-5].

Research on the relative costs of doing business in Kansas, and on taxation in particular, provides a way for the state to assess its progress towards this goal and to identify areas in which policy adjustments could improve the business environment.

This chapter applies the simulation model in two ways. First, the model is used to compare overall taxes and costs in Kansas with those prevailing in other states. Second, the model is used to estimate the impact of proposed tax changes.

Methodology

The IPPBR tax and cost simulation model takes a "hypothetical firm" approach. Profiles of firms in several industries are developed based on industry average costs for capital, labor, and other inputs. The firms are then "placed" in each of several states, where they become subject to 1) the state's business tax rates, and 2) the prevailing costs for labor, energy, land, and other factors in the state.

The model is structured to allow two different types of simulations. The first type, referred to as the "full model simulation," allows taxes and other business costs to vary simultaneously across states. This situation gives a picture of the overall business climate in a state. The other type of simulation, referred to as the "partial model," isolates the impact of business taxes by holding other costs constant (at their US average levels). The partial model simulations are useful for distinguishing particular taxes for which a state's tax structure is out of line with its competitors.

The model carefully distinguishes between the situation faced by a new firm and that faced by an ongoing concern or "mature firm." The new firm is assumed to be eligible for numerous tax incentives from state and local governments. The ongoing concern does not receive tax incentives, and hence faces the full impact of the state's tax structure. Note that an expanding firm could be modeled as a combination of a new and a mature firm.

Industries examined by the IPPBR model

The model currently includes seven industries (four manufacturers and three services), selected to represent a range of average wages and capital intensities. Manufacturing industries include two representatives of high technology (medical drugs and electronics), a traditional heavy industry (motor vehicles and parts), and a lighter manufacturing industry (plastic products). The service industries include wholesale trade, data processing, and research and development laboratories. A key difference among industries is their capital intensity, that is, the value of structures and machinery available per employee. As seen in Table 9-1, a wide range of capital intensities is seen within both the manufacturing and the service categories.

Table 9-1
Industries, Payrolls, and Capital Intensities per Employee

Industry Name	Payroll per Production Emp.	Value of Structures per Emp.	Value of Equipment per Emp.	Total Depreciable Capital per Emp.
Medical drugs	$29,776	$60,995	$93,630	$154,625
Plastic products	20,160	15,795	53,729	69,524
Electronics and components	22,498	28,752	66,799	95,551
Motor vehicles and parts	35,541	40,019	93,909	133,928
Wholesale trade	27,897	16,342	26,104	42,446
Data processing	29,503	12,035	35,065	47,100
Research and development labs	32,685	26,211	25,952	52,163

Estimates of capital stocks per employee were compiled from several sources, including:

1. U.S. Bureau of the Census, *1992 Census of Service Industries, Capital Expenditures, Depreciable Assets, and Operating Expenses* (for book value of assets);
2. U.S. Bureau of the Census, *1992 Census of Service Industries, Geographic Area Series, United States* (for employment);
3. U.S. Bureau of the Census, *1992 Census of Wholesale Trade, Measures of Value Produced, Capital Expenditures, Depreciable Assets, and Operating Expenses* (for book value of capital);

4. U.S. Bureau of the Census, *1992 Census of Wholesale Trade, Area Series* (for employment);
5. U.S. Bureau of the Census, *1992 Census of Manufactures, General Summary* (for book value and employment);
6. U.S. Bureau of Economic Analysis, *Wealth Series*, data on diskette, 1993 (historical and current cost by 2 digit sic code for machinery and structures).

Representative firm profiles

The basic structure of the IPPBR tax model is fairly straightforward. A profile is developed for a representative firm in each industry, listing sales, costs, and assets. The profile is based on industry averages for the U.S. Once the firm profile is in place, the model proceeds to calculate the federal, state, and local taxes that the typical firm would incur.

Table 9-2 shows an example of such a profile, constructed for an electronics-components manufacturer. All dollar amounts are shown in per-employee terms. Costs are in annual terms, and both costs and assets are adjusted to real 1992 prices. The costs in the sample profile reflect U.S. average prices for labor, land, and other purchases. However, the actual simulation model incorporates local cost adjustment factors for states. The adjustments for local costs assume that the firms use the same quantity of each input (labor, energy, etc.) regardless of price.[1]

Tax and Cost Data and Calculations

The Tax Simulation Model uses information from the cost and asset profiles to calculate the taxes that would be paid by typical firms in each state. The model relies on a database of state and local tax rates and a complete description of the base to which each tax applies. The model is based on the most up-to-date information available about state tax rates and incentives. All sales tax and corporate tax rates are for 1997. For the most part, statewide estimates of property tax rates are based on 1996 data.

In essence, the model fills out federal, state, and local tax forms for each representative firm and calculates the firm's liability for each type of business tax. The model is careful to account for the feedback effects among taxes. For example, the model incorporates the "federal offset" which occurs when state and local taxes are deducted from federal taxable income. Similarly, there is a state offset for local taxes. All calculations are carried out for a 20 year period, and then converted to annualized averages.

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[1] This assumption is known as "Leontief technology." An alternative assumption, known as "Cobb-Douglas" allows for substitution in the input mix as prices vary.

Table 9-2
Profile of an Electronics/Components Firm (SIC Code 308)

AVERAGE ANNUAL SALES	$124,549
AVERAGE ANNUAL COSTS	$107,970
Payroll	24,433
Production	15,503
Other	8,930
Employer's Soc. Sec. Payments	1,869
Employee Benefits	3,614
Intermediate Goods and Services	71,179
Materials	47,423
Transportation	5,596
Utilities	3,672
Electricity	2,653
Gas	415
Water	101
Communications	340
Other	163
Business Services inc. Advertising	3,609
Other	10,878
Depreciation (annual average)	5,385
Repair and Rental Payments	501
Interest Payments	2,846
Other Costs or Revenue (-)	(1,856)
ASSET COSTS (excluding sales taxes)	
Land	$4,677
Buildings	15,795
Machinery	53,729
Inventory	13,788
Debt/Equity Ratio	0.90
Interest Rate	0.08

Alternative simulations

The Cost and Tax Simulation Model is designed to allow the user to make alternative assumptions about the situations of the representative firms. Major assumptions are of two types, concerning:

1. the degree to which the firm receives tax credits and abatements; and
2. the importance of cost differentials other than those related to taxes

Whether a firm receives tax incentives can make a large difference in its bottom-line tax bill. The tax situation faced by a new firm in a particular state may share little with the situation of a mature firm. Furthermore, the situation of the new firm may bear little

relation to the underlying tax rates that prevail in a state. Hence the results presented in this report contrast two alternative sets of assumptions.

In one scenario (the "new firm" scenario), a firm is assumed to qualify for all incentives allowed for new firms in their respective industries. The firm is assumed to locate in an enterprise zone in the states where enterprise zone credits exist. In states which allow 100 percent property tax abatements, the firm is assumed to receive the full tax break. The first scenario approximates the situation of a "footloose" firm which can shop for the best incentive package available in the region.

In the alternative scenario (the "mature firm" scenario), the firm is offered no special tax credits or abatements. This scenario is intended to represent the situation of a mature, established firm which is currently neither expanding nor changing locations. The mature firm pays taxes in line with the basic tax structure of the state in which it is located. A mature firm may be discouraged from making additional investments in a state by high costs due to taxes and other factors.

The second set of assumptions concerns the extent to which differences in non-tax costs are built into the model. The appropriate set of assumptions depends on the type of question the user is trying to address. If the user is interested in distinguishing differences in state tax structures, a model which holds all other costs constant across locations is suitable (see Tables 9-3 and 9-4). On the other hand, if the user is interested in broader issues of cost competitiveness, an extended model which builds in local cost adjustment factors for labor, utilities, and other key inputs is more valid (see Tables 9-5 and 9-6).

Results from both approaches are presented in this report. It should be noted that the second approach reflects feedback effects between costs and taxes. For example, suppose that a firm locates in an area where land is expensive in comparison to other states. Then the full version of the model will indicate high property taxes for the firm, since the property tax level reflects not only the tax rate, but also the land value. Similarly, income taxes in the full model reflect the impact of costs on the taxable income base.

Detailed model assumptions

The situations of representative new and mature firms are defined by a detailed set of assumptions. Some assumptions are shared in common, while others distinguish the two alternative firm types.

Assumptions Applying to All Firms:

1. Firms in each industry are assumed to hire competitively 200 full-time employees.
2. Firms are export-oriented, selling 90 percent of their product outside the state.

3. Prices of the firm's output are determined in national markets, so that the firm cannot pass increases in state and local taxes along to its customers.
4. On average, firms earn a before-tax rate of return of 20 percent on their investment. State-to-state variations in taxes and costs affect the actual after-tax return on investment.
5. All simulations are calculated as annual averages over a 20- year period. During that time period, the firm's initial investment is assumed to depreciate and replacement investment is assumed to take place.
6. The model incorporates what is known as the *federal offset*. Reductions in state and local taxes generally increase federal taxable income, and hence the federal income tax liability.
7. No adjustments are made for differences across locations in labor productivity.
8. Materials prices are assumed to be the same in all locations.

Assumptions Applying to New Firms Only:

1. Firms purchase a new structure and new machinery and equipment.
2. In states which allow property tax abatements, firms receive the maximum property tax abatement allowed by state law.
3. Firms qualify for job and investment tax credits in states where these are applicable. In states that enhance benefits in enterprise zones, the enhanced credit level is incorporated into the model.
4. Firms qualify for enterprise zone reductions in sales taxes where applicable.

Assumptions Applying to Mature Firms Only:

1. Firms receive no property tax abatement.
2. Firms operate from buildings that were purchased previous to the period under analysis. They replace some of their machinery and equipment each year.
3. Firms do not qualify for job and investment tax credits or for special enterprise zone benefits.

Application of the Model

The IPPBR model currently compares business costs and taxes in Kansas with those in nine other states: Colorado, Iowa, Missouri, Nebraska, Oklahoma, California, Illinois, New Jersey, and New York. Simulations are performed for statewide average taxes and costs, and (in a forthcoming report) for a selection of metropolitan areas.

The model is first run under the assumption that non-tax costs, with the exception of some minor variations in interest payments, are constant throughout the region. Although this assumption runs contrary to fact, it serves to isolate the impact of taxes alone. This simulation is appropriate if we are trying to answer the limited question of how the Kansas tax structure compares with that in other states.

The model is then run under the assumption of varying non-tax costs. It is this type of simulation that can be used to determine whether Kansas business locations are "competitive"–in other words, whether Kansas has a favorable business climate overall.

The model compares states by looking at a measure of after tax profits (or after tax returns on capital). All impacts are calculated in per-employee terms. Note that profits per employee are equal to sales minus costs minus taxes. When costs are held constant, the all variations in profits are due to taxes alone. Low profits per employee translate into high taxes per employee and vice versa.

Results of Simulation 1 (Table 9-3)
Assumptions: new firms, firms receive all available tax incentives, costs are standardized across locations.

This simulation isolates the impact of taxes by holding all other business costs constant across states. From the point of view of a new firm which receives all available tax credits and abatements, the tax structure of Kansas appears moderately attractive. This is largely due to the availability of 100 percent, 10 year tax abatements. Kansas average profits per employee are three to seven percent above the regional average, depending on industry. Since all other costs are held constant, this is equivalent to saying combined federal, state, and local taxes are lower in Kansas than in the region on average.

For most industries, Iowa appears to be the the lowest taxed location in the region for new firms. This is due to a combination of generous income tax incentives in Iowa, a sales-only income tax formula that favors firms that export, and the recent removal of property taxes from business machinery and equipment. Although taxes for new firms that locate in Kansas are generally not as low as those in Iowa, Kansas is nevertheless well stocked with incentives with which to compete for new businesses.

Surprisingly, the large comparison states (California, Illinois, New York, and New Jersey) appear to fare quite well in terms of their tax structure. *If* other costs of doing business were the same, then profits per employee in these states for new enterprises would be very similar to those in Kansas. Although income taxes tend to be higher in these states than in Kansas, three of the four, Illinois, New Jersey, and New York, largely exclude machinery and equipment from the property tax base. Of course in actuality, business costs are not the same across states. This is reflected in simulations 3 and 4 below.

Results of Simulation 2 (Table 9-4)
Assumptions: mature firms, firms receive NO tax incentives, costs are standardized across locations.

For mature firms that receive no tax credits or abatements, the tax structure in Kansas is higher than that in any other state in the region, and in fact generally results in higher taxes than in the four large comparison states. In table 9-4, this is reflected in profit-per-employee estimates that are lower in Kansas than in other states. The primary explanation for these results is the relatively high Kansas property tax, particularly on business machinery and equipment. The results shown in Table 9-4 compare the basic business tax structures of the states, accounting for interactions among taxes.

Comparing simulations 1 and 2, it is clear that the Kansas tax climate is more favorable for firms starting up (or expanding) in the state than it is for on-going business concerns.

Results of Simulation 3 (Table 9-5)
Assumptions: new firms, firms receive all available tax incentives, costs vary by location.

An accurate picture of the competitiveness of the Kansas business climate is revealed only when we look at all business costs, not just taxes. For new firms receiving credits and abatements, Kansas again appears to be a moderately attractive business location. Kansas profits per employee exceed the regional average for all industries in Table 9-5. Projections of profits per employee are substantially higher in Kansas than in Colorado or Missouri.

Of particular note in this simulation is the situation of the large comparison states. All of these states have basic business costs far above those found in the region surrounding Kansas As a consequence, profits per employee, as measured by the model, are much smaller than in Kansas or the rest of the surrounding region.

Results of Simulation 4 (Table 9-6)
Assumptions: mature firms, firms receive NO tax incentives, costs vary by location.

When all costs are taken into account, the model estimates that for most industries, profits per employee at Kansas locations still fall below the regional average, as they did in Simulation 3. However, the differentials between Kansas and the regional average are not as great as in Simulation 2. This indicates that low Kansas basic business costs (other than taxes) in part offset the impact of relatively high taxes For data processing, the advantages of low Kansas labor costs actually outweigh the unfavorable tax structure.

Not surprisingly, all of the states in the region surrounding Kansas show higher profits and lower costs per employee than in the large comparison states. This is explained by the relatively low wage and utility costs found throughout the region. New York stands out as the highest cost location among those examined by the model.

Table 9-3
Profits per Employee: Partial Model with No Cost Variations
New Firms Receiving Tax Credits and Abatements

Location	Manufacturing				Services		
	Medical Drugs	*Plastic Products*	*Electronics, Components*	*Mot. Vehicles and Parts*	*Data Processing*	*Wholesale Trade*	*Research and Devel.*
State Averages							
Colorado	$21,973	$8,866	$11,665	$15,928	$7,288	$5,554	$6,960
Iowa	23,989	9,944	12,973	17,741	7,993	6,486	7,930
Kansas	23,390	9,565	12,579	17,055	7,952	6,218	7,712
Missouri	22,358	8,899	11,736	16,546	7,381	5,780	7,420
Nebraska	22,076	9,094	11,700	16,615	7,761	5,903	7,445
Oklahoma	22,874	9,224	12,367	16,988	6,730	6,027	7,599
California	22,996	9,418	12,343	16,630	7,551	5,728	7,661
Illinois	23,725	9,713	12,880	17,496	7,461	5,946	7,445
New Jersey	22,206	9,172	12,064	16,367	7,334	5,988	7,307
New York	22,998	9,340	12,477	16,510	6,780	5,459	7,207
Reg. Av. (Co, Ia, Mo, Ne, Ok)	22,654	9,205	12,088	16,763	7,431	5,950	7,471
Kansas as % of Reg. Av.	103.25%	103.90%	104.06%	101.74%	107.02%	104.50%	103.23%

NOTE: Under the assumptions of the partial model, business costs such as labor, land, and energy are held constant across states.
SOURCE: Calculated by IPPBR

Table 9-4
Profits per Employee: Partial Model with No Cost Variations
Existing Firms Receiving No Credits or Abatements

Location	Capital Intensive Mfg.		Other Mfg.		Services		
	Medical Drugs	*Plastic Products*	*Electronics, Components*	*Mot. Vehicles and Parts*	*Data Processing*	*Wholesale Trade*	*Research and Devel.*
State Averages							
Colorado	$21,288	$8,496	$11,047	$15,321	$7,072	$5,528	$6,924
Iowa	23,257	9,759	12,635	17,274	7,861	6,349	7,625
Kansas	20,649	8,300	10,885	14,660	6,981	5,296	6,655
Missouri	20,940	8,403	10,982	15,525	7,064	5,574	6,976
Nebraska	21,545	8,855	11,363	16,169	7,604	5,735	7,265
Oklahoma	21,587	8,665	11,608	15,936	6,410	5,709	7,064
California	21,937	8,865	11,463	15,725	7,373	5,644	7,209
Illinois	22,511	9,264	12,217	16,643	7,233	5,802	7,037
New Jersey	21,739	9,002	11,773	16,030	7,100	5,624	7,085
New York	21,810	8,971	12,008	15,730	6,547	5,327	6,917
Reg. Av. (Co, Ia, Mo, Ne, Ok)	21,724	8,836	11,527	16,045	7,202	5,779	7,171
Kansas as % of Reg. Av.	95.05%	93.94%	94.43%	91.37%	96.93%	91.65%	92.81%

NOTE: Under the assumptions of the partial model, business costs such as labor, land, and energy are held constant across states.
SOURCE: Calculated by IPPBR

Table 9-5
Profits per Employee: Full Model Including Cost Variations
New Firms Receiving Tax Credits and Abatements

Location	Manufacturing				Services		
	Medical Drugs	*Plastic Products*	*Electronics, Components*	*Mot. Vehicles and Parts*	*Data Processing*	*Wholesale Trade*	*Research and Devel.*
State Averages							
Colorado	$23,089	$9,354	$12,378	$16,771	$7,498	$6,010	$7,514
Iowa	30,293	13,582	17,768	23,530	12,416	10,684	12,859
Kansas	28,304	12,407	16,206	21,515	11,319	9,401	11,453
Missouri	25,166	10,573	13,918	19,202	9,591	7,762	9,769
Nebraska	28,591	12,969	16,527	22,484	12,093	9,972	12,313
Oklahoma	29,115	13,063	17,050	22,790	10,896	9,835	12,132
California	18,584	6,365	9,067	12,600	4,611	3,318	4,581
Illinois	21,148	7,951	10,905	15,098	5,681	4,284	5,525
New Jersey	14,128	3,698	5,872	8,976	2,174	1,039	1,472
New York	14,525	4,131	6,075	8,673	1,150	92	748
Reg. Av. (Co, Ia, Mo, Ne, Ok)	27,251	11,908	15,528	20,956	10,499	8,853	10,917
Kansas as % of Reg. Av.	103.86%	104.19%	104.37%	102.67%	107.82%	106.19%	104.91%

NOTE: Under the assumptions of the full model, taxes and other costs (labor land, energy, etc.) vary by location.
SOURCE: Calculated by IPPBR

Table 9-6
Profits per Employee: Full Model Including Cost Variations
Existing Firms Receiving No Credits or Abatements

Location	Manufacturing				Services		
	Medical Drugs	*Plastic Products*	*Electronics, Components*	*Mot. Vehicles and Parts*	*Data Processing*	*Wholesale Trade*	*Research and Devel.*
State Averages							
Colorado	$22,401	$8,983	$11,759	$16,162	$7,281	$5,982	$7,476
Iowa	29,621	13,559	17,447	23,093	12,284	10,540	12,567
Kansas	25,679	11,168	14,564	19,214	10,460	8,501	10,479
Missouri	23,739	10,050	13,138	18,156	9,236	7,519	9,293
Nebraska	28,034	12,706	16,165	22,009	11,910	9,779	12,106
Oklahoma	27,816	12,468	16,244	21,672	10,656	9,579	11,701
California	17,630	5,955	8,346	11,892	4,571	3,346	4,278
Illinois	19,954	7,509	10,253	14,258	5,460	4,148	5,128
New Jersey	13,628	3,519	5,565	8,618	1,931	699	1,238
New York	13,419	3,857	5,630	8,017	956	16	437
Reg. Av. (Co, Ia, Mo, Ne, Ok)	26,322	11,553	14,951	20,218	10,274	8,680	10,629
Kansas as % of Reg. Av.	97.56%	96.67%	97.41%	95.03%	101.81%	97.94%	98.59%

NOTE: Under the assumptions of the full model, taxes and other costs (labor land, energy, etc.) vary by location.
SOURCE: Calculated by IPPBR

Sources of Errors in the Model

As is the case with any economic model, the IPPBR Cost and Tax Model contains a number of sources of potential error. It should be emphasized that "error" and "mistake" are not synonymous in this context. By "error," we simply mean that there is unavoidable variability in the model, or that the model is not a perfect replica of the real world. Model errors stem from three possible sources:

1. Imperfect state-level data sources. State-level data sources are responsible for the interstate variations in total costs reported by the model. As an example of error, it is likely that the data used to create state-specific measures of wages may not exactly represent the occupation mix employed by a specific industry.

2 Imperfect national-level data sources. National-level data are used to construct the firm profiles. The data are taken from a variety of sources, and inconsistencies across the data sources can be observed. We employ standard methods to resolve these inconsistencies, but errors due to the data remain.

3. Missing data. This is probably the most important source of error in the model. Some data are unavailable at the state or local level. Included in our list of missing data are state-specific measures of many types of materials costs, state-specific measures of transportation costs, and, most critically, state-specific adjustments of labor productivity.

Because of the potential for error in the model, the interstate profit differences reported in Tables 9-4 and 9-6 should be interpreted with caution. Although we have not completed a quantitative analysis of errors, small profit differentials (say on the order of 1 to 2 percent) may not be significant.

Detailed Breakdown of Taxes

Table 9-7 distinguishes the particular taxes responsible for the high overall level of taxation for mature Kansas firms. Most important among these are the property tax and the sales tax. We look at examples for two industries: medical drugs and data processing. We compare taxes in Kansas with Iowa (the lowest taxed state) and with the regional average. Kansas property taxes exceed the regional average by about 50 percent for the two firms considered. The current Kansas tax structure creates a large differential between residential and business property (real estate and machinery), and taxes business property at relatively high rates.

State income taxes exceed the regional average by an even greater percentage, 94 percent for data processing and 99 percent for drugs. The problem is not that Kansas corporate tax rates are extraordinarily high. Instead, Kansas taxes a greater portion of a firm's overall income than is the case in some other states in the region. Our assumption is that the firms are export-oriented. Kansas typically bases the income tax for multi-state

firms on in-state percentages of three factors: payroll, property, and sales.[2] By contrast, several other states in the region base their income tax allocations on sales only, or on a combination of sales and property. For firms with most of their sales out-of-state, the single- and two- factor formulas generally result in a lower state tax liability.[3]

Table 9-7
Detailed Breakdown of Taxes

	Kansas		*Iowa*		*Reg. Av.*		*KS: % Reg. Av.*	
Industry Type of Tax	Medical Drugs	Data Proc.	Medical Drugs	Data Proc.	Medical Drugs	Data Proc.	Medical Drugs	Data Proc.
ANNUALIZED TAXES								
Federal Taxable Income	$31,528	$8,085	$35,285	$9,629	$33,052	$8,791	95.4%	92.0%
Federal Income Tax	10,720	2,749	11,997	3,274	11,238	2,989	95.4%	92.0%
State Income Tax	1,693	428	327	69	851	220	198.9%	194.0%
Unemploy. and Workers' Comp.	420	206	432	286	478	247	87.9%	83.4%
Property	4,360	1,414	1,918	467	3,078	937	141.7%	150.9%
Franchise	12	12	12	12	49	18	25.7%	69.3%
Sales	609	291	534	230	985	440	61.8%	66.1%
On Machinery and Structures	126	63	113	67	403	307	31.3%	20.4%
Total State and Local	7,094	2,351	3,225	1,064	5,440	1,863	130.4%	126.2%

The results from the IPPBR model are similar to those found in studies performed in 1992 and 1994. In earlier studies we also found that the Kansas tax climate was much more facroable for new than for mature firms.

Simulations of Changes in Kansas Business Taxes

A number of measures are being considered by the 1998 Kansas Legislature that would affect the competitiveness of Kansas firms. Since we have pointed out that the problems lie with how the Kansas tax climate affects "mature" firms (on-going concerns), we emphasize the effect of tax changes on this category. We analyze three potential

[2] In Kansas, firms with a payroll factor exceeding 200% of the average of the property and sales factors may elect to use a two-factor formula. The alternative formula is based 50% on sales and 50% on property.

[3] Suppose that a firm has 90% of its property, 90% of its payroll, and 15% of its sales in a single state. Then 65% of its income will be taxable in that state under a 3-factor formula (90/3+ 90/3+ 15/3). But only 15% of its income will be taxable in that same state under a sales only formula. The firm may be liable for additional income taxes in other states on the basis of its out-of-state property, payroll, and sales.

changes in Kansas tax structure, two of which are in the Governor's 1998 recommendations. Table 9-8 shows the results.

1. Allow a 15% credit against the income tax for property taxes paid on commercial and industrial machinery and equipment (Governor's recommendation).

Impact: This proposal would lower overall taxes and increase profits by about $75 to $250 per employee per year, depending on industry. The proposal has a greater impact the greater the machinery and equipment intensity of the industry--for firms with capital intensities greater than those shown in our study, the tax savings could easily exceed the $250 per employee figure. If such a plan were implemented, Kansas would move closer to the regional average in terms of profits per employee.

2. Allow a 15% credit against the income tax for property taxes paid on commercial and industrial machinery and equipment and reduce the statewide property tax levy from 27 to 23 mills (Governor's recommendation).

Impact: This proposal would lower overall taxes and increase profits by about $100 to $350 per employee per year, depending on industry. Again, the proposal has a bigger impact the more capital intensive the firm. If such a plan were implemented, profits per employee would move very close to the regional average.

3. Allow a 15% credit against the income tax for property taxes paid on commercial and industrial machinery and equipment and reduce the statewide property tax levy from 27 to 17 mills. Although this is not one of the Governor's recommendations, we include the simulation for comparison purposes.

Impact: This proposal would lower overall taxes and increase profits by about $150 to $475 per employee per year, depending on industry. The plan provides bigger savings the more capital intensive the firm. If such a plan were implemented, profits per employee would be about equal to the regional average, depending on industry.

Conclusions

Is Kansas a high-cost state for doing business? That depends on one's perspective: whether one is concerned with new firms or mature firms, and whether one is making regional or national comparisons.

From the point of view of a firm seeking to make a new investment, the overall Kansas cost and tax climate appears moderately favorable in comparison with other states in the region. Estimated profits per employee exceed the regional average.

Table 9-8
Impact of Tax Changes on Profits per Employee
Existing Firms in Selected Industries

	Manufacturing				Services		
	Medical Drugs	*Plastic Products*	*Electronics, Components*	*Mot. Vehicles and Parts*	*Data Processing*	*Wholesale Trade*	*Research and Devel.*
1997 baseline							
Reg. Av. (Co, Ia, Mo, Ne, Ok)	$26,322	$11,553	$14,951	$20,218	$10,274	$8,680	$10,629
1997 Kansas	25,679	11,168	14,564	19,214	10,460	8,501	10,479
Kansas as % of Reg. Av.	97.56%	96.67%	97.41%	95.03%	101.81%	97.94%	98.59%
15% credit for tax on mach.							
Kansas with credit	25,956	11,327	14,761	19,492	10,537	8,605	10,556
Kansas as % of Reg. Av	98.61%	98.04%	98.73%	96.41%	102.56%	99.13%	99.32%
15% credit plus 4 mill reduction							
Kansas with credit and reduct.	26,036	11,365	14,811	19,562	10,565	8,630	10,585
Kansas as % of Reg. Av	98.91%	98.37%	99.07%	96.75%	102.83%	99.43%	99.59%
15% credit plus 10 mill reduction							
Kansas with credit and reduct.	26,155	11,421	14,886	19,667	10,606	8,668	10,629
Kansas as % of Reg. Av	99.37%	98.85%	99.57%	97.27%	103.24%	99.87%	100.00%

NOTE: This model uses Kansas specific business costs in the baseline and other simulations.
SOURCE: Calculated by IPPBR

But from the point of view of a mature firm, Kansas property taxes make it the highest taxed state in the region. To some degree, moderate costs for labor and utilities mitigate the impact of high taxes, placing Kansas in the mid-range of the region in terms of overall costs. Still, overall profits per employee fall short of the regional average by about two to five percent for most industries.

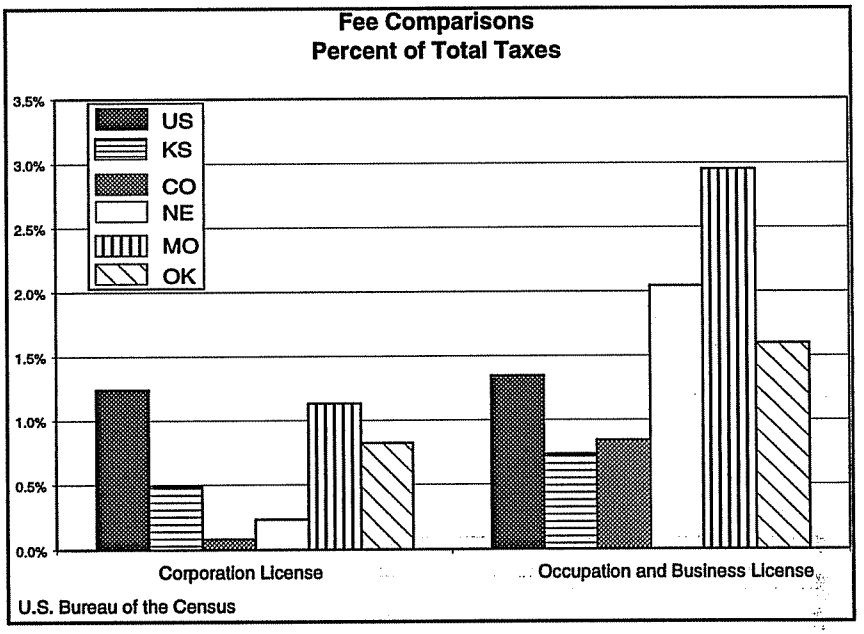
Kansas and the entire surrounding region fare well (in terms of estimated profits per employee) with comparison to the large states considered by the model (California, Illinois, New Jersey, and New York). Basic business costs for labor, land, and energy are far higher in these large states than in the region surrounding Kansas.

State tax structures change rapidly as states balance the need to generate revenue with political demands for business incentives, tax "fairness," and property tax relief. Kansas is considering several measures this legislative session that could improve the business climate for existing Kansas firms, and help increase their competitiveness.

APPENDIX A: STATE AND LOCAL GOVERNMENT LICENSES AND FEES

The research on business fees has one major purpose: to determine if fees are of sufficient significance to justify a more complete study. The answer is no. We do not find any major fees outside the business cost model in this report that would lead to any different conclusions on how Kansas compares with competing states on business costs and taxes.

All the budget information reported by the state, counties, and cities include line items for fees and/or license fees. The total amount of such fees for Kansas is not out of line compared to other states; indeed it is lower than for the average of all states. Data provided by the U.S. Bureau of the Census yield information on Corporation Licenses, Public Utility Licenses, and Occupation and Business Licenses at the federal and state level. When taken as a percentage of the total amount of revenue collected by the federal government, Kansas, and states contiguous to Kansas, this revenue is a very small portion of the total.



Of more significance is our finding that most of the reported fee incomes do not affect businesses in the state. The budget line on fees also includes permits for state parks. The Occupational & Business License portion of fee revenue covers a wide variety of items that have virtually no bearing on the topic of costs for a manufacturing or service firm locating in a particular state. Licensed occupations include physicians, nurses, real estate agents and appraisers, etc. Business licenses are required to do business, with the largest sources of revenue by far coming from the Kansas Departments of Health and Revenue. The Department of Health issues licenses for restaurants. They are normal fees that businesses will encounter in any state. The Department of Revenue fee revenue comes predominantly from motor vehicle and drivers' licenses.

An example of a small state fee is the one on water. The state charges three cents per 1,000 gallons of water sold at retail by a public water system. This is imposed on residential homes as well as businesses and is too small to be a significant burden on businesses. Another example of a state fee is one imposed by the Kansas Department of Commerce and Housing for industrial revenue bonds. This fee is $2,000 and there is an additional closing fee that is a fraction of the bond issue.

Our review of county budgets, supplemented by a few interviews, did not reveal any fees of significance for business. County fees are almost entirely of an ad hoc nature that are not targeted at business. The counties we studied were Sedgwick, Shawnee, Douglas, Reno and Johnson.

At the city level the major fee imposed is for building permits. Other typical fees are for having plats reviewed, and for water and sewage. These are fees for services and there is no indication that they are being used to extract funds from businesses at a higher rate than for residential users. Most of the cities that we reviewed have no special fees that apply to businesses and none had fees that severely impact business. Included in our surveys were Lawrence, Lenexa, Overland Park, Topeka, Wichita, Hutchinson, and Dodge City.

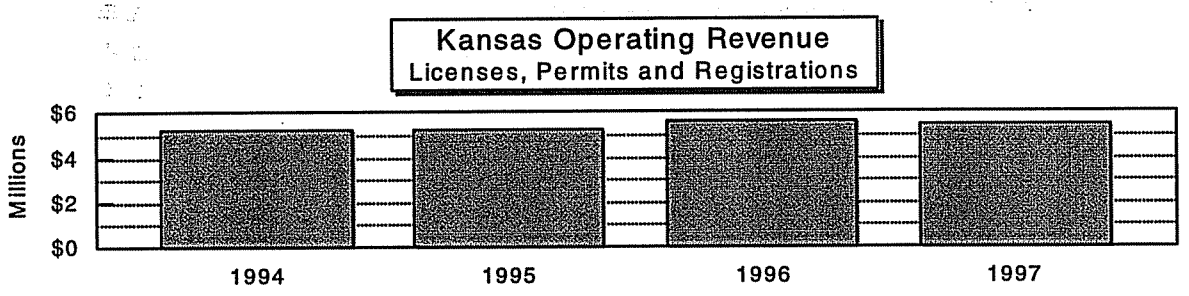
An interesting finding of this preliminary research is that Kansas communities that are growing the most rapidly are starting to impose modest growth-related fees. This is the case in Lawrence and some Johnson County communities. Lawrence, for example, has imposed an impact fee that is intended to have newcomers to the city help pay for the existing infrastructure. This is a modest fee that when fully phased in will be approximately $12,000 - $15,000 on a new 80,000 square foot facility. No one at the city or Chamber of Commerce believes that this will have any impact on a firm's decision to locate in Lawrence. We do not know of any community in the state that has a larger impact fee than does Lawrence.

From our interviews, we have come to understand that these impact fees are carefully balanced political concerns. There is a need to have fees to assure current residents that they are not being overly burdened with the "cost of growth." At the same time, the fees are kept nominal to avoid creating a negative issue for the new firms.

Cities that are growing more slowly are avoiding any similar fees out of a concern for discouraging growth. One company in Abilene, for example, reported that it did not pay any fees to the city and that if the city had any fees they would have been waived as part of the negotiations to locate this plant in Abilene. Such communities may also waive any building permit fees as part of negotiations with a new firm. This is one further reason why the issue of local fees is not of statewide significance – communities can waive them when they want to.

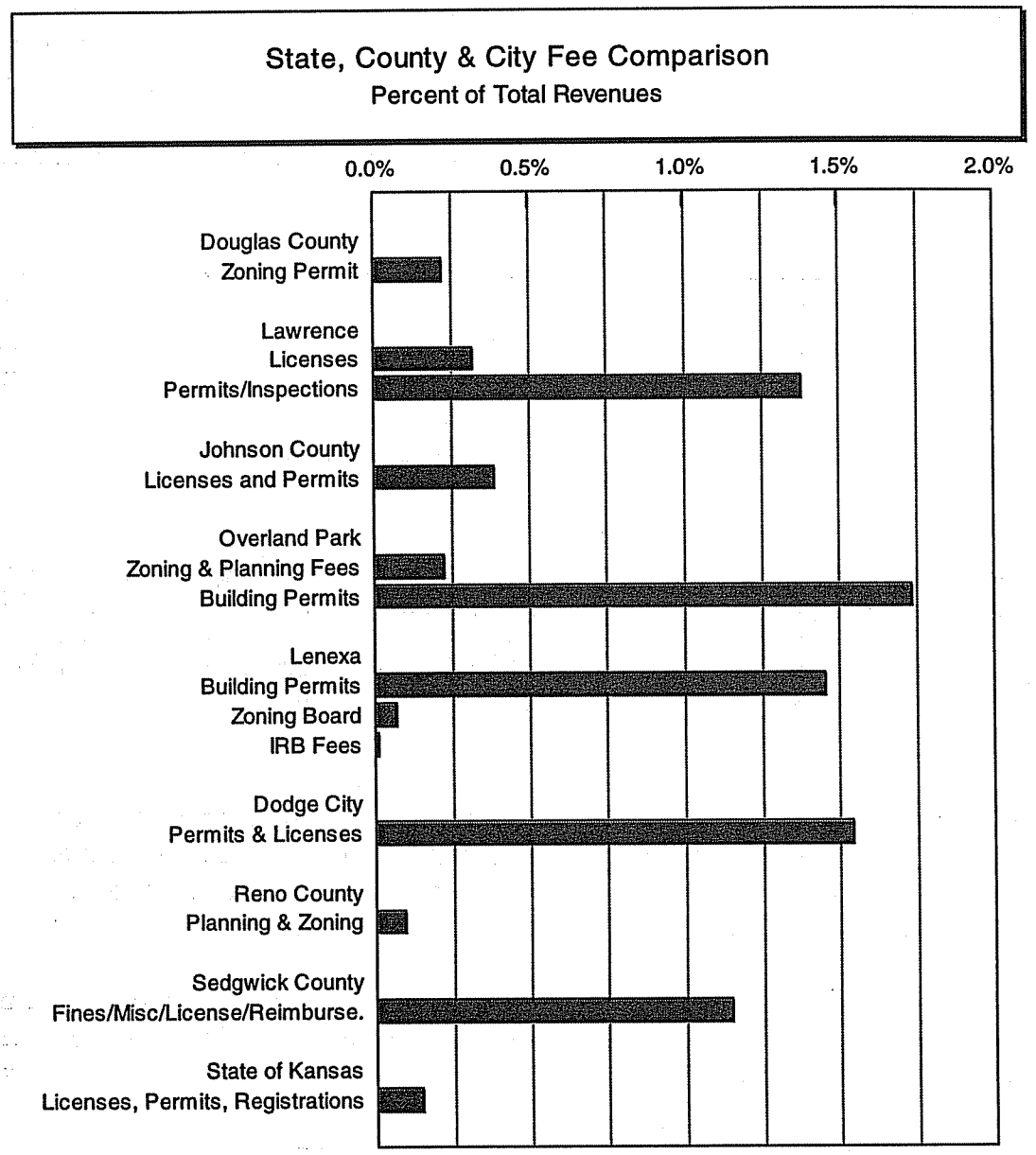
Our interviews with businesses and local economic development officials led to one major conclusion: business is not concerned about fees imposed in Kansas and there is no discernible impact on economic development. The companies interviewed were not aware of any fee by any level of government. It was not possible to obtain estimates of the amounts of fees. This issue does not appear to be on their radar screen. None of the businesses interviewed could cite any fee that their business paid. In part this is because some of the fees, such as for water or sewage, are not viewed as separate fees but just as part of the price of a service.

Fees collected from licenses and permits within Kansas have not changed significantly over the past four years. The total is about 0.15% of the total operating revenue received by the state. In 1997, Licenses, Permits and Registrations accounted for $5.4 million in non-tax revenues.



The chart on the next page shows the only fees we could find that could have even a remote effect on businesses. They are shown as a percentage of total revenue from each of the jurisdictions. Even the largest are a very small fraction of the the budget, and the largest of these, building permits, apply to all construction, commercial and residential. Our conclusion is that none of these fees are significant to a business.

It is our conclusion that impact fees are not currently an issue with companies. Our recommendation is that no further research on fees and their impacts on business is warranted at this time.


State, County & City Fee Comparison
Percent of Total Revenues
0.0%
0.5%
1.0%
1.5%
2.0%
Douglas County
Zoning Permit
Lawrence
Licenses
Permits/Inspections
Johnson County
Licenses and Permits
Overland Park
Zoning & Planning Fees
Building Permits
Lenexa
Building Permits
Zoning Board
IRB Fees
Dodge City
Permits & Licenses
Reno County
Planning & Zoning
Sedgwick County
Fines/Misc/License/Reimburse.
State of Kansas
Licenses, Permits, Registrations

APPENDIX B: ANALYSIS OF TAX ELASTICITY ISSUES

Introduction

Two important questions arise when the variability of state tax revenues is considered. First, for a given tax structure, how does the growth rate of tax revenues compare with the growth rate of aggregate income in the long run? Second, how do tax revenues vary as aggregate income varies during the business cycle? The first question is important because there has been and is likely to continue to be a clear growth trend in aggregate income. Supposing, for example, that the level of government services remains a constant proportion of total income, revenues will have to grow as fast as income for a state to retain the ability to balance its budget on average over the long term. The second question is important because the answer provides information on the ability of a state to finance governmental services throughout the course of the business cycle, in particular during periods of recession.

The concept of elasticity has been used by economists to summarize the responsiveness of tax revenue to income. The elasticity of a particular tax is defined to be the ratio of the percentage change in tax revenue to the percentage change in income. Thus, a tax with an elasticity of one will have the property that if aggregate income increases by 10 percent, then the revenues from that tax will also increase by 10 percent. Similarly, a tax with an elasticity of less than one will have the property that if aggregate income increases by 10 percent, then the revenues from that tax will increase by less than 10 percent.

Not all state taxes are equally affected by changes in personal income. One would expect that the greatest elasticity would be for the income tax, particularly for one with progressive tax rates. A one percent increase in personal income should result in at least a 1 percent increase in state personal income tax revenue. This is because an increase in personal income will be taxed at the highest marginal rate after all fixed tax deductions, such as the personal deduction, have been accounted for. Thus, if personal income for an individual increases from $30,000 to $31,000 the added $1,000 will be taxed at the appropriate marginal tax rate with no offset for the personal deduction. In addition, for a state with a progressive personal income tax, such as Kansas, increases in personal income will push individuals into higher marginal tax brackets. For both of these reasons the tax elasticity for personal income should be greater than 1.0 and should be higher than for other taxes that are not as progressive.

The elasticity of the sales tax will be affected by the extent of coverage of the sales tax. Of particular importance is the extent to which services are taxed. As personal incomes increase individuals are likely to spend a smaller proportion of the increase on items subject to a state sales tax. Specifically, higher incomes generally result in some increase in the savings rate and in more spending on personal services, neither of which is generally

subject to a sales tax. States that have not extended their sales tax to many services will have a lower sales tax elasticity than states that have been able to tax services.

Since different taxes have different elasticities, the composition of taxes within the system can have an effect on the overall elasticity of a state's tax system. For example, a state that depends more on the sales tax and less on the income tax for its revenues will have a smaller overall tax elasticity than another state that depends more on the income tax and less on the sales tax. The former state may find that it is faced with increasing tax rates sooner than the latter.

National Data

It is important to distinguish the concepts of short-run elasticity, which refers to fluctuations of tax revenue across the business cycle, and long-run elasticity, which refers to the relationship between income growth and revenue growth. Groves and Kahn [Groves and Kahn, 1952] first analyzed elasticity of tax revenue with respect to income. However, they failed to distinguish between long-run and short-run elasticity. Thus, they concluded that there was a trade-off between long-run revenue growth and short-run volatility; if a tax had a higher income elasticity, the revenues from that tax would grow faster over the long-run (as income grew), but would also be subject to greater fluctuations over the business cycle, and would fall especially short during times of recession.

Table B-1

Type of Tax	Long-run Elasticity	Short-run Elasticity	Short-run Standard Deviation
Personal taxable income	1.215	1.164	0.161
Adjusted gross income	0.945	0.970	0.100
Corporate taxable income	0.670	3.369	0.685
Retail sales	0.660	1.039	0.094
Nonfood retail sales	0.701	1.377	0.108
Motor fuel usage	0.996	0.729	0.175
Liquor store sales	0.254	-0.011	0.219

Source: Sobel and Holcombe, "Measuring the Growth and Variability of Tax Bases Over the Business Cycle," 1996, p 543.

This notion of a trade-off between long-run revenue growth and high volatility over the business cycle persisted in the economics literature until a 1996 study by Sobel and Holcombe [Sobel and Holcombe, 1996] explicitly attempted to measure the short-run and long-run elasticities of various taxes. They showed that two taxes could have similar long-run elasticities, but widely differing short-run elasticities. By thus decoupling the long-run

and short-run elasticities of tax revenues to income, they showed that policy makers may be able to construct a tax system that provides both the potential for long-run growth (a greater long-run elasticity) and decreased cyclical variation (a smaller short-run elasticity closer to zero). Key results of the study by Sobel and Holcombe are summarized in Table B-1. [Sobel and Holcombe, 1996]

The long-run elasticity for the corporate taxable income (0.670) and the retail sales (0.660) indicate that the two tax bases have the same long-run growth potential. The short-run elasticity, the second column of data, indicates, though, that the corporate taxable income varies much more over the short-run (3.369) than does retail sales (1.039). Sobel and Holcombe find that nationally there is little or no correlation between the long- and short-run elasticities. If taxing personal income and motor fuel will have the same long-run growth potential, and the personal income tax base will fluctuate less in the short-run, policy makers might prefer to tax personal income.

Additionally, in the short-run the elasticities of corporate income and nonfood retail sales are significantly greater than one, indicating that they fluctuate more than income over the business cycle. The least cyclical national tax base is liquor sales which, though slightly negative, is close enough to zero that it likely fluctuates very little with the business cycle. Policy makers should note that the personal income and motor fuels taxes have a higher long-run growth rate and a lower cycle variability than the corporate income tax. Additionally, personal income tax has almost the same cyclical variability as the retail sales tax, but it has a significantly higher long-run growth rate.

Sobel and Holcombe estimate that the most cyclically variable element of the national tax base is corporate income, which would make intuitive sense. This is followed by nonfood retail sales, personal taxable income, retail sales, adjusted gross income, motor fuels and, finally, liquor sales. These last three estimates are close to one, which would indicate that they vary similarly to income over the business cycle. Sobel and Holcombe assert that the ideal taxes, with a low short-run volatility and a high long-term elasticity, would be the personal income tax and the motor fuels tax. Both have the potential for substantial long-term growth and a lower cyclical variability than, for example, the corporate income tax. The third column in the table, the short-run standard error, is a measure of the short-run volatility of tax revenues that is not due to the changes in income (the business cycle). It is also a useful measure for policy makers, since it is a summary measure of how much the revenues from a particular tax will fluctuate due to other causes.

Kansas Data

A study of the elasticities of various Kansas taxes has been conducted by Glenn Fisher and Carol Macmillan. [Fisher and Macmillan, 1996] Fisher and Macmillan estimate the elasticities of the major Kansas taxes for the period 1988-1995, and compute the overall elasticity of the Kansas tax system for that period. The overall elasticity of the tax system

is determined by the elasticities of the individual taxes in the system, as well as by the relative importance of the individual taxes in raising revenue. The three most important types of taxes in terms of the fraction of total tax revenue raised in 1993 were the property-based taxes (35.6 percent), the sales- based taxes (not including motor fuel) (32.4 percent), and the income-based taxes (25.7 percent). [Fisher and Macmillan, 1996] The relative proportion of tax revenue generated by these taxes has become more equal since 1988, when the property-based taxes provided more than 40 percent of tax revenues, while the sales-based taxes (not including motor fuel), and the income-based taxes each provided less than 30 percent of tax revenues. Since these three tax types provided nearly 92 percent of total tax revenues in 1993, their elasticities determine the overall elasticity of the Kansas tax system to a very great extent. To compute the overall elasticity of the Kansas tax system from 1988-1995 we simply note that tax revenue from state and local taxes increased by 5.6 percent annually over the period while personal income increased by 5.25 percent. [Fisher and Macmillan, 1996] So the elasticity of the total Kansas tax system over the period was approximately 1.07; i.e., the tax revenue from the Kansas tax system was elastic over this period.

Table B-2

Type of Tax	Tax Elasticities 1988-1994
Property tax	0.509
Motor carrier	.266
Sales, use and excise tax	0.907
General sales and use tax	1.022
Cigarette and tobacco	-.223
Liquor and beer	.553
Insurance Premiums	1.212
Income and privilege tax	0.974
Individual income tax	.994
Corporate Income Tax	.698
Domestic insurance companies	.670
Financial institutions	2.345
Inheritance tax	1.358
Severance tax	0.442
Corporate franchise	0.890
Motor fuel tax	0.303

Source: Fisher and Macmillan, "An Overview of Kansas State and Local Finance," 1996, p6.

The elasticities for individual Kansas taxes that were computed by Fisher and Macmillan are shown in Table B-2. These elasticities vary both within a state, depending on the business cycle, and between states, depending on variations in the tax codes, such

as exemptions and tax structures. Nevertheless, most studies have concluded that income tax elasticity is significantly greater than 1.0 and sales tax elasticity is significantly less than 1.0 in the long-run. [Fisher and Macmillan, 1996]

An interesting feature of the Table B-2 is the estimate of 1.022 for the general sales and use tax, and the estimate of .994 for the individual income tax. These results especially the income tax elasticity, are somewhat surprising in view of other studies as well as theoretical considerations: given exemptions and graduated income tax rates, one would expect the elasticity of the income tax to be greater than one. Nevertheless, Fisher and Macmillan argue that these results are consistent with the experience of other states in recent years. The elasticity of the property tax for this period was estimated at .509, well below the overall sales and the income tax elasticities of 0.907 and 0.974 respectively.

Fisher and Macmillan also note that Kansas has experienced an increasing gap in the long-term tax revenues and expenditures. This gap is currently being filled by non-tax revenue such as federal transfers, but if this aid were to be cut off the state and local governments would have to fill this tax burden.

Fisher and Macmillan's data indicate that if expenditures grow at the same rate as personal income there will be a $500 million revenue deficit by the year 2000. [Fisher and Macmillan, 1996] It is in drawing conclusions like this, though, that one must be particularly careful. If Fisher and Macmillan's estimate of the tax elasticity from 1988-1995 was temporarily low, this deficit could be substantially less than the $500 million they predict. On the other hand, if Fisher and Macmillan's estimate was unusually high the deficit might be substantially greater. The data from 1988-1995 might not adequately represent the period 1994-2000 due to the recession in the early 1990s or other unique circumstances.

The key is that Kansas needs a balanced system of tax collection. Bringing development to Kansas necessitates a tax code that will ensure the greatest long-term growth and decreased short-run fluctuations, all at rates competitive with other states. When analyzing the tax code, policy makers need to consider current tax trends, future predictions such as Fisher and Macmillan's, Kansas' tax history, and national tax trends. With increasing competition among states for economic development, a poorly-conceived tax structure could put the state at a competitive disadvantage. Tax and expenditure policies must be both adequate and competitive, and elasticities of tax revenue are a practical and useful tool in creating a tax code capable of long-term growth and resistant to short-run cyclical fluctuations.

APPENDIX C: TAX INCIDENCE

Who bears the tax burden? Questions of tax incidence have a long history in economics. Writing in the early 1800s, David Ricardo noted that "taxes are not necessarily taxes on capital, because they are laid on capital, nor on income, because they are laid on income." [quoted in Eatwell, 1987]. Ricardo's point is that there may be serious differences between who is legally responsible for the payment of the tax, and who feels its actual impact.

Boadway [1979] provides a clear way to think about tax incidence. He claims that tax incidence can be understood as the difference between the actual world, in which a given tax exists, and a counter factual world, in which the tax has been removed or reduced. The differences between the actual and counter factual worlds will be many; in the counter factual world, the entire pattern of goods and services prices may be different, and as a consequence, there may be a completely different pattern of consumer welfare.

A simple example illustrates this point. In Figure C-1, we see a graphic representation of the market for tires. As the price of tires rises, consumers cut back on their purchases. The consumer demand curve is downward sloping. But as the price of tires rises, firms have an incentive to produce more: the supply curve of tires is upward sloping. In the absence of any tax, the point with price = P1 and quantity = Q1 is referred to as an equilibrium. At this point, the amount the consumers want to buy exactly matches what producers want to sell.

Now suppose that suppliers must collect a tax, say 30% on the price of every tire sold. The introduction of a tax changes the picture. The supply curve shifts upwards, because suppliers try to recoup the tax amounts that they must remit to the government. But as prices start to rise, consumers have an incentive to cut back on their purchases–they may put more miles on their existing tires, repair tires, buy used tires from junk yards, or even cut back on their driving. The point P1 and Q1 will no longer be an equilibrium.

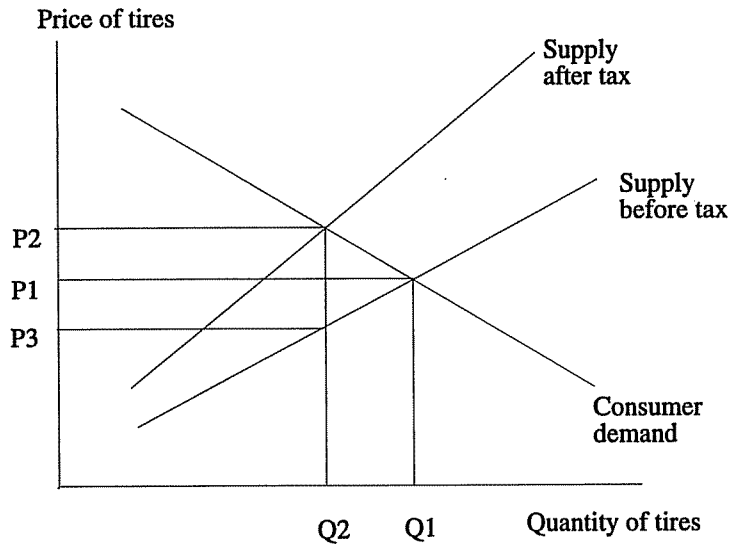


Figure C-1

A new equilibrium is established at P2 and Q2. But suppliers do not get to keep the entire price P2. They must pay 30% of this as a tax. The amount remaining after tax is shown by P3 in the diagram. In the example,

the true incidence of the tax falls on both suppliers and consumers. Suppliers must settle for a lower volume of sales and a lower after-tax price. Consumers must pay a higher price and hence cut back on their purchases. Part of the tax has been ***shifted*** from suppliers to consumers.

Of course the government also collects revenue (an amount equal to (P2-P3)*Q2), which it will presumably use to provide public goods such as roads, education, and parks. There is an incidence of benefits as well as of taxes. The two are generally isolated from each other in economic studies of tax incidence but are bound together in actual policy-making situations. Suppose, for example, that the tax collected from tires went exclusively for road improvements. Then the consumer loss from the tax would at least in part be offset by better roads.

The above analysis is referred to as "partial equilibrium"–partial in that we only look at one market rather than at the economy as a whole. Issues of tax incidence are rarely as straightforward as in the example. First, most taxes are very broadly based. The personal income tax, for example, taxes household earnings from labor, capital, and other resources. Second, markets interact with each other. Even a tax levied on a single product like tires may have far-reaching effects. The reduction in tire production, for example, may have an impact on the suppliers of rubber, who, in turn, will bear part of the burden of the tax.

Because of the conceptual problems with the partial equilibrium approach, tax incidence questions are more appropriately addressed in what is called a general equilibrium framework. This framework was first developed by Harberger [1962] and was later elucidated by McLure [1969, 1975] and Mieszkowski [1969]. General equilibrium models generally have equations that specify:

1. the supply of factors of production such as labor, land, and capital, including their responsiveness to price changes;
2. the input requirements for producing goods and services including their responsiveness to price changes;
3. consumer demand for goods and servcies, as related to prices (called price elasticities).

In most theoretical models, the key questions are whether a tax is ultimately borne by owners of labor, capital, or land. To generalize, the answer depends on:

1. whether the factors of production are mobile (can they shift from place to place?), whether they are fixed in amount;
2. how intensely the factors are used in the products that are taxed.

Mieszkowski's 1969 article makes some additional points that are of interest for question of state and local taxation. If capital is mobile between states, and labor is immobile, Mieszkowski shows that, under reasonable assumptions, a tax on mobile capital

(such as a property tax on machinery and equipment), will in part be borne by labor in the form of lower wages. In effect, the tax discourages the use of capital and at the same time reduces the demand for the labor that is used with capital.

The avenues of analysis opened up by general equilibrium tax incidence modeling led to a flurry of applied research in the 1970s and 1980s on the actual incidence of various federal, state, and local taxes. The core of this work was undertaken at the Brookings Institute by Joseph Pechman and his associates [Pechman and Okner, 1974; Pechman, 1985] In empirical studies, the question of tax incidence is generally re-framed. The applied economists are not so much interested in whether "labor" or "capital" bears the tax, but more in whether poor, middle-class, or rich people bear the tax. The question becomes one of tax incidence by income category rather than by resource category. Taxes are evaluated in terms of their progressiveness, that is, the extent to which they fall disproportionately on those with higher incomes.

Pechman's 1985 study reached several important conclusions:

1. Combined state and local taxes are much less progressive than are federal taxes. Depending on the assumptions made, they appear to be regressive or at best mildly progressive.

2. Individual income taxes are progressive. Although Pechman examines combined federal-state income taxes, it is likely that his results carry through for state systems, particularly where rates are graduated according to income class.

3. Sales taxes are regressive. This conclusion holds up under a variety of different assumptions. Pechman estimates that (as of 1985) people in the lowest 20 percent of the income ranking pay about 7 percent of their total income in various sales and excise taxes. People in the top 10 percent of income pay only about 1 percent of their income in taxes .

4. Whether property taxes are progressive or regressive depends critically on whether the property owner can pass the tax on in terms of higher prices. Under the assumption that property owners absorb costs due to taxes, Pechman finds that the tax is progressive, since property owners tend to be in higher income classes. Under the alternative assumption that owners pass on the tax to renters and consumers, Pechman finds that the tax is proportional for most income groups, but takes a disproportionate share from low income families.

A study done in by David Phares [1980] goes into more detail on specific state and local taxes. He reaches the same conclusions as Pechman about the progressivity of sales taxes and also finds state income tax systems to be generally progressive. He, like Pechman, makes alternative assumptions about property taxes that can radically alter results. Phares' "benchmark" scenario shows residential property taxes to be regressive. Property taxes on industrial property fall heavily on the low and high ends of the income scale. On the low end, consumers are affected by prices passed through to products

(similar to sales tax). On the high end, property owners realize reduced profits from the tax.

A more recent study [Fullerton and Rogers, 1993] examines the lifetime incidence of taxes. The main idea of their work is that people change their income categories during their lifetime. For example, they may start out as low income, move into middle income brackets, and return to low income after retirement. Different taxes impinge on them at different phases of their income cycle. Looking at the entire life cycle of a consumer, Fullerton and Rogers estimate that property taxes have a U-shaped incidence curve. That is , they impinge more heavily on low lifetime earning income and high lifetime earnings than they do on the middle class.

The extent to which property classes are shifted from property owners to other categories of taxpayers still seems to be an open question. Several empirical studies have addressed this issue. Yinger and others [1988], in a study of Massachusetts communities, found that homeowners bear less than 100 percent of an increase in residential property taxes on homeowners; the tax incidence ranged from 9 percent to 79 percent, depending on the community. McDonald, in a study of Chicago commercial real estate, found that landlords shift 45 percent of the property tax burden to their tenants in the form of higher rents. Empirical investigations of the actual degree of tax shifting will continue to be important contributions to the literature.

Tax policy changes generally have different impacts on households, depending on their income category and on the types of resources they own. Policy makers should be aware of these incidence effects when designing new tax structures.

APPENDIX D: THE RELATIONSHIP OF TAXES TO ECONOMIC GROWTH

Economists have performed hundreds of studies looking at various aspects of the relationship between taxation and economic growth. Bartik [1991] reviews all major studies conducted during the 1980s and early 1990s. Not surprisingly he finds a very wide range of reported effects, ranging from insignificant to very large. Nevertheless, there are some similarities in the studies. Most report tax elasticities in the range of -0.1 to - 0.6. The term "elasticity' as used above needs further explanation.[1] It is the responsiveness of business activity to changes in tax liability. An elasticity of -0.1 means that a 10 percent increase in taxes will reduce business activity by one percent. Wasylenko [1997] reviews and updates Bartik's work, and argues for focusing on tax elasticity as a measure by which to summarize these studies. Broadly speaking, he confirms Bartik's results, and concludes that many of the empirical measures of the responsiveness of business activity to taxes are grouped around -0.2. As pointed out by Bradbury, Kodrzycki, and Tannenwald [1997], a consensus view of the impact of taxes on growth seems to be emerging. The consensus is that the increases in state and local taxes have a small negative effect.

However, as pointed out by Bartik and Wasylenko, taxes must be considered in their geographic context. Large differences in taxes between nearby and otherwise similar jurisdictions (such as counties in the same state) may have much larger effects on the location of business activity. In fact, Bartik summarizes articles that address just this issue, and finds much larger elasticity measures–in the range of -1.0 to -3.0. In this vein, a recent study of taxes and growth in the Washington, DC area [Mark, McGuire, Papke, 1997] finds that sales taxes and property taxes have had a significant negative impact on the retail trade sector in the District (measured elasticity of -2.6). This is most likely because there exist other nearby locations with different tax structures.

Another issue is that of public expenditures. Tax impacts should not be treated in isolation of the expenditures on which the taxes are spent. There is evidence, summarized by R. Fisher, [1997] that some types of public expenditure, particularly education, have strong positive impacts on economic growth.

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[1] The term is used differently in Appendix B of this report, which looks at the responsiveness of taxes to income changes.

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