

THE TAX BURDEN IN ARIZONA

A Report from the Office of the University Economist

May 2009

Tom Rex, M.B.A.

Associate Director, Center for Competitiveness and Prosperity Research;
and Manager of Research Initiatives, Office of the University Economist

Center for Competitiveness and Prosperity Research
L. William Seidman Research Institute
W. P. Carey School of Business
Arizona State University
Box 874011
Tempe, Arizona 85287-4011

(480) 965-5362

FAX: (480) 965-5458

EMAIL: Tom.Rex@asu.edu

wpcarey.asu.edu/research/competitiveness-prosperity-research
economist.asu.edu



ARIZONA STATE UNIVERSITY

TABLE OF CONTENTS

Summary	1
Introduction	2
Overall Tax Burden	3
Individual Tax Burden	8
Business Tax Burden	9
References	14

LIST OF TABLES

1. 2007 District of Columbia Tax Burden Study, State and Local Government Taxes in Phoenix, Arizona	8
2. Correlations of Business Tax Burden Studies	9
3. Business Tax Burden in Arizona by Study	10
4. Business Tax Burden in Arizona by Type of Tax Measured as a Percentage of Private-Sector Gross Product	12
5. Urban Property Tax Burden in Arizona by Property Classification Measured as a Percentage of the True Market Value	13

LIST OF CHARTS

1. Census Bureau Tax Burden in Arizona, 1964 Through 2006, State and Local Government Taxes Per \$1,000 of Personal Income	3
2. Census Bureau Tax Burden in Arizona, 1964 Through 2006, State And Local Government Taxes as a Ratio to the National Average	4
3. 2006 Census Bureau Tax Burden in Comparison States, State and Local Government Taxes	5
4. Tax Foundation Tax Burden in Arizona, 1977 Through 2008, State and Local Government Taxes	6
5. Tax Foundation Tax Burden in Arizona Relative to National Average, 1977 Through 2008, State and Local Government Taxes	7
6. 2008 Tax Foundation Tax Burden in Comparison States, State and Local Government Taxes	7

SUMMARY

The overall tax burden in Arizona is lower than in most states, and lower than it was in the past. This low overall burden is the result of a very low tax burden for individuals and a moderate tax burden for businesses.

However, very small unincorporated businesses have a relatively low tax burden while the taxes paid by large businesses are relatively high. The differential in tax burden between small and large businesses results from two factors. Business property taxes are moderate for properties with a low valuation but quite high for large businesses. In addition, unincorporated businesses file under the individual income tax code, which results in a lesser relative tax burden than for businesses filing under the corporate income tax code.

The tax burden in Arizona is low to moderate on most business taxes. However, the sales tax burden is quite high. On net, the business property tax burden also is high. While taxes on properties of low valuation are near the national average, taxes on higher-value properties are considerably higher than the national average. Thus, large companies, especially those classified as industrial and having a considerable amount of personal property, have a very high property tax burden. High-technology manufacturing companies are among those with a high property tax burden.

Compared to other states, taxes assessed on individuals are quite low except for those with low incomes. The individual income and residential property taxes are very low. In contrast, the sales tax burden is quite high. Other than these three major taxes, Arizona's tax burden on individuals is relatively low on all other taxes combined.

INTRODUCTION

This paper looks at measures of the state and local government tax burden in Arizona compared to the national average and to eight western states. The overall state and local government tax burden — all taxes paid by businesses and individuals divided by a measure that adjusts for differences in population size by state — is presented first. More than 30 years of data are available to analyze changes in the overall tax burden over time.

A brief look at the state and local government tax burden of individuals — excluding taxes paid by businesses — follows. Then the state and local government business tax burden as measured by various studies is examined. The analyses of the individual and business tax burdens focus on the most recent year of data available. Most of the studies have not been produced for a long time period and revisions to methodology and to data have rendered the earlier results inconsistent with the latest results for some of the studies.

The various studies of tax burden combine state and local government taxes. The government jurisdiction — state government or local governments (counties, cities and towns, school districts, and special districts) — responsible for taxing and spending varies by state. Thus, a comparison across states of only state government taxes would be misleading.

Various methodologies have been used to calculate tax burdens. Most can be classified as a “macro” approach in which taxes paid, typically as reported by the U.S. Census Bureau, are divided by a measure of size — commonly population or personal income — so that states can be directly compared. Some studies also include a comparison of tax rates across states, usually comparing the maximum tax rate. In contrast, the “micro” approach creates a hypothetical household or business, then works through the actual tax code to determine the tax payments that the hypothetical household or business would need to make in each state.

In general, when comparing taxes over time, it is important to look at a long time series or to ensure that the comparison year is comparable to the latest year in terms of the economic cycle. Tax collections are cyclical and some states, including Arizona, experience particularly large cyclical variations.

OVERALL TAX BURDEN

Data are readily available to calculate the overall tax burden by state. Using a consistent accounting system for all states, the Census Bureau has reported state and local government tax collections by state since 1964 (the latest data are for fiscal year 2006). In order to compare states, it is necessary to adjust for differences in the sizes of states. Thus, two measures of tax burden are common used:

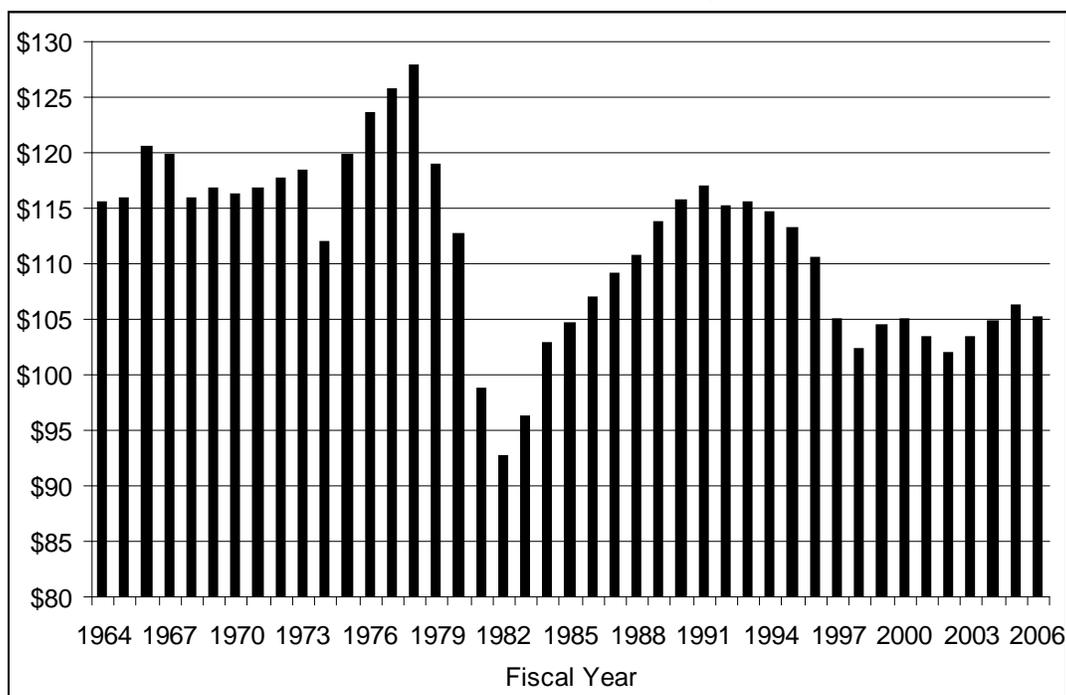
- Per capita — the amount of taxes collected divided by population. A time series analysis of per capita data also needs to adjust for inflation and for gains in prosperity.
- Per \$1,000 of personal income — this simultaneously adjusts for size, inflation, and gains in prosperity.

The Tax Foundation provides an alternative measure of tax burden for the 1977-to-2008 period. It defines taxes differently than does the Census Bureau and uses a different gauge of income in order to compare states. However, both datasets are based on the “macro” approach to measuring tax burden.

Census Bureau

Since the mid-1990s, the tax burden in Arizona, measured per \$1,000 of personal income, has been lower than at any time since the mid-1960s except for a few years in the early 1980s (see Chart 1). The tax burden has fallen substantially relative to other states (see Chart 2). Per \$1,000 of personal income, the tax burden in Arizona was greater than the national average from the mid-1960s

CHART 1
CENSUS BUREAU TAX BURDEN IN ARIZONA, 1964 THROUGH 2006,
STATE AND LOCAL GOVERNMENT TAXES PER \$1,000 OF PERSONAL INCOME



Sources: U.S. Department of Commerce, Census Bureau (taxes and population) and Bureau of Economic Analysis (personal income).

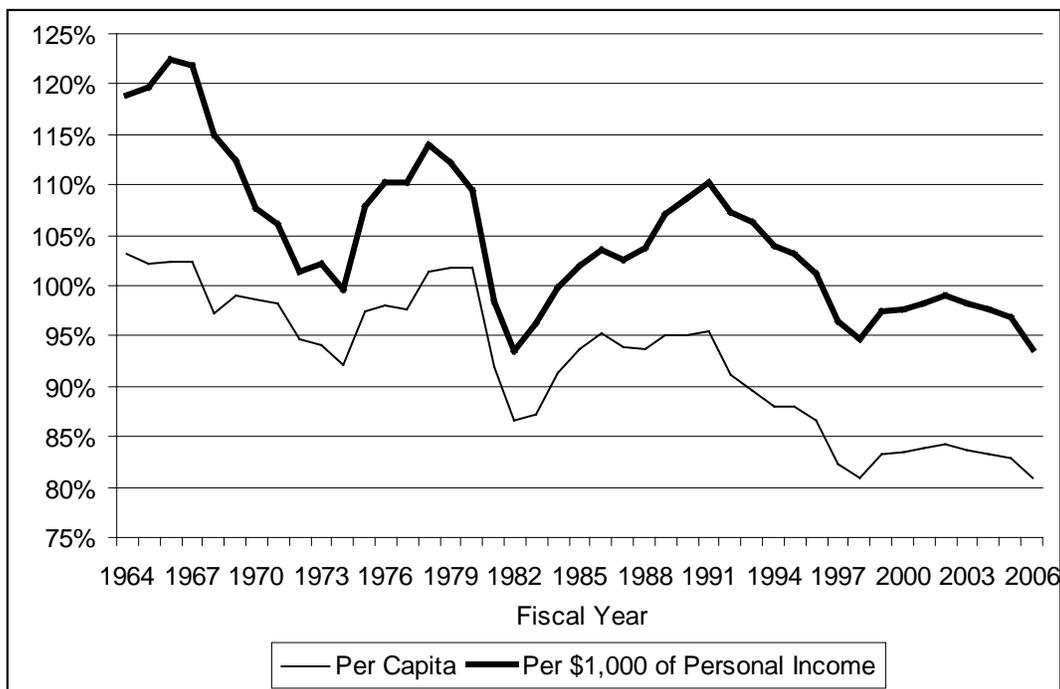
through the mid-1990s, other than during the early 1980s. In contrast, in the latest year (2006), the tax burden had fallen to 6 percent below average, essentially equal to the low point in 1982.

The tax burden in Arizona is further below the national average based on the per capita measure. Per capita taxes collected in Arizona in 2006 were 19 percent below the national average, the lowest on record relative to the U.S. average. Only during the mid-1960s and late 1970s was the per capita tax burden higher than the U.S. average.

The tax burden in Arizona in 2006 is compared to other western states in Chart 3. Per capita taxes were marginally higher than those in Texas and Utah, and lower than in the other six states. The tax burden also was third lowest per \$1,000 of personal income.

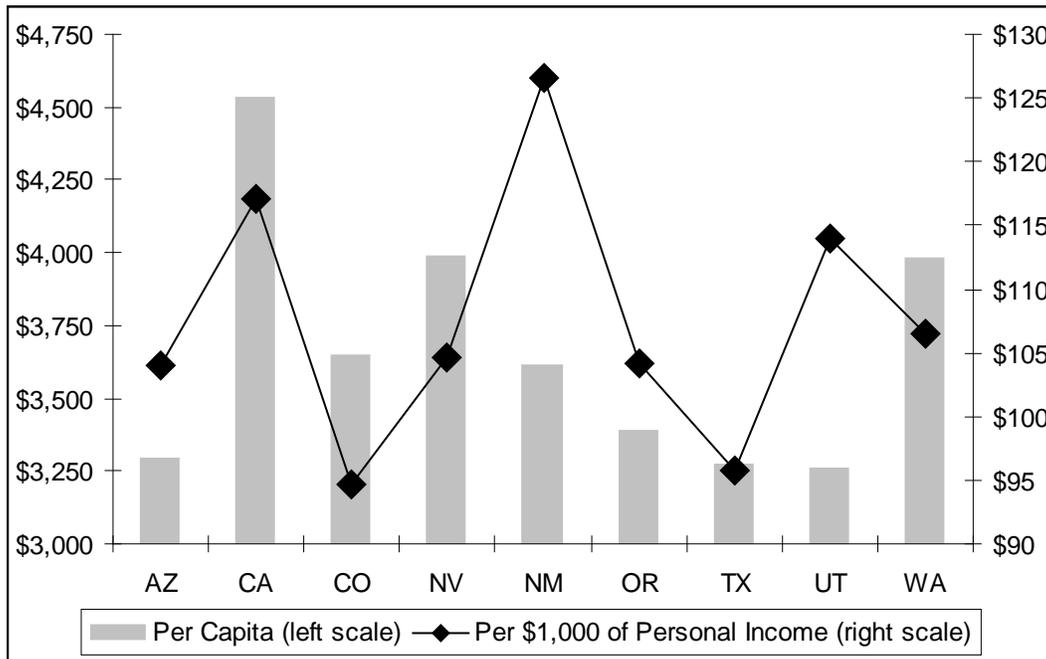
Note that the Census Bureau data reported here are the official, published figures. The Arizona Tax Research Association has determined that certain errors were made in the calculation of taxes collected by state and local governments in Arizona in 2006. Thus rather than the figures displayed in Charts 1 and 2 being lower in 2006 than in 2005, the 2006 tax burden probably was somewhat higher than in 2005.

CHART 2
CENSUS BUREAU TAX BURDEN IN ARIZONA, 1964 THROUGH 2006,
STATE AND LOCAL GOVERNMENT TAXES AS A RATIO
TO THE NATIONAL AVERAGE



Sources: U.S. Department of Commerce, Census Bureau (taxes and population) and Bureau of Economic Analysis (personal income).

CHART 3
2006 CENSUS BUREAU TAX BURDEN IN COMPARISON STATES,
STATE AND LOCAL GOVERNMENT TAXES



Sources: U.S. Department of Commerce, Census Bureau (taxes and population) and Bureau of Economic Analysis (personal income).

Tax Foundation

The Tax Foundation’s measure of tax burden is defined to answer the question “How much are the residents of a state paying to state and local governments, regardless of the state in which the government is located?” In order to answer this question, tax burdens are shifted as necessary from the state of collection to the state of residence of the taxpayer. In addition to the geographic shifting of the tax burden, the Tax Foundation measure is different from the Census Bureau measure in the way in which both taxes and income are defined.

As calculated by the Tax Foundation, the state and local government tax burden in Arizona — defined as per capita taxes as a share of per capita income — from 1977 (the first year available) through 1980 was about equal to the national average at around 10 percent of income. However, Arizona ranked above the median state (with between the 17th- and 21st-highest tax burden) during those four years. Since 1981, Arizona’s tax burden has always been lower than the U.S. average.

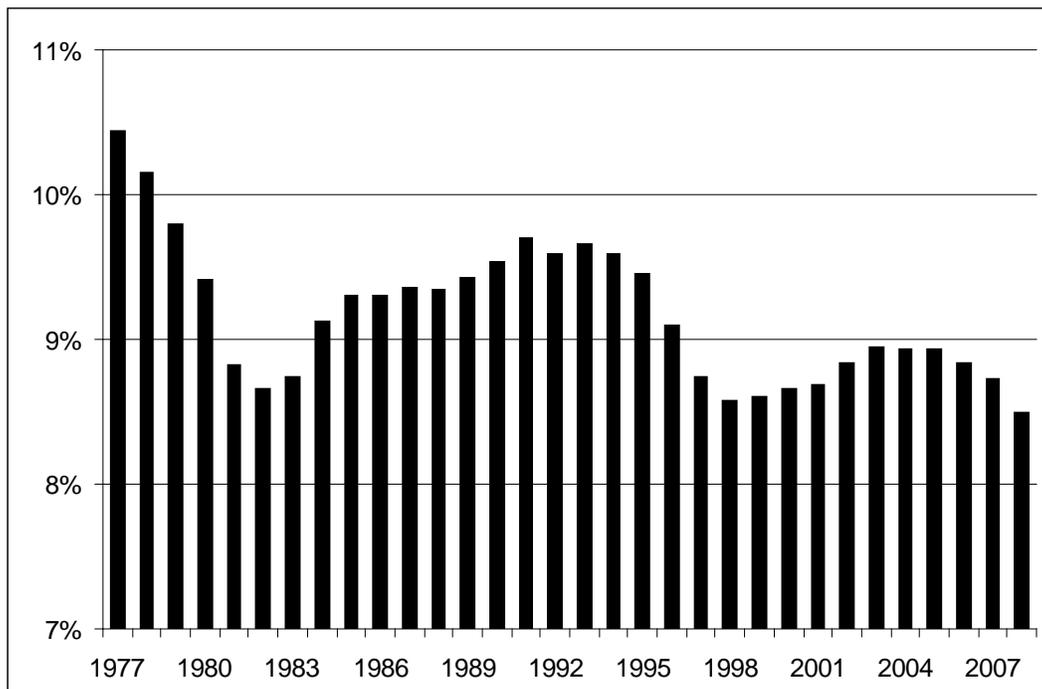
State government tax reductions from 1979 through 1981 sent the burden down, to below the national average. An inability to balance the budget led to a subsequent tax increase in 1983, but the burden during the rest of the 1980s remained less than in the late 1970s. When the economy slowed in the late 1980s, state government revenue was insufficient to meet the needs, causing spending reductions and further tax increases. The tax burden approached the national average in 1991 when Arizona ranked 25th among the states. However, even after the increases, the tax burden remained below the historical pre-1980 level as well as below the national average (see Charts 4 and 5).

A series of state government tax cuts began in the early 1990s, lowering the tax burden to below the level of the early 1980s. Since 1991, Arizona's tax burden has declined from 9.7 percent of per capita income to 8.5 percent in 2008. The national average tax burden barely dropped during this period and was 9.7 percent in 2008. The burden in Arizona in 2008 was 1.2 percentage points less than the national average, the largest differential on record. Arizona ranked 41st (10th lowest) among the 50 states, its lowest rank on record, down from a rank of 17th highest in 1977.

Among the subset of nine western states, Arizona's tax burden ranked seventh (third lowest) in 2008 (see Chart 6). It had ranked as high as fourth highest in 1979.

Thus, the Tax Foundation results are consistent with the Census Bureau data in showing that the tax burden in Arizona is among the lowest in the country and has fallen significantly over time, particularly since the early 1990s. This consistency is significant given that the Tax Foundation's method of estimating taxes is very different from that of the Census Bureau. Further, the Tax Foundation's measure of income is different from the personal income measure used to adjust the Census Bureau data.

CHART 4
TAX FOUNDATION TAX BURDEN IN ARIZONA, 1977 THROUGH 2008,
STATE AND LOCAL GOVERNMENT TAXES



Source: Tax Foundation.

CHART 5
TAX FOUNDATION TAX BURDEN IN ARIZONA RELATIVE TO NATIONAL AVERAGE, 1977 THROUGH 2008, STATE AND LOCAL GOVERNMENT TAXES

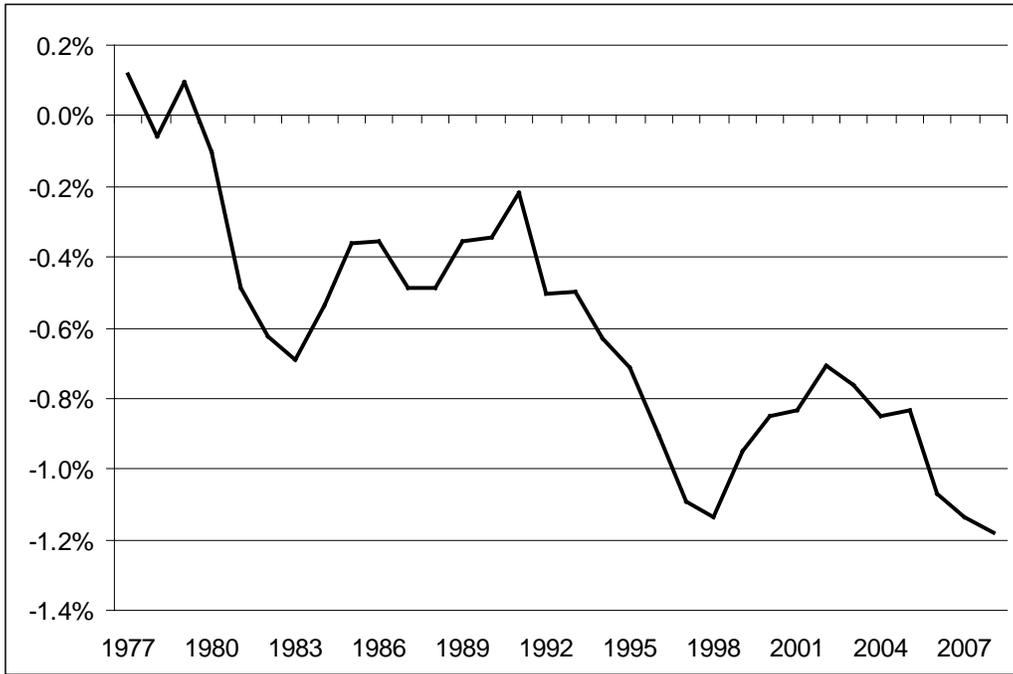
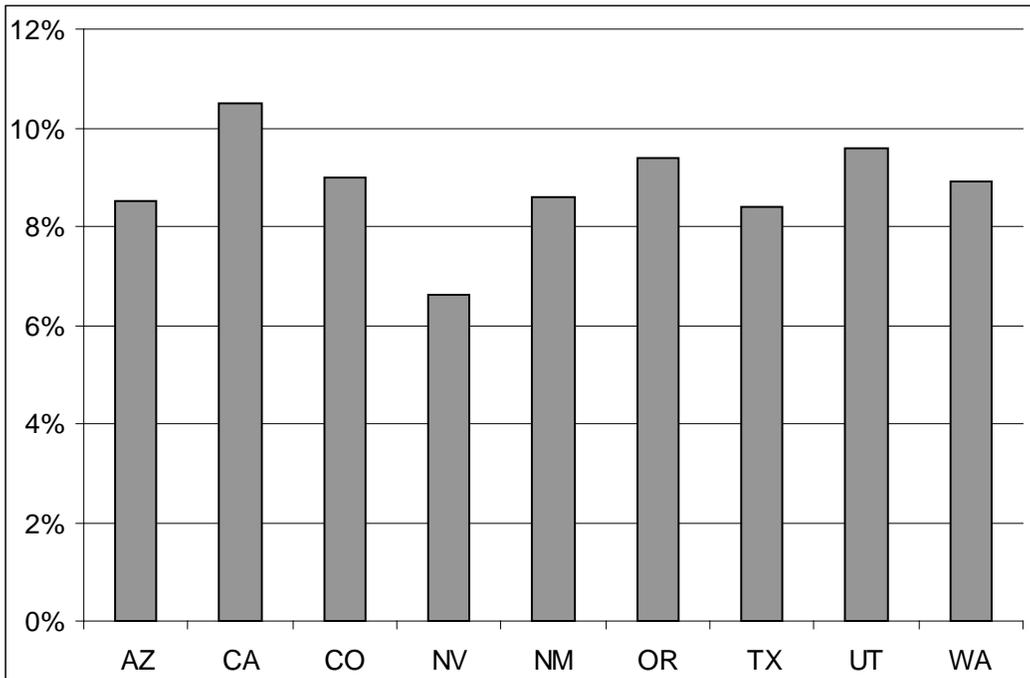


CHART 6
2008 TAX FOUNDATION TAX BURDEN IN COMPARISON STATES, STATE AND LOCAL GOVERNMENT TAXES



Source (Charts 5 and 6): Tax Foundation.

INDIVIDUAL TAX BURDEN

Since the tax data reported by the Census Bureau and the Tax Foundation do not differentiate whether the taxpayer is a business or an individual, it is much more difficult to estimate the tax burden of individuals and businesses separately. Studies of taxes paid specifically by individuals are not common. The best example is a study done annually by the government of the District of Columbia using the “micro” approach.

In this study, the tax burden of a hypothetical family is calculated at each of five income levels using the actual tax laws in each state. Since the property tax within states varies by locality, the calculations are made for the largest city in each state. Not all taxes are included, but the three major tax sources (income, property and sales) as well as automobile-related taxes are included.

The results of the 2007 District of Columbia study are summarized in Table 1. The tax burden in Phoenix (the sum of the four tax categories included) was substantially below the norm except in the lowest income category. The income tax and property tax burdens were quite low, the sales tax burden was very high, and the automobile taxes ranged from typical at lower income levels to higher than in the median state at higher income levels.

Compared to the largest city in each of the comparison states, the tax burden in Phoenix ranked third or fourth lowest among the nine cities at each of the four highest incomes. In contrast, at the lowest income, Arizona’s tax burden was the highest. Overall, Nevada and Washington had the lowest individual tax burdens among these nine states. The highest were in New Mexico, Oregon and Utah.

Thus, the results of the District of Columbia study are consistent with the overall measures of tax burden. For individuals, the tax burden in Arizona is among the lowest in the country.

**TABLE 1
2007 DISTRICT OF COLUMBIA TAX BURDEN STUDY,
STATE AND LOCAL GOVERNMENT TAXES IN PHOENIX, ARIZONA**

	Household Income				
	\$25,000	\$50,000	\$75,000	\$100,000	\$150,000
Rank Among 51 ‘States’ *					
Income Tax	27	14	13	11	11
Property Tax	**	9	10	10	10
Sales Tax	50	50	50	51	50
Automobile Taxes	24 tie	28 tie	35	35	39
Sum of Four Tax Categories	35	10	8	10	11
Taxes as a Percentage of Income					
Sum of Four Tax Categories	12.6%	6.8%	6.8%	7.2%	6.9%
Difference from Average State	0.7	-2.0	-1.9	-1.7	-2.1
Difference from Median State	1.2	-2.0	-1.7	-1.7	-2.4

* A rank of 1 indicates the lowest (best)

** Tax assumed to be equal in all states.

Source: Government of the District of Columbia, *Tax Rates and Tax Burdens in the District of Columbia: A Nationwide Comparison*.

BUSINESS TAX BURDEN

Three studies of business taxes were examined, as produced by the

- Small Business and Entrepreneurship Council
- Ernst & Young
- Tax Foundation

In addition, the Milken Institute includes a tax burden index as part of their “Cost-of-Doing-Business Index.” An additional study by the Minnesota Taxpayers Association examines only property taxes.

The results from these studies vary widely. The correlations from study to study in the estimated scores across the 50 states are shown in Table 2. Generally, little-to-moderate correlation in the results exists from study to study. The highest correlation is between the SBEC and TF studies.

The results for Arizona are more consistent across the studies. Arizona’s overall rank among the states and a measure of the difference from the national average is presented in Table 3. While some of the studies provide results for the District of Columbia, the district has been excluded in the table so that all of the ranks are among the 50 states. A rank of 1 is best (lowest tax burden, lowest business tax share of total taxes, etc.).

Except as a share of all taxes, the various measures agree that the overall business tax burden in Arizona ranges from below to near the national average: ranks of 13th to tied for 22nd. Among the nine western states, Arizona’s rank ranges from third to seventh. As discussed below, the tax burden as a share of gross product produced by Ernst & Young probably is the best measure of tax burden. Arizona ranks in the middle, sixth among the western states and tied for 22nd among the 50 states.

Description of Studies

The wide dispersion in results from one business tax study to another can be explained by the very different methodologies employed in these studies.

Milken Institute

The Milken Institute figures (for calendar year 2006) can be discarded as unusable as an estimate of business taxes. The measure presented simply is all state government tax collections as a share of personal income. Business and personal taxes are not differentiated and local government taxes are not considered.

TABLE 2
CORRELATIONS OF BUSINESS TAX BURDEN STUDIES

	Milken	SBEC	TF	E&Y
Milken Institute	-	0.24	0.09	0.52
Small Business and Entrepreneurship Council (SBEC)	0.24	-	0.80	-0.12
Tax Foundation (TF)	0.09	0.80	-	0.25
Ernst & Young (E&Y)	0.42	-0.16	0.34	-

Sources: See reference list at end of report.

**TABLE 3
BUSINESS TAX BURDEN IN ARIZONA BY STUDY**

Study	Rank Among 50 States**	Difference from National Average	Rank Among Nine Western States**
Overall Measures:			
Milken	13	-7%	3
Small Business and Entrepreneurship Council	17	na	5
Tax Foundation	22	-5	7
Ernst & Young: Share of Gross Product	22 tie	-4	6
Alternative Measures:			
Ernst & Young: Share of All Taxes	35 tie	13	5 tie
Ernst & Young: Ratio*	14	-10	4

na: not available

* Of business taxes to expenditures that benefit businesses

** A rank of 1 indicates the lowest (best)

Sources: See reference list at end of report.

Small Business and Entrepreneurship Council

This study also should not be used as a measure of tax burden. This study's methodology is crude and simplistic. For example, the *top* tax rate is simply used as the measure of corporate and personal income taxes. In addition, the overall measure is a tally of the scores assigned to each of 16 components; the nature of the scores varies widely by component such that the tally equates to a summing of "apples and oranges." Released in 2009, the dates of the component data used in this study vary from 2006 through 2009.

Ernst & Young

In contrast, the Ernst & Young (E&Y) study is very detailed. An estimate of the actual taxes paid by businesses by state in fiscal year 2008 is provided in each of eight categories (two of these categories are combined in the presentation of the results). Conceptually, this method is superior to the other methodologies if the goal is to assess business tax burdens by state. In practice, the shortcoming of this study is that many of the components had to be estimated. Still, it appears that E&Y expended very considerable effort in estimating these figures.

In order to compare states, the tax dollars paid by businesses are adjusted by private-sector gross product to provide a measure of the total effective tax rate by state. E&Y warns, however, that such a measure is just a starting point for comparing tax burdens across states. They note the importance of the structure and composition of business taxes. The example cited in the report is of two states with equivalent overall business tax burdens. One state, however, imposes higher origin-based taxes on business capital (property and sales taxes). Thus, its taxes on capital-intensive manufacturers are relatively high while taxes on labor-intensive service industries are relatively low. This places the state at a competitive disadvantage in attracting plant and equipment and thus may hinder economic growth even though its overall business tax burden is the same as the other state.

The E&Y study also presents two other measures: the percentage of total state and local government taxes paid by businesses and the ratio of business taxes relative to benefits received. The latter measure presents data for 2006; this indicator originally was developed by the Federal Reserve Bank of Chicago.

While the study presents a six-year percent change in taxes (2002 to 2008), this information should be used cautiously since the six-year period does not represent an entire economic cycle (2002 was the first year of recovery and 2008 was the last year of the expansion) and because the tax revenues of some states (including Arizona) are much more cyclical than others.

Tax Foundation

The study by the Tax Foundation is not defined as a measure of business tax burden. Instead, it is intended to be a measure of an ideal tax system from the perspective of business climate, as of July 1, 2008. The Tax Foundation considers low, flat tax rates on broad bases and treating all taxpayers the same to be integral parts of an ideal system.

The definitional difference explains the relatively low correlation between the results of the Tax Foundation and Ernst & Young studies. In contrast, since the Tax Foundation places an emphasis on tax rates, including the top rates, the correlation with the Small Business and Entrepreneurship Council results is high. While the Tax Foundation study may do a good job of measuring business climate aspects of the tax code, it should not be used as a measure of business tax burden.

Minnesota Taxpayers Association

This group undertakes detailed calculations to determine the total state and local government property tax burden in the largest city of each state. (Calculations also are made for a representative rural area in each state, but these results were not analyzed for this paper.) Calculations are made for various property values in each of four property classifications: residential, commercial, industrial, and apartment. The true market value is assumed to be the same in all cities so that the results reflect differences in the tax codes across states rather than differences in property values. For the nonresidential categories, the total value is split between real and personal property. In the case of apartments and commercial properties, personal property equates to fixtures. For industrial properties, personal property includes fixtures, machinery and equipment, and inventories. Property taxes for the industrial classification were calculated three ways, using two differing assumptions of the percentage of the total value made up by personal property, and using state-specific personal property shares and values.

To summarize, the Ernst & Young study provides the best measure of business tax burdens overall and for most specific taxes. However, the property tax information presented by the Minnesota Taxpayers Association is more detailed and therefore more useful.

Analysis by Tax

As noted by Ernst & Young, it also is important to examine tax burdens for each of the specific business taxes. Only the E&Y results are provided in Table 4, though the Tax Foundation and the Small Business and Entrepreneurship Council also present results by type of tax. Across these three studies, significant differences in the results occur in the business property tax category: the

TABLE 4
BUSINESS TAX BURDEN IN ARIZONA BY TYPE OF TAX
MEASURED AS A PERCENTAGE OF PRIVATE-SECTOR GROSS PRODUCT

Tax	Rank Among 50 States**	Difference from National Average	Rank Among Nine Western States**
Property	25	1%	8
Sales	42	49	8
Excise and Gross Receipts	21	-18	3
Corporate Income	22	-21	6
Individual Income*	11	-59	4
Unemployment Insurance	6	-48	2
License and Other	13	-48	2

* On business income

** A rank of 1 indicates the lowest (best)

Source: Ernst & Young.

Tax Foundation rates Arizona as being among the best in the nation while E&Y places Arizona's tax burden in the middle of the states. In contrast, the Minnesota Taxpayers Association indicates that commercial and industrial property taxes are among the highest in the nation.

Differences also are present across the studies in the individual income tax category. The Tax Foundation ranks Arizona among the middle of the states while E&Y shows the tax burden to be among the lowest in the nation of those states that levy this tax, ranking 11th lowest among all 50 states.

Based on the Ernst & Young study, Arizona's business tax burden among all 50 states is high only on the sales tax. The property tax burden is in the middle of all states, but is second highest among the nine western states. While the excise and gross receipts and corporate income tax burdens rank only slightly better than the middle of the 50 states, the tax burden is well below the national average. The individual income, unemployment insurance, and license and other taxes in Arizona are substantially less than the national average. Each ranks among the lowest burdens among the nine western states.

Property taxes as estimated by the Minnesota Taxpayers Association are summarized in Table 5. The property tax burden of homeowners is low on in Arizona, ranking 12th or 13th lowest among the states at some 40 percent less than the national average. The tax burden on apartments is comparably low.

In contrast, commercial property taxes in Arizona are more than the national average, especially at higher valuations. Arizona has the highest taxes among the nine western states at valuations of \$1 million or more.

The property tax burden in Arizona for industrial properties with a low valuation ranks among the middle of the states, with the effective tax rate below the national average. In contrast, the property tax burden in Arizona is quite high for industrial properties of higher valuations,

particularly for those with a high percentage of personal property. Arizona ranks among the 10 highest industrial property tax burdens in the nation, and second highest in the western states.

TABLE 5
URBAN PROPERTY TAX BURDEN IN ARIZONA BY PROPERTY CLASSIFICATION
MEASURED AS A PERCENTAGE OF THE TRUE MARKET VALUE

Tax	Rank Among 50 States*	Difference from National Average	Rank Among Nine Western States*
Residential ("homestead")			
\$150,000	12	57%	3
\$300,000	13	59	4
Median Value	13	59	4
Commercial			
\$100,000	29	102	7
\$1 million	35	118	9
\$25 million	37	125	9
Industrial (50% personal property)			
\$100,000	20	80	5
\$1 million	40	132	8
\$25 million	41	138	8
Industrial (60% personal property)			
\$100,000	30	93	7
\$1 million	42	141	8
\$25 million	42	145	8
Industrial (state specific personal property)			
\$100,000	26	89	6
\$1 million	42	141	8
\$25 million	43	146	8
Apartment			
\$600,000	9	58	4

* A rank of 1 indicates the lowest (best)

Source: Minnesota Taxpayers Association.

REFERENCES

Ernst & Young

Phillips, Andrew; Robert Cline and Thomas Neubig “Total State and Local Business Taxes: 50-State Estimates for Fiscal Year 2008” January 2009

[http://www.ey.com/Publication/vwLUAssets/Total_state_and_local_business_taxes: 50 state estimates for fiscal year 2008/\\$FILE/Total_state_and_local_business_tax_fiscal_year_2008.pdf](http://www.ey.com/Publication/vwLUAssets/Total_state_and_local_business_taxes:_50_state_estimates_for_fiscal_year_2008/$FILE/Total_state_and_local_business_tax_fiscal_year_2008.pdf)

Milken Institute

“2007 Cost-of-Doing-Business Index” August 16, 2007

www.milkeninstitute.org/research/research.taf?cat=indexes

Minnesota Taxpayers Association

“50-State Property Tax Comparison Study: Payable Year 2008” April 2009

www.mntax.org/research/property.php

Small Business and Entrepreneurship Council

Keating, Raymond J. “Business Tax Index 2009: Best to Worst State Tax Systems for Entrepreneurship and Small Business” April 2009

www.sbecouncil.org/businessstaxindex2009

Tax Foundation

Barro, Joshua “2009 State Business Tax Climate Index” October 2008 *Background Paper* Number 58 www.taxfoundation.org/files/bp58.pdf