

**Fiscal Affairs of State and Local
Governments in Nevada**

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CHAPTER 12

GAMING

INTRODUCTION

The economic feature that makes Nevada unique among the fifty states is its casino industry. Since 1931, Nevada has been the only state to legalize casino gambling statewide. Because of its monopoly position (and after the first casino opened in Atlantic City in 1978, its near-monopoly position), taxation of casino gambling has made a significant contribution to state revenues. In FY 1986 gaming taxes contributed 26.5 percent of total state tax collections and 49.4 percent of the states general fund.¹

This chapter has two major tasks: to assess the overall level of gaming taxes in Nevada, and to evaluate the structure of existing state and local gaming taxes. The chapter relies on certain research presented in the earlier chapters on tourism and on taxes and economic development. It is also closely linked to the next chapter which considers whether Nevada should allow a form of gaming currently prohibited by the state constitution - a lottery.

The following pages first provide background on Nevada's casino industry including an overview of its history, the role of publicly traded corporations, the extent of competition within the gaming industry, the differences between the gaming industry in the north of the state versus the south, and the changing nature of casino games played. The remainder of the chapter focuses more narrowly on gaming taxes. The state levied taxes and some locally imposed taxes are ultimately pays the casino taxes and what impact an increase in these taxes would likely have on Nevada's gaming industry. The level of gaming taxes and the gaming tax structure in Nevada is compared to New Jersey's system of gaming taxes. Finally, a number of policy options are proposed.

Nevada's Casino Industry

Probably the most important developments in casino gaming in the last quarter century are its increased social acceptance and its greater integration into the American economy. The 1969 state legislation facilitating public corporate ownership of casinos was a crucial factor contributing to both of these developments. A second important contributing factor is the growth in legalization and taxation of gaming alternatives among the fifty states. Since New Hampshire adopted its lottery in 1964, the number of lottery states has swelled to 28. In 1976, New Jersey became the second state to legalize casino gambling, although it restricted casinos to Atlantic City.

History of Nevada's Gaming Industry

The history of gambling in Nevada predates Nevada's existence as a state. The discovery of the Comstock Lode in 1859 brought saloons and gambling halls with the silver boom. Until the 1930s, Nevada's government reversed its policy toward gambling several times. In 1861, the legislature of the Nevada Territory prohibited all forms of gambling. This prohibition was adopted in 1864 by the newly formed State of Nevada, but in 1869 the state legislature reversed its policy and legalized a number of games and levied taxes on them. Gambling was once again made illegal in 1909, but enforcement of this prohibition over the next twenty-two years proved increasingly ineffective. In part because of the existence of substantial illegal gambling, in 1931 the state legislature once again legalized gambling. Gambling has been legal in Nevada ever since.²

Gambling or gaming, as it is now termed, did not begin to constitute an industry until World War II. The state did not begin to rely on gaming taxes in a major way, either, until it enacted

the "percentage tax" based on gross gaming revenues in 1945. That tax has since become the major revenue raiser among the various gaming taxes and licenses. In 1947, the framework for the current structure of state regulation of the gaming industry was laid when the Nevada Tax Commission was given the authority to issue gaming licenses and to investigate the backgrounds of those individuals applying for the licenses.³

From the beginning, the gaming industry has had an image problem due to its strong association with organized crime. For example, Benjamin "Bugsy" Siegel, who built the first of the modern casino-hotel complexes in 1946, was murdered in Beverly Hills the following year, and was subsequently linked to major crime figures such as Meyer Lansky, Lucky Luciano and Frank Costello.⁴ In the early 1960s, Nevada's image problem was at its worst. Attorney General Robert Kennedy declared "war on Nevada" because he believed that Nevada gambling was operating as a front for organized crime. Two books in particular published in the early 1960s, The Green Felt Jungle and Gambler's Money, contributed to Nevada's image problem.⁵

Changes in the state's regulatory structure enacted by the 1959 legislature were eventually to make an important contribution toward the industry's legitimacy. A new State Gaming Commission with its companion Gaming Control Board was created in order to more effectively regulate the gaming industry. The Corporate Gaming Acts of 1967 and 1969 also had a major impact on both the structure and the image of the gaming industry. Before the passage of these acts, public ownership was effectively prohibited by the requirement to investigate all of the owners of any casino prior to issuing a gaming license. These acts modified the licensing requirements in order to make public corporate ownership possible.⁶

The success of the changed regulatory structure and the introduction of publicly traded corporations into the gaming industry is reflected in the 1976 assessment of gambling in Nevada by the Commission on the Review of the National Policy Toward

Gambling. The Commission's report came to these important conclusions:

Nevada has used its 45 years of experience in the gaming field to develop a regulatory system that is sophisticated, efficient, and on the whole, capable of maintaining the integrity of the gaming industry at an acceptable level.⁷

Although organized crime once was a significant factor in some Nevada casinos, its influence has declined considerably and consistently during the past ten years. In comparison with the situation 15 years ago, the presence of organized crime in Nevada today is negligible.⁸

Subsequent developments were to reveal that the national gambling commission's conclusions were overly sanguine. From time to time since the report's publication, the existence of skimming operations or links between organized crime and the casino industry have come to light. Nevertheless, the image of casino gambling is vastly different today than it was in the twenty years after World War II. As major national hotel corporations as well as state governments themselves enter the industry, and public attitudes toward gaming become more positive, it appears that, despite unavoidable ongoing regulatory tensions, gaming in Nevada as well as in other states has become an established and largely accepted part of the American economy.

The Industry's Revenue Growth. For a complementary view of the history of the casino industry since World War II, Table 1 presents total casino gross taxable revenues from 1946 through 1987 as well as the percentage change from year to year. Gross taxable revenues are the same as casino winnings or the collective losses of the players. This broad measure of the level of casino activity should not be confused with net income or net profit. Operating and other expenses are not deducted to arrive at gross taxable revenues.

As Table 1 shows, the growth of the casino industry has been vigorous for nearly all of the post-War period. Most years have shown at least double digit growth. During the 1980s there have been several years of slower growth, but the Fiscal Year 86-87 increase was 10.2 percent and the fiscal year 87-88 increase was 9.8 percent.

Publicly Traded Corporations

As noted above, the rise of publicly traded corporations has been one of the most important developments in the casino industry over the last twenty-five years. The fifteen publicly traded corporations in the U.S. casino gambling industry in 1988 as well as their casino locations are listed in Table 2. Some of these are Nevada casinos that "went public", like the Golden Nugget. A second important group are hotel chains that expanded into the casino gaming industry. This includes the Hilton Hotels Corporation, the Holiday Corporation and Ramada Inns, Inc. Bally Manufacturing Corporation was a slot machine manufacturer before it bought out the MGM Grand Hotels in Las Vegas and Reno. Resorts International, which has casino locations in Atlantic City and the Bahamas was Mary Carter Paint Company in its earlier life.

Nevada casinos dominate the U.S. casino industry: 32 of the casino locations are in Nevada compared to nine in Atlantic City. U.S. casino corporations do not yet have extensive locations outside of the U.S. Hilton has an interest in an Australian casino, Pratt Hotel Corporation has a large interest in a casino in Puerto Rico and the home base of Resorts International is in Nassau.

Publicly traded corporations dominate Nevada's casino industry. In 1987, they accounted for nearly half of Nevada's gross taxable gaming revenues.⁹ Most of the rest of Nevada's casinos are closely held corporations.

TABLE 1		
GROWTH OF CASINO	GROSS TAXABLE	REVENUE IN NEVADA
FISCAL	TOTAL	CHANGE FROM
<u>YEAR</u>	<u>REVENUE (\$MIL)</u>	<u>PREVIOUS YEAR</u>
1946	21.5	
1947	31	44.2%
1948	35.9	15.8%
1949	39	8.6%
1950	39.5	1.3%
1951	48.2	22.0%
1952	55.2	14.5%
1953	73.9	33.9%
1954	84.4	14.2%
1955	94.4	11.8%
1956	113.1	19.8%
1957	126.4	11.8%
1958	143.8	13.8%
1959	162.8	13.2%
1960	194.1	19.2%
1961	203.7	4.9%
1962	227.1	11.5%
1963	248.2	9.3%
1964	276.3	11.3%
1965	295.4	6.9%
1966	328.8	11.3%
1967	358	8.9%
1968	387.7	8.3%
1969	456.9	17.8%
1970	543.7	19.0%
1971	607.6	11.8%
1972	683.3	12.5%
1973	803.5	12.5%
1974	937.4	16.7%
1975	1065.6	13.7%
1976	1187.7	11.5%
1977	1380.3	16.2%
1978	1671.1	21.1%
1979	1980.2	18.5%
1980	2274.5	14.9%
1981	2463.2	8.3%
1982	2599.7	5.5%
1983	2683.6	3.2%
1984	2991.1	11.5%
1985	3227.6	7.9%
1986	3365.9	4.3%
1987	3708.4	10.2%
1988	4071.8	9.8%

Source: Nevada State Gaming Control Board spreadsheet and Nevada Gaming Abstracts

Table 2
Publicly-Traded
Corporations in the U.S. Casino
Gambling Industry

Bally Manufacturing Corporation¹

- *Bally's, Las Vegas²
- *Bally's Reno²
- Bally's, Atlantic City³
- Bally's Park, Atlantic City

Caesars World, Inc.

- Caesars Atlantic City, Atlantic City (86.6% interest)
- *Caesars Palace, Las Vegas
- *Caesars Tahoe, Lake Tahoe

California Hotel and Casino

- *California Hotel, Las Vegas
- *Fremont, Las Vegas
- *Sam's Town, Boulder Highway
- *Stardust, Las Vegas
- *Gold River, Laughlin (17.1% interest, management contract)

Dunes Hotels and Casinos, Inc.

- *Dunes Hotel and Country Club, Las Vegas⁵

Elsinore Corporation

- Atlantis Casino Hotel, Atlantic City (91.5% interest)
- *Four Queens Hotel and Casino, Las Vegas
- *Hyatt Lake Tahoe hotel and Casino, Lake Tahoe

Golden Nugget, Inc.⁶

- *Golden Nugget, Las Vegas

Hilton Hotels Corporation

- *Flamingo Hilton, Las Vegas
- *Las Vegas Hilton, Las Vegas
- *Reno Hilton, Reno
- Gold Coast Conrad International Hotel and Jupiters Casino,
Queensland, Australia (10% interest, management contract)

Notes: * Nevada properties.

- 1 Bally Manufacturing Corporation merged in Bally's Park Place, Inc., June 1986.
- 2 Formerly MGM Grand Hotels, acquired April 25, 1986.
- 3 Formerly Golden Nugget Casino Hotel, acquired March 1, 1987.
- 4 Opened July 1987.
- 5 Sold December 15, 1987, leased thereafter.
- 6 Golden Nugget Casino Hotel, Atlantic City, sold March 1, 1987

Table 2
Publicly-Traded
Corporations in the U.S. Casino
Gambling Industry (Cont.)

Holiday Corporation

- *Bill's Casino, Lake Tahoe
- *Harrah's Lake Tahoe
- *Harrah's, Reno
- Harrah's Marina Hotel/Casino, Atlantic City
- *Holiday Casino, Las Vegas

Pratt Hotel Corporation

- Sands Hotel and Casino, Atlantic City
- Sands, San Juan (49% interest, management contract)¹⁰

Ramada Inns, Inc.

- *Eddies Fabulous 50's, Reno
- Tropicana Hotel and Casino, Atlantic City
- *Tropicana Resort and Casino, Las Vegas

Resorts International Inc.

- Paradise Island Resort & Casino, Nassau, Bahamas
- Resorts International Casino Hotel, Atlantic City

Sahara Resorts, Inc.

- *Hacienda Resort Hotel and Casino, Las Vegas (63.7% interest)
- *Sahara Hotel and Casino, Las Vegas (63.7% interest)

Showboat, Inc.

- *Showboat, Las Vegas
- Showboat, Atlantic City

Union Plaza Hotel and Casino, Inc.

- *Union Plaza Hotel and Casino, Las Vegas

Source: Laventhol & Horwath, U.S. Gaming Industry: Financial Results and Reporting Trends, 1988 Philadelphia, PA, pp 4-5.

Notes: * Nevada properties.

- 7 Opened July 1987.
- 8 Opened November 1987.
- 9 Opened June 1987.
- 10 Opened March 1987.
- 11 Formerly Scott Corporation.

Competition and Concentration

An industry is said to be competitive when no one producer has appreciable control over the price of its product. The opposite of a competitive industry is a monopoly, in which a single firm supplies the entire market. The more concentrated an industry, the more it resembles a monopoly rather than a competitive industry.

Measurement of concentration and competition within Nevada's casino industry is greatly hampered by lack of data. A period that would be most interesting to investigate is the immediate aftermath of the state's authorization of casino ownership by publicly traded corporations. This is impossible to pursue with state government data, however, because gaming data were first published for 1967, the year that publicly traded corporation began to be legalized. With no opportunity for "before and after pictures", it is not possible to quantify any move toward concentration in the industry.

The yearly data that are now put out by the State Gaming Control Board are designed not to reveal financial statistics with respect to any single casino or casino corporation. For that reason, all statistics are reported in groupings. This makes it impossible to compute a concentration ratio--the most commonly used measure of concentration in an industry. For example, a four-firm concentration ratio measures the proportion of an industry's output produced by the largest four firms. A concentration ratio of 80 percent indicates that the top four firms produce 80 percent of an industry's output. Such a concentration ratio is viewed as indicating a great deal of concentration, and hence little competition, within that particular industry.

The best available measures of casino industry concentration are presented in Table 3. The last column presents the amount of the entire industry in Nevada that was accounted for by publicly held corporations from 1975 to 1987. During that entire time

Table 3
Publicly Traded Corporate Casinos

Fiscal Year	Number of Corporations	Number of Locations	Gaming Revenue	Gaming Revenue of Publics As % of Total
1975	12	19	613	58%
1976	12	19	646.2	54%
1977	11	16	621.6	45%
1978	11	16	728.4	44%
1979	12	21	983.3	50%
1980	12	20	1093.8	48%
1981	12	20	1088.6	44%
1982	12	20	1185.1	46%
1983	12	21	1159.7	43%
1984	14	28	1495.8	50%
1985	14	26	1577.3	49%
1986	13	25	1558.1	46%
1987	13	27	1787.4	48%

Source: Nevada Gaming Abstracts

Note: The Nevada Gaming Abstract first reports separate statistics on publicly owned casinos in 1975. Only casinos with revenue of \$10 million and over are reported.

span, about a dozen publicly held corporations have accounted for about one-half of the casino industry. In comparison with other U.S. industries, Nevada's casino industry does not appear to be very concentrated.

A second measure of the degree to which Nevada's casino industry is competitive or concentrated is presented in Table 4. That table illustrates the turnover in publicly traded corporations in Nevada from 1979 to 1988. This table shows that of the 21 casino locations held by publicly traded corporations in 1979, only 8 were held by the same corporation nine years later. Caesar's World, Elsinore Corporation, Golden Nugget, Hilton Hotels, Showboat and Del E. Webb retained some or all of the properties in 1987 that they held in 1979. Publicly held casino corporations that have left the market are AITS, Argent Corporation, Continental Connector, Harrah's, Metro-Goldwyn Mayer, and Scott Corporation. New entrants to the market were Bally's, California Hotel and Casino, Circus, Dunes, Holiday Inns, Ramada Inns, Sahara Resorts, and Union Plaza Hotel & Casino.

COMPETITION FROM OTHER STATES

The previous section presented two alternative measures of the degree of competition or concentration within the Nevada casino industry. Another type of competition, competition from gaming in other states, is also important to consider.

As Chapter 3 described, although the first casino opened in Atlantic City in 1978, Atlantic City probably did not pose an effective competitive threat to Nevada until 1980 when New Jersey gaming revenues reached a significant fraction of Nevada's gaming revenues. Chapter 3 also indicated that Atlantic City's competitive pressure appears to have stabilized, since Atlantic City gaming revenues have remained approximately 60 percent of Nevada gaming revenues since 1982. Whether this situation

Table 4**Turnover in Publicly Traded Corporations
in Nevada, 1979-1988**

<u>Corporation & Casino Locations</u>	<u>1979</u>	<u>1988</u>
AITS		
Rivera Hotel	X	
Argent Corporation		
Fremont	X	
Stardust	X	
Bally Grand Resorts, Inc.		
Bally's Grand-Las Vegas		X
Bally's Grand-Reno		X
Caesars World		
Caesars Palace	X	
Caesars Tahoe		X
Circus Circus Enterprises, Inc.		
Circus Circus Hotel and Casino		X
Circus Circus Hotel and Casino-Reno		X
Edgewater Hotel and Casino		X
Silver City Casino		X
Slots-A-Fun		X
Continental Connector Corp.		
Dunes Hotel	X	
Dunes Hotels and Casinos, Inc.		
Dunes Hotel		X
Golden Nugget, Inc.		
Golden Nugget	X	X
Harrah's		
Harrah's Reno	X	
Harrah's Tahoe	X	
Hilton Hotels Corporation		
Flamingo Hilton	X	
Las Vegas Hilton	X	
Reno Hilton		

Table 4

Turnover in Publicly Traded Corporations
in Nevada, 1979-1988 (Cont.)

<u>Corporation & Casino Locations</u>	<u>1979</u>	<u>1988</u>
Holiday Inns, Inc.		X
Harrah's Club-Reno		X
Harrah's Club-Tahoe		X
Holiday Casino		X
Metro-Goldwyn Mayer, Inc.		
MGM Grand	X	
MGM Reno	X	
Ramada Inns, Inc.		
Eddie's fabulous 50's		X
Tropicana Hotel and Country Club		X
Sahara Resorts		
Hacienda Resort Hotel and Casino		X
Sahara Las Vegas Hotel and Casino		X
Scott Corporation		
Union Plaze	X	
Showboat, Inc.		
Showboat	X	X
Del E. Webb, Corporation		
Del Webb's High Sierra		X
Del Webb's Nevada Club	X	
Mint Hotel	X	
Park Tahoe	X	
Sahara	X	
Sahara Reno (Primadonna)	X	
Sahara Tahoe	X	
Union Plaza Hotel & Casino, Inc.		
Union Plaza	X	

Source: Nevada Gaming Abstracts and Laventhol & Horwath, U.S. Gaming Industry Financial Results and Reporting Trends, 1988, Philadelphia, PA.

continues depends upon Atlantic City's action in improving airline service, rail service, highway connections and whether the planned convention center becomes a reality.

From time to time, voters in other jurisdictions are presented with an opportunity to legalize casino gambling. Most recently, Detroit voters turned down a casino referendum for the third time. Cleveland, Louisiana, and San Francisco have also recently considered legalizing casino gambling as an economic development device. An expert on the casino industry stated recently that, "for the foreseeable future, Nevada and New Jersey are likely to be the only states with legal casinos."¹⁰

Perhaps a more imminent threat to Nevada's casino industry is the potential for high class casinos on nearby Indian reservations. On February 25, 1987, the U.S. Supreme Court ruled in California vs. Cabazon Band of Mission Indians that Indian tribes have the right to self regulation of gaming activities on their reservations, in the absence of federal legislation stipulating otherwise.¹¹ Although the current game of choice on Indian reservations, bingo, is not a real competitor to casinos, the push for economic development in combination with an influx of outside capital could build an Indian gaming industry that does pose a credible threat. Several bills are currently being considered in Congress that would set up a federal Indian Gaming Commission and distinguish between games that could be regulated by the Indians themselves and games that must be regulated by the federal commission.

North Versus South

In the early years of Nevada's casino gaming industry, the gaming industry was centered in the North, in Reno, in Washoe County. In part because of its pro-growth policy, and in part because of its proximity to rapidly growing Los Angeles, Las Vegas in Clark County outstripped Reno as a gaming center by 1955.¹²

Tables 5 and 6 present the county shares of the state's gross taxable gaming revenues and their respective annual rates of growth in taxable gaming revenues. As of 1955, Clark County accounted for 62 percent of taxable gaming revenues and Washoe County accounted for 28 percent. In the next decade, the Lake Tahoe area of Douglas County was the fastest growing gaming area of the state so that in 1965, the county shares of taxable gaming revenues were: Clark County, 54 percent; Douglas County, 16 percent; and Washoe County, 26 percent.

In the decade from 1965 to 1975, Clark County established its dominance of the state's casino gaming industry. As of 1975, 68 percent of gross taxable gaming revenues were generated in Clark County. The shares in Douglas and Washoe had slipped to 11 and 17 percent respectively. From 1975 to 1985, Washoe County regained some of its share, and now contributes 20 percent of total gross taxable gaming revenues. An important development within Clark County is the boom in the resort town of Laughlin, located south of Las Vegas on the Arizona border. After several years of growth well in excess of 20 percent, Laughlin now accounts for 5 percent of the state's gross taxable gaming revenues.

Within both Clark and Washoe counties the center of the gaming activities has shifted over the last thirty years. The growth in Laughlin in Clark County has already been noted. Prior to the Laughlin boom, the city of Las Vegas saw a shift in activity from downtown to the Las Vegas Strip. Now some of the fastest growing Las Vegas casinos cater to the local market and are located on the outskirts of the city on Boulder highway.

For many years, the Reno city council had established a "red line" boundary indicating the permissible area for unrestricted gaming activity. Outside of the boundary, casino gaming was allowed only in conjunction with a hotel of 100 rooms or more. The "red line" was abolished in 1971 which contributed to growth in gaming outside of the city center.¹³

Table 5
County Shares of Gross
Taxable Gaming Revenues

Year	CLARK	DOUGLAS	WASHOE	CARSON	ELKO	LAUGHLIN*	Remainde
1955	62%	4%	28%	n/a	n/a	0%	n/a
1960	53%	13%	28%	1%	2%	0%	2%
1965	54%	16%	26%	1%	2%	0%	2%
1970	64%	12%	20%	1%	1%	0%	1%
1971	63%	13%	21%	1%	1%	0%	1%
1972	65%	12%	19%	1%	1%	0%	1%
1973	67%	11%	18%	1%	1%	0%	1%
1974	68%	11%	17%	1%	1%	0%	1%
1975	68%	11%	17%	1%	1%	0%	1%
1976	67%	11%	18%	1%	2%	0%	1%
1977	67%	11%	18%	1%	2%	0%	1%
1978	67%	9%	20%	1%	2%	0%	1%
1979	67%	9%	20%	1%	2%	1%	1%
1980	68%	9%	19%	1%	2%	1%	1%
1981	66%	10%	20%	1%	2%	2%	1%
1982	67%	9%	20%	1%	2%	2%	1%
1983	66%	9%	21%	1%	2%	3%	1%
1984	65%	9%	21%	1%	2%	4%	1%
1985	67%	9%	20%	1%	2%	5%	1%

Source: Nevada Statistical Abstract 1986 Edition, which cites State Gam
Control Board, Economic REsearch Section, Quarterly Reports.

Note: Laughlin is included in Clark County total.

TABLE 6

County Annual Growth Rates For
Gross Taxable Gaming Revenue

Year	CLARK	DOUGLAS	WASHOE	CARSON	ELKO	LAUGHLIN*	Remainder
1960	10%	45%	13%				
1965	10%	14%	8%	9%	2%		3%
1970	16%	7%	7%	4%	6%		5%
1971	8%	13%	15%	30%	16%		5%
1972	19%	13%	4%	45%	23%		11%
1973	23%	9%	15%	56%	16%		10%
1974	17%	13%	7%	18%	19%		8%
1975	12%	9%	14%	7%	15%		10%
1976	10%	14%	19%	19%	17%		17%
1977	20%	17%	22%	39%	21%		15%
1978	22%	4%	31%	17%	21%		35%
1979	15%	13%	15%	9%	13%		11%
1080	14%	11%	8%	12%	15%	26%	23%
1981	4%	14%	11%	1%	20%	31%	15%
1982	4%	-2%	4%	2%	10%	53%	-2%
1983	6%	15%	9%	13%	14%	46%	7%
1984	11%	0%	1%	0%	6%	36%	3%

Source: Nevada Statistical Abstract 1986 Edition, which cites State Gam Control Board, Economic Research Section, Quarterly Reports.

Note: Laughlin is included in Clark county total.

Changing Product Mix

As important as the changing geographical distribution of gaming activity in the state is the changing product mix. Table 7 illustrates the most important change in product mix over the last twenty years: the rising importance of slot machines and the concurrent decline in the importance of games. In 1971 games (or pit revenue) accounted for over two-thirds of casino revenue statewide; slots (or coin operated devices) accounted for less than one-third. As of 1987, the relative importance of slots and games has reversed. Games now account for about 40 percent of revenue and slots for about 55 percent of total Nevada casino revenue.

In 1975, the games that contributed the most to gaming revenue were blackjack (or twenty-one) and craps. Blackjack accounted for over 25 percent of gaming revenue in the state and craps accounted for over 20 percent. Also important were roulette, which accounted for about 3 percent of state gaming revenue and baccarat which accounted for about 5 percent. Since 1975, the relative contributions of both roulette and baccarat have declined only slightly; the contribution of blackjack has declined substantially and the contribution of craps to total gaming revenue has plummeted.¹⁴

The growing importance of slots is caused by the growth in \$1.00 slots (other common denominations are \$0.50, \$0.25 and \$0.05) and the growth in video games. Video games, such as video poker, are not the traditional "open-armed bandit" slot machine, but are included with slot machines in the broader category of coin operated devices.

One contributing explanation for this shifting product mix is the changing of demographic profile of gamblers. Years ago, a significant proportion of Nevada's visitors had learned to play craps during World War II. Today's gambler is much less likely to know how to play the game. In addition, today's young gambler

Table 7**Changing Mix of Casino Revenue
FY1971-1987**

Fiscal Year	<u>Percentage of Statewide Casino Revenue From:</u>		
	Pit Revenue	Coin Operated Devices	Other
1971	67.0	31.4	1.6
1972	65.4	31.2	1.3
1973	65.5	32.1	1.4
1974	66.7	31.6	1.7
1975	67.8	30.1	2.1
1976	66.2	31.8	2.0
1977	63.4	34.6	2.0
1978	59.8	37.6	2.6
1979	57.5	39.5	3.0
1980	55.6	41.2	3.2
1981	54.2	42.8	3.0
1982	52.2	44.8	3.0
1983	46.9	50.0	3.1
1984	44.5	52.0	3.4
1985	44.4	51.9	3.7
1986	41.7	54.2	4.1
1987	40.5	55.4	4.1

Source: Nevada Gaming Abstracts

Notes: Pit revenue includes keno and bingo. Other revenue includes pok pan, race book and sports pool. Only casinos with gaming revenue of \$1 million and over are included.

is likely to be familiar with coin-operated machines from the growing presence of video arcades in non-gaming resorts. A further explanation is the success of technology. As more firms produce less expensive and more interesting slot machines, gamblers find increased enjoyment in playing the slots.

It is also increasingly clear that the casino market is a segmented one. Certain casinos (like Caesar's Palace) cater to the high roller and are likely to have a higher than average proportion of games and to spend a greater than average amount of revenue on comps (complimentaries). Others, like Circus Circus, cater to middle or lower middle income gamblers who have the strongest preference for slots over games. There is also a growing segment of the market that caters to local gamblers. These casinos tend to have the best odds, because local gamblers are the most knowledgeable about the relative "price" of gambling in the various casinos.

STATE AND LOCAL CASINO TAXES

As pointed out in Chapter 19, gaming taxes constitute by far the most important form of business taxation in the State of Nevada. Not all of the traditional principles of business taxation are applicable to casino taxes, however.

Most importantly, one must recognize that the state created a monopoly industry when it legalized casino gambling. This special privilege, in combination with a robust market demand for casino entertainment has created a profitable casino industry. The special privilege granted to casinos by the state can justify higher taxes than are levied by state and local governments on businesses in the U.S. on average. Data in Chapter 5 indicated that the average rate of business taxation among the states in Nevada's comparison group is 8.1%. In contrast, the average rate of business taxes on the Nevada-Atlantic City gaming industry is 24.5%.

It is also possible to justify the relatively high rate of taxes levied on the gaming industry because of public service costs the industry generates. Most gaming patrons are tourists who generate demand for police, fire and other services, and who, in the absence of gaming taxes, would contribute little toward the costs of these public services. In addition, because casino gaming is illegal in other states, and has long been associated with organized crime, legalization of the industry imposes high costs of regulation on state and local governments.

The gaming industry also faces an unusual business tax structure. Rather than being subject to corporate income or profits taxes, casinos in Nevada are subject to an array of license taxes and to a tax on gross revenues. This tax structure has the virtue of being simple to administer and enforce. For example, no complex issues of apportioning interstate income are generated by this tax structure on the other hand, when a casino is subject to high taxes in a year of net losses, this tax system appears somewhat inequitable. Again, the special privilege theory has been used to argue that positive taxes imposed even in a loss year do not constitute inequitable business taxation.

State Casino Taxes

The State of Nevada both regulates and taxes casinos and related entities. Table 8 sets out the types of gaming licensees in the state and the number of each type.

Restricted licenses are issued in order to operate not more than 15 slot machines only. Restricted licensees are often convenience stores, bars, restaurants, grocery stores and laundromats for which slot machines are an incidental part of the business. Although restricted licenses make up the majority of licenses issued, they account for a relatively small fraction of gross gaming revenue generated.

Table 8

Gaming Licensees in Nevada, 1987

<u>Type of Licensee</u>	<u>Number</u>
Restricted ¹	1,568
Nonrestricted ¹	273
Nonrestricted Group I ²	162
Nonrestricted Group II ²	111
Manufacturers/Distributors	92
Slot Operators	83
Wire Services & Simulcasts	8
Total	<u>2,024</u>

Source: Nevada Gaming Control Board Fact Sheet, Revised 8/87.

Notes: ¹Restricted gaming licenses are issued for the generation of not more than 15 slot machines and no other games. Nonrestricted gaming licenses are issued for the operation of games and/or tables only; for the operation of 16 or more slot machines only or for the operation of games and/or tables in conjunction with slot machines.

²Group I casinos have \$1 million or more in gross gaming revenue. Group II casinos generate less than \$1 million in gross gaming revenue.

Nonrestricted licenses are issued for the operation of more than 15 slot machines, or for the operation of table games. All the large casinos fall into this category. Group I casinos, or those casinos with over \$1 million in gross gaming revenue, account for most casino revenues.

Restricted licensees are subject to annual and quarterly license fees only. Non restricted licensees are subject to the monthly gross gaming fee, which raises the most revenue, and to annual and quarterly slot machine taxes, annual and quarterly game licensee taxes, and, in some cases, to the casino entertainment tax.

The slot route operator manages slot machines for a number of lower volume gaming locations. In some cases, a slot route operator can effectively avoid the higher tax rates imposed on nonrestricted licensees. For example, a slot route operator might manage the slot machines for a statewide chain of convenience stores. Each store might have 15 or fewer slot machines, but in total the operator is managing a number of machines that is many times greater than the stipulated dividing line between restricted and nonrestricted licensees.

Table 9 provides an overview of the major state gaming taxes. The most important of these taxes is the gaming percentage fee or monthly fee, that brought in \$205.1 million in FY 1987 and that accounted for 75.6% of all state gaming tax collections in that year.

The base of the gaming percentage fee is gross gaming revenue. The tax is levied at a graduated rate, with the first \$50,000 of monthly gross gaming revenue taxed at a 3 percent rate, the next \$84,000 taxed at a 4 percent rate, and any revenue over \$134,000 taxed at a 6 percent rate. The last session of the state legislature raised the top tax rate from 5 3/4 to 6 percent. Up until 1983, this tax was levied on a quarterly basis as are most of the other gaming taxes or fees, but payments were accelerated as a one-time revenue generator.

Table 9
The Structure of State Gaming Taxes and Fees in Nevada

Tax/Free	Which Licensees Applicable To	Base	Rate	Disposition of Revenue	Yield (FY87)	Percentage of Total State Gaming Taxes ¹
Gaming Percentage Fee or Monthly Fee	Nonrestricted	Gross gaming revenue	3% of the first \$50,000 4% of the next \$84,000 plus 6% of revenue over \$134,000; all per month	State General Fund	\$205.1 million	75.6%
Annual Slot Tax NRS 463.385	All	Per slot machine	\$250 per year	First \$5 mil- lion to Higher Education Capi- tal Construction Fund which is then reappropriated to General Fund to support University operations 20% to special Capital Construction fund for Higher Educa- tion the Remainder to Distributive School Fund	29.5 million	10.9%
Casino Entertain- ment Tax NRS 463.401	Nonrestrict- ed licensees with more than 5 slot machines and/or more than 5 table games.	Amounts paid for food, re- freshment, admissions or similar charges while in casino en- tertainment	10%	State General Fund	\$16.8 million	6.2%
Nonrestricted Slot Fee or Quarterly by License Fee 463.375	Nonre- stricted	Per slot machine	\$20 per quarter or \$80 per year	State General Fund	\$ 7.9 million	2.9%

Table 9 (cont.)

The Structure of State Gaming Taxes and Fees in Nevada

Tax/Free	Which Licensees Applicable To	Base	Rate	Disposition of Revenue	Yield (FY87)	Percentage of Total State Gaming Taxes ¹
Flat Fee on Games or Quarterly Game Fee or	Nonrestricted	By number table games	Depending upon total number of games, additional quarterly fee per game from \$12.50 to \$1,700.	State General Fund	\$ 5.4	2.0%
Annual Game Fee or	Nonrestricted	Per table machine	Depending upon total number of games, additional annual fee per game ranges from \$100 to \$4,000	Distributed on an equal basis among the state's 17 counties, after deducting costs of administration Deposited to county general fund, unless county commis- sioners wish to share with cities and towns	\$2.3 million	0.8%
Restricted Slot Fee or Quarterly Licensee Fee on Restricted Licensees NRS 463.373	Restricted	Per slot machine	Up to 5 slot machines, the additional fee per quarter is \$45; for 6-15 machines the additional quar- terly fee is \$90	State General Fund	\$2.3 million	0.8%

The next most productive gaming tax is the annual slot tax of \$250 per machine per year which applies to both restricted and nonrestricted licensees. This tax brought in \$29.5 million in FY 1987, or 10.9% of the amount contributed by all state gaming taxes. This tax is unusual among the gaming taxes in that it is earmarked for educational purposes. The first \$5 million is earmarked for the Hughes Education Capital Construction Fund. Twenty percent of the remaining revenues are contributed to the Special Capital Construction Fund for Higher Education, and the remainder goes to the Distributive School Fund. As a revenue measure in the 1983 tax bill, the \$5 million earmarked for the Higher Education Capital Construction Fund was reappropriated to the State General Fund to support university operations.

The Casino Entertainment Tax, which applies at a 10 percent rate to purchases of food, merchandise or admission charges while a non-restricted casino is in casino entertainment status, also generates a significant amount of revenue. In FY 1987 this tax raised \$16.8 million, equal to 6.2 percent of the state gaming tax total.

The remaining four gaming taxes of note contributed from \$2.3 to \$7.9 million during FY 1987. Each of these taxes is levied on the number of slot machines or table games operated on either a quarterly or an annual basis. All but the annual license fee for the games is contributed to the State General Fund. The annual game fee is distributed among Nevada's 17 counties on an equal basis, after the state has deducted costs of administration.

Table 10 provides a collection history for each of these seven taxes or fees. It is apparent that the annual game fee and the quarterly game fee are quite inelastic revenue sources since each contributed nearly the same revenue in FY 1987 as it did in FY 1982. This inelasticity in revenue is likely due in part to the declining relative importance of table games in the casino industry.

Table 10
Nevada State Gaming Tax and Fee Collections, by Tax or Fee,

Fiscal Year	Percentage Fee		Entertain. Tax		Annual Slot Fee		Quarterly Nonre- stricted Slot Tax		Quarterly Re- stricted Slot Tax		Annual Game Fee		Game
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$
1987	\$205.1	10.1%	16.8	4.3%	29.5	7.6%	7.9	-0.2%	2.3	7.0%	2.3	-0.5%	5.4
1986	186.3	5.2	16.1	3.4	27.4	-3.2	7.9	9.8	2.1	13.0	2.3	-0.5	5.6
1985	177.1	7.2	15.6	3.7	28.3	17.2	7.2	7.5	1.9	15.5	2.3	5.3	5.3
1984	165.2	-3.5	15.0	-12.1	24.1	0.4	6.7	3.6	1.6	30.1	2.2	-1.0	5.0
1983	171.1	21.6	17.1	-14.6	24.0	7.0	6.5	3.0	1.2	6.9	2.2	-2.1	5.2
1982	140.7	11.4	20.0	6.1	22.5	4.8	6.3	98.9	1.2	51.3	2.3	0.8	5.3
1981	126.3	8.9	18.9	-4.0	21.4	5.3	-	-	-	-	2.2	0.6	-
1980	116.0	14.6	19.7	16.6	20.3	7.2	-	-	-	-	2.2	3.8	-
1979	101.2	22.3	16.9	18.8	19.0	29.9	-	-	-	-	2.2	2.4	-
1978	82.8	21.5	14.2	9.2	14.6	14.7	-	-	-	-	2.1	15.8	-
1977	68.2	-	13.0	-	12.7	-	-	-	-	-	1.8	-	-

\$ Amounts in Millions

% denotes percent difference from previous year

Conversely, the growing importance of gaming via slot machines probably was a major contributor to the revenue growth of the two quarterly slot fees and the annual slot tax.

The Casino Entertainment Tax is the single gaming tax that has actually shown a decline in collections during the 1980s. Because the Casino Entertainment tax is an ad valorem sales tax, one would ordinarily expect it to be an elastic revenue source. However, the base of the tax is a narrow one, and the tax is easily avoided in part by purchasing food and liquor before or after attending the entertainment. Furthermore, since the casino patrons may have a choice between a free drink before the show (a "comp") and a drink taxed at a 10 percent rate during a show, there is a strong incentive to postpone or accelerate such purchases and thereby avoid the tax.

The percentage fee has shown a vigorous growth in most years. Because of its ad valorem nature, unless the state legislature acts to raise the rates of the slot and game license fees, this tax will become an ever increasing proportion of total gaming tax collections.

Comparison With New Jersey Casino Taxes

In an evaluation of Nevada's state gaming tax structure, it is instructive to compare Nevada's gaming taxes with New Jersey's. The cornerstone of New Jersey's system of casino taxation is also a percentage tax on the gross operating revenues of casinos. There are several differences compared to Nevada, however. First, New Jersey really has two gross gaming taxes. The first, the Casino Revenue Tax, is levied at an 8 percent rate and is dedicated to programs for the elderly and the handicapped. The second is an option under the Investment Alternative Tax. Either the casino must contribute 2.5% of gross revenues to the Casino Control Commission, or it must contribute 1.25% of gross revenues either directly or indirectly to the Casino Reinvestment Development

Authority. When added together, these two percentage fees account for 82.5 percent of New Jersey's state gaming taxes, in comparison to the 75.6% contribution that Nevada's percentage fee made to the state's gaming tax total (Table 11). A second difference between Nevada's and New Jersey's gross gaming fees is that New Jersey employs two separate bureaucracies to collect its two different percentage fees, while Nevada does not. Third, New Jersey allows a deduction for bad checks in computing the applicable tax base, while Nevada does not.

License fees play a smaller role in New Jersey's gaming tax system than in Nevada's. New Jersey also employs different types of license taxes. It levies one tax on the operation of the casino and other license taxes on the employment of particular types of casino employees.

THE EFFECTS OF TAXES ON THE CASINO INDUSTRY

As described in the discussion of general business taxes above, gaming taxes in New Jersey are significantly higher than in Nevada. For a casino with annual revenue of \$11 million, gaming tax rates in Atlantic City are 32 percent higher than in Las Vegas. For a larger casino, with annual revenue of \$180 million, Atlantic City's gaming tax rate is 29 percent higher than Las Vegas: taxing state income, property and sales taxes into account only exacerbates this differential because New Jersey imposes a state income tax on casinos and New Jersey imposes higher business property taxes than does Nevada.

This tax data indicates that relatively low tax levels compared to Atlantic City, New Jersey are likely to keep a sizeable proportion of casino expansion in Nevada. Probably an equally important factor is the relative regulatory burden imposed on casinos by the two states. Because the basis of casino regulation is "people watching people", a high regulatory burden will generate

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These tax data indicate that Nevada's relatively low tax levels compared to Atlantic City are likely to keep a sizable proportion of future casino expansion in Nevada. Probably an equally important factor is the relative regulatory burden imposed on casinos by the two states. Because the basis of casino regulation is "people watching people," a high regulatory burden will generate high labor costs. It is generally acknowledged that New Jersey imposes a greater regulatory cost on its casinos than does Nevada. One participant in the casino industry estimated that the additional labor costs imposed by state regulatory requirements in New Jersey cost the Atlantic City casino industry approximately \$60 million last year.¹⁷

Who Pays Nevada's Casino Taxes?

Although casino owners write the checks in order to satisfy state and local casino tax liability, a basic principle of public finance holds that individuals, not business firms, must be the ultimate bearers of any tax burden. The relevant question is whether shareholders, wage earners, property owners, or casino customers bear the burden of the state's casino taxes.

A second basic principle of tax incidence is that the least mobile factors of production will bear most of the tax burden. Earlier in this chapter the discussion of the high level of industry competition indicates that owners of capital or shareholders are unlikely to bear the burden of casino taxes. Given Nevada's elastic labor supply, wage earners are also unlikely to bear more than a small proportion of casino tax burdens. The most likely candidate for tax incidence is the consumer, given the limited choices within the United States for casino gaming.

The chapter on tourism (chapter 6) implicitly assumed that consumer patrons bear the entire burden of casino taxes. Given this assumption, the proportion of the gaming tax effectively shifted to out-of-state residents was estimated to be 88.5 percent. Only jet fuel taxes were estimated to impose a greater fraction of total tax burden on out-of-state residents. Casino taxes were estimated to be over twice as successful in shifting tax burden out of Nevada than were either general or selective excise taxes.

This incidence discussion deserves two qualifications. First, in the short run the incidence of any tax increase may well be borne by casino shareholders, until casinos have a chance to adjust their payout rates or the generosity of their "comp" packages. Second, to the extent that casino gambling begins to be legalized in other parts of the United States that are attractive as well as readily accessible to tourists, Nevada will be less able to shift casino taxes forward to tourists. Instead, a greater proportion of the casino tax burden would begin to be borne by property owners in Nevada.

County Casino Taxes

Unlike New Jersey, Nevada levies casino taxes at the local as well as the state level. These include the county taxes levied generally, and the special additional county gaming taxes levied in Clark, Douglas, Elko, and Washoe counties. These taxes are mostly levied per game or per slot machine in operation. Clark County does impose a gross gaming fee, but at a much lower level than does the state.

Table 11

The Structure of Casino Gaming Taxes and Fees in New Jersey

Tax/Free	Base	Rate	Disposition of Revenue	Administration	Yield (FY 87)	% of Total
Casino Revenue Tax	Gross gam- ing reve- nues of operating casinos ¹	8% of gross revenues	Deposited in- to the Casino Revenue Fund (CRF) and dedicated for programs for the elderly and the hand- icapped ²	Taxes collected by Casino Con- trol Commission State legisla- ture approves disbursements for specific programs	\$200 million 74.2%	
Investment Alternative Tax	Gross gam- ing reve- nues of operating casinos. ³	2.5% of gross revenues used to purchase Casino Re- investment Development Authority (CRDA) bonds for direct investment in CRDA approved projects.	CRDA proceeds used to revi- talize urban areas of the state with Atlantic City Given first priority, then	Casino Reinvest- ment Development Authority	\$ 22 million (for first 9 months of 1987) 8.3%	

to be legalized in other parts of the U.S., Nevada will be less able to shift casino taxes forward to tourists. Instead, a greater proportion of the casino tax burden would begin to be borne by property owners in Nevada.

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All local gaming taxes are now constrained by a state law that limits local fees or taxes to the amount or rate in effect on or before April 27, 1981. (NRS 463.395). This is part of the reason that they contribute such a small portion of local revenues. For example, in 1987, local gaming taxes accounted for only 1.5% of county revenues. This was a reduction from 2.5% in 1979.¹⁶

Policy Options

Probably the most important policy consideration with respect to gaming taxation in Nevada is whether the state should continue its current high level of reliance on gaming taxes. Should Nevada aim to reduce its overall level of casino taxation, or could the state safely increase gaming taxes to solve any future fiscal crisis?

The information summarized in this chapter indicates that Nevada is not now at a competitive disadvantage because of high casino taxes. New Jersey, Nevada's only competitor imposes both higher taxes and greater regulatory burden on its casinos. At the same time, though, the casino industry is a competitive one.

Several hotel-gaming corporations operate casinos in Atlantic City as well as in Nevada and could easily open casinos in another state should casino gaming become legal elsewhere. If Nevada were to raise casino taxes a great deal higher, legalization of casino gambling elsewhere in the U.S. could induce a exodus of casino capital, robbing Nevada of a significant part of its tax base. Indeed, the casino industry itself could work effectively to secure legalization of casino gaming.

In weighing these opposing considerations it appears that Nevada has no need to lower its rate of casino taxation, but should be cautious in considering substantial increases in the tax burden it imposes on its primary industry.

Within the industry itself, it appears that large casinos are taxed at a lower rate than the smaller (but nonrestricted license) casinos. Specifically, business tax model estimates the effective rate of gaming taxation imposed on casinos with annual gross receipts of \$11 million is almost 50 percent greater than the tax rate on casinos with annual gross receipts of \$180 million. Under the current tax system each casino would be subject to the 6% top rate of the gaming percentage fee. One way to correct this inequity would be to add a fourth bracket to the graduated gaming percentage fee.

Nevada should also consider three other policy options which affect the structure of the state's gaming tax system.

As noted above, the annual gaming license tax is a nearly constant \$2.3 million amount that is distributed equally among the 17 counties. This earmarked tax should be reconsidered along with the other earmarking provisions and the revenues be considered part of the pool for general state aid to county governments. The state may also wish to consolidate the multiplicity of small gaming taxes. As the percentage fee grows in importance, the administrative and compliance costs per dollar generated by the various license fees grows. It should be possible to consolidate these taxes in an equitable manner. Alternatively, because growth

in local gaming taxes is restricted, these taxes could be abolished in return for an increase in state aid, if such revenue support is needed.

Third, the state may wish to reevaluate the advisability of imposing the casino entertainment tax. Due in part to its narrow base, revenue collections from this tax have actually declined during this decade. It may be preferable to either abolish or reduce the rate of this tax, while increasing other gaming taxes, in order to create a more stable, less distorting, gaming tax system as a whole.

ENDNOTES

1. State of Nevada, Department of Taxation, Annual Report Fiscal 1985-86 (Carson City: November 19, 1986); and Assembly Committee on Taxation, Revenue Reference Manual, 1987 Nevada Legislature.
2. R.A. Zubrow, R.L. Decker, and E.H. Plank, Financing State and Local Government in Nevada, Nevada Legislative Tax Study Group, Nevada State Printing Office, Carson City, Nevada, 1960, p. 306.
3. William R. Eadington, "The Evolution of Corporate Gambling in Nevada," Nevada Review of Business and Economics, Spring 1982, Volume VI, No. 1, p. 15.
4. Eadington, "The Evolution of Corporate Gambling in Nevada," p. 15.
5. Eadington, "The Evolution of Corporate Gambling in Nevada," p. 16-17.
6. William Eadington, "The Evolution of Corporate Gambling in Nevada," pp. 16-17.
7. Commission on the Review of the National Policy Toward Gambling, Gambling in America, Government Printing Office, Washington, D.C., p. 86.
8. Gambling in America, p. 78.
9. 1987 Nevada Gaming Abstract.
10. Harold Vogel, First Vice President, Merrill Lynch Capital Markets, in Laventhol & Horwath, Study of Financial Results and Reporting Trends in the U.S. Gaming Industry, 1988.
11. Michael P. Davis, "Casino Representatives Warn of Rampant Reservation Gaming," Gaming & Wagering Business, February 15, 1988, p.8.
12. Nevada Gaming Abstract, November 1972, p. 48.
13. Nevada Gaming Abstract, November 1972, p. 48.
14. Harold L. Vogel, Entertainment Industry Economics, Cambridge University Press, Cambridge, England, 1986, p. 271.
15. Marvin B. Roffman, in Laventhol & Horwath, U.S. Gaming Industry: Study of Financial Results and Reporting Trends, 1988, p. 21.

16. Planning Information Corporation, Nevada Local Government Revenues Analysis, May 1988.

SHOULD NEVADA ADOPT A LOTTERY?

"The Nevada casino gaming industry has always operated with some degree of paranoia. In the pre-corporation days, prior to the 1970s, the paranoia usually centered around the federal government making casino gambling illegal, or taxing it out of a profitable existence. It was also felt that things could get bad for Nevada if California ever allowed legalized casinos."¹

California did not legalize casinos but it did enter into the state lottery business in 1985. This activity has caused concern about the possible repercussions it could have on the state of Nevada, where casino gaming is the "major industry, major employer, and the major taxpayer."² This section will compare and evaluate the experience of the 26 states that have lotteries and then make recommendations on the best structure for any potential state lottery for Nevada, as well as the likely incidence of this revenue source and its revenue potential.³

THE LOTTERY: ITS STRUCTURE AND DEVELOPMENT

The Lottery Defined

A "lottery" is really any game of pure chance in which the "winner" is determined by a "lot" or drawing.⁴ Three elements must be present for a lottery to be considered as gambling: chance, consideration and prize. For example, if the tickets in a drawing are free a lottery is not gambling, even if prizes are awarded for playing the game. For lotteries to come under gambling laws, lots or chances must be purchased in return for a consideration. State lotteries usually conform to the "pure chance" rule, whereby the determination of winners is by pure chance; if any element of skill contributes to the determination of winners there is no lottery. The players may select a number to bet on, but this choice has no statistical effect on the chance of winning.⁵

Depending on the type of game, lottery tickets in the U.S. generally sell for \$.50 or \$1. On average, prizes account for 45 to 50 percent of the lottery gross. Administrative expenses range from 10 to 20 percent, and the remaining proceeds are retained by the state either as general revenue or for use in specific programs. The proportion of sales not returned as prizes is called the 'takeout rate.'

Emergence of the Lottery

Lotteries have a long history in America. The voyage of the Mayflower, the Revolutionary War, and the founding of Harvard, Yale and Dartmouth were all financed by lotteries.⁶

Pre-Revolutionary lotteries were used for the financing of various projects such as construction of transportation facilities, campaigns in the French and Indian Wars, local government expenses and so on. Private lotteries in which high value properties and personal possessions were raffled were used to liquidate personal debts. With the successful conclusion of the Revolution, the popularity of lotteries grew. The nation had a tremendous need for cash, and lotteries which enjoyed the public support were the logical solution. By 1820, the Congress had passed more than 70 acts authorizing lotteries for the financing of state and municipal bridges, wharves, water systems, schools, roads, and libraries. Private lottery operations also experienced significant growth over the same period.⁷

The growth in lottery use however, was accompanied by a increasing number of abuses and irregularities. The stigma produced by these improprieties convinced the states in 1893 to ban the use of all form of lotteries. At the dawn of the Twentieth Century, no states had lotteries while 36 state constitutions had provisions specifically outlawing them.⁸

Legalized lotteries re-emerged in 1963 when New Hampshire inaugurated a biannual sweepstakes. In 1967, New York became the second state to start a lottery with monthly lottery drawings.

Both these lotteries were disappointing in fiscal terms. Their major failing was that drawings occurred too infrequently, which made it difficult to maintain consumer interest. In 1970, New Jersey became the third state to institute a lottery. Learning from the lessons of New Hampshire and New York, New Jersey increased the frequency of its drawing and lowered ticket prices. The revenue yields of the New Jersey lottery exceeded all expectations, and prompted other states to consider using lotteries as revenue-raising tools.

By 1980, 13 States were operating lotteries. As of April 1988, 26 States plus the District of Columbia operate lotteries (total 27). Two states--Virginia and Wisconsin--are in the process of establishing lotteries. Two states--Indiana and Idaho--will be voting on legalizing lotteries this year.⁹ U.S. lottery states fall into two groups--those who started lotteries just prior to or during the 1970s (13 states), and those who began lotteries in the 1980s (13 states plus the District of Columbia).¹⁰ Figures 1 and 2 are graphic representations of the emergence of lotteries in the various states from 1963 to 1988.

Lottery Games

According to Edward Stanek, the director of the Iowa lottery, a lottery is ".....different for each area. There's a different sociological mix, different history, different spending habits, different economy, a different mix of ages and sexes -- all of which influences what's going to happen with a lottery."¹¹ There are five basic types of lottery games in use in various states today. They are passive, instant, numbers, lotto, and video.

The Passive Game

The first lottery game which started in New Hampshire was a passive game. The passive lottery is one in which the player purchases a ticket with a pre-printed number on it. Most, but

not all the lottery states had a passive game at one time or another, only to replace it with more visual (instant lottery or video terminals) or active (numbers or lotto) games. Only a few states still have passive games, selling tickets through the mail on a subscription basis.¹²

The Instant Lottery

All state lotteries operating today provide an instant game. In most cases tickets cost 50 cents; sometimes they cost a dollar. The first instant game lottery ticket was sold by the Massachusetts State Lottery on May 28, 1974 and became an 'instant' success. These games are played by scratching off a part of the ticket to reveal a number or symbol indicating immediately whether the player has won or not. Of the various lottery products, the prize winnings from this game are usually the smallest, but the probability of winning is generally the highest. The instant game is usually the first type of lottery game to be established in a state because it can become operative very quickly. It does not involve any computer or on-line terminals; all it requires is a seller. However, once the bigger prize games become available, and the computerized network becomes operative, interest in the instant game usually diminishes.

Numbers

This game is also called "Daily Numbers," "Pick 3," or "Pick 4" by some states. The New Jersey State Lottery introduced the nation's first legal numbers game, "Pick-it," on May 22, 1975. "Pick-it" allowed players to choose their own three-digit number in a daily drawing. Today three-digit and four-digit games are the most common type of "numbers" game. The player selects a series of one-digit numbers and can win either a "straight bet" where the player has selected the correct digits in the correct

order, or a "boxed bet" in which the digits are correct but the order wrong. There may also be a payoff for a "leader" ticket in which the first digit is correct, or a "bleeder" ticket in which the last two digits are correct. Three-digit numbers games are so popular that in some states they are played daily. Four digit numbers games tend to be played daily in larger states, weekly in smaller ones.

Legal numbers games first originated with an intention of reducing illegal number games. However this has not been proven to be effective; studies show that adoption of legal numbers games in the form of lotteries have had little or no effect on illegal gambling.¹³

Lotto

The lotto games receive the most publicity. Lotto is a pari-mutuel game in which huge jackpots may be awarded. In lotto the player selects six numbers, and if the numbers selected exactly match those drawn by the lottery commission he/she wins the first prize. Lesser prizes are awarded for other combinations--five out of six correct, four out of six correct, etc. When customers want to buy tickets, they can either select the numbers themselves or ask the computer to select one. There is absolutely no difference in the odds of winning whether the individuals select the numbers themselves or the computer does. Since lotto games are pari-mutuel games, the pay-off depends on the number of people who play. The more people who play and the longer the game goes without a winner, the larger the 'pot' becomes. Since each player has the option of picking his or her own prize number, it is possible for several players to have the same number. In this case the jackpot prize is split evenly among the ticket holders.¹⁴

Lotto has recently declined in popularity as a mass market product. The solution to this in the near future may be new boutique games, aimed at replacing simple wagering with complex

bet offerings. The new lottery products being considered are card games offering payoffs as high as 1,000 times the bet, jackpot 'bridge' games linking up 3 and 4-digit games called "Push 7", and on line 'bingo' called "Bingo-Lotto."

Multi /State Lotteries

Lotto generally does not work well in states with small populations, because it is difficult to generate a large enough jackpot to interest people in playing the game. This problem is especially severe for those states which are surrounded by highly populated lottery states and whose citizens cross the border in the hope of winning larger jackpots.¹⁵ This lead to the creation of the multistate or regional lotto game. In September 1985, three states in the East--Maine, New Hampshire and Vermont--were the first states to combine their resources and form the "Tri-State Lotto Game". These states teamed up after realizing that they could not compete with the awards being offered by neighboring Massachusetts and New York. The sale proceeds are split up among the three states in proportion to the number of tickets sold in each state.

A second combined lottery began early this year (1988) when Iowa, Kansas, Missouri, Oregon, Rhode Island, West Virginia and the District of Columbia began selling tickets to Lotto America. Unlike the Tri-States, these states have not combined administrative operations and continue to operate their own games in addition to the multistate game. Discussions are also taking place between Illinois, Michigan, New York and Ohio for a combined lottery between these four states.

The Video Games

Lottery video games are also known as PALMS (player-activated lottery machines). These games are very similar to video games played at arcades, but they differ from them with respect to

price. The lottery games are more expensive--being played for a dollar rather than a quarter or 50 cents. The objective of the game is to obtain a score which matches a number flashed on the screen. A higher score or greater skill does not increase the chance of winning. If the player wins, he receives a ticket from the machine which is then cashed for the amount of the prize.¹⁶

Lottery video games are similar in principal to slot games, and therefore they are still a controversial subject and prohibited by many lottery states.

Keno

The lottery game 'keno', patterned after the casino game was offered by only two states, New York and Pennsylvania, by mid-1987. As more states begin marketing 'keno' as a lottery, its name will probably be changed to 'Pick-15'. The reason for this was bluntly stated by New York lottery director John Quinn--"Keno has a casino connotation. It's a slightly dangerous title for a lottery."

In 'keno' the player selects a limited group of numbers (example 12) from a larger field (80) and the lottery picks a still larger group of numbers (20) from the field. "The greater the number of correct picks the higher the payoff. Both the predetermined payoff and the odds depend on how many numbers the player has selected."¹⁷ The chief attraction of keno is that players can set their own odds and also, keno yields better middle range prizes than does lotto.

Lottery Product Mix

Charles Clotfelter and Philip Cook have gathered data on the changing product mix of three state lotteries--Connecticut, Massachusetts, and Pennsylvania. Each of these states first instituted weekly draw games in the early 1970s. The instant games were adopted next, and the weekly draw games lost sales to

the new entrant. Daily numbers games were the third product to be adopted. The numbers games grew both in terms of dollar sales and as a proportion of the entire tri-state lottery market. Numbers accounted for about one third of total sales in 1977, but for three-fourths of the total in 1981. The fourth entrant to the lottery market was lotto, which accounted for 1 percent of the Connecticut-Massachusetts-Pennsylvania total in 1981, but for over 40 percent in 1985.¹⁸

Table 1 shows the total lottery ticket sales by state for calendar year 1987 and the percentage of sales accounted for by instant numbers, lotto and other games. For the U.S. as a whole, lotto accounts for 40 percent of the total, numbers for 36 percent, instant for 23 percent and other games such as video, passive, and subscription account for 2 percent.¹⁹ The variation in reliance on these games among the states is considerable, though. The three states listed in Table 1 that most recently entered the lottery business, Kansas, Montana and South Dakota, each operate instant lottery games only. Eastern states appear to rely most heavily on numbers games, with Delaware, District of Columbia, and, Maryland each deriving more than two-thirds of their sales from numbers games. The states deriving more than two-thirds of their sales from lotto are Western states--Arizona and Washington.

ISSUES OF IMPLICIT STATE TAXATION THROUGH LOTTERIES

Purpose of a State Lottery

The apparent primary purpose of state lotteries is to produce revenues for state treasuries. The operation of lotteries in 23 jurisdictions in 1986 resulted in \$12.3 billion in lottery sales, of which just under \$5 billion was a net contribution to state coffers. Table 2 shows net state government revenues from the operation of lotteries, in total,

TABLE 1
U.S. LOTTERY GAMES AS A PERCENTAGE
OF TOTAL SALES, 1987

State	Percentage of Total				Total (\$Million)
	<u>Instant</u>	<u>Numbers</u>	<u>Lotto</u>	<u>Other</u>	
Arizona	22½	—	78½	—	\$ 151.6
California	56	—	44	—	1,619.3
Colorado	97	—	—	3	98.4
Connecticut	15	32	53	—	518.7
Delaware	14	67	18	—	50.0
District of Columbia	3	88	8	2	119.2
Illinois	19	33	49	—	1,312.3
Iowa	71	—	29	—	110.3
Kansas	100	—	—	—	20.7
Maine	36	11	53	—	74.2
Maryland	9	70	21	—	778.9
Massachusetts	34	31	32	3	1,270.0
Michigan	12	49	39	—	1,011.5
Missouri	72	9	18	—	157.9
Montana	100	—	—	—	157.9
New Hampshire	45	9	46	—	15.6
New Jersey	7	54	38	—	1,142.4
New York	5	42	48	5	1,540.5
Ohio	16	40	43	—	1,203.7
Oregon	44	6	50	—	127.8
Pennsylvania	16	46	28	10	1,401.0
South Dakota	100	—	—	—	11.7
Vermont	58	4	38	—	31.9
Washington	25	7	69	—	190.2
West Virginia	63	16	20	1	58.7
TOTAL	23	36	40	2	13,081.9

Source: Gaming and Wagering Business.

TABLE 2
U.S. LOTTERIES NET GOVERNMENT REVENUES, 1986

State	Net Government <u>Revenues</u> (\$ millions)	Net Govern- ment Revenues <u>Per Capita</u>	Net Government Revenues as a Percentage of Total Tax <u>Revenues</u>
Arizona	\$370	\$12	1.2%
California	692.0	26	2.2
Colorado	29.2	9	1.2
Delaware	16.7	27	1.9
District of Columbia	40.0	64	23
Illinois	545.7	47	5.6
Iowa	27.5	10	1.1
Maine	11.8	10	1.1
Maryland	323.4	74	6.9
Massachusetts	382.6	66	5.0
Michigan	415.0	46	4.5
Missouri	81.1	16	2.2
New Hampshire	10.7	11	2.2
New Jersey	418.2	55	5.0
New York	607.8	34	2.7
Ohio	370.0	34	4.1
Oregon	28.1	10	1.5
Pennsylvania	537.8	45	5.0
Rhode Island	21.6	22	2.4
Vermont	3.3	6	0.7
Washington	69.3	16	1.3
West Virginia	20.0	10	1.1
TOTAL/AVERAGE	\$4,880.3	\$31	2.9%

Source: Gaming and Wagering Business, March 15, 1988 and U.S. Census, State Government Tax Revenues.

per capita, and as a percentage of total tax revenues. Net government revenues per capita range from \$6 in Vermont to \$74 in Maryland, with an average of \$31. Lotteries contribute an amount to state revenues that averages 2.9 percent of total state tax revenues, but which ranges from 0.7 percent (Vermont) to 5.6 percent (Illinois).

Although the proliferation of state lotteries appears to be largely revenue driven, lotteries do not by any means constitute a major state revenue source. John Mikesell and Kurt Zorn ranked net lottery proceeds among state tax sources using 1985 data. Of the 16 states and the District of Columbia they considered, the state lottery ranked highest in Maryland, where it could be considered the fourth most important tax source, next in importance to the motor fuel excise tax. In Vermont the lottery ranks 15th in importance as a state "tax" source, just after death and gift taxes. Other taxes ranked just higher than the lottery in terms of revenue productivity were alcohol beverage excess, hunting licenses, insurance excise, documentary tax, motor vehicle license tax, corporate income tax, and public utility excise.²⁰

Despite the modest yield of lotteries relative to other tax sources, the lottery revenue is important for at least two reasons. First, in the face of balanced budget requirements, in difficult fiscal circumstances even a 2 percent increase in state tax revenues can be important to a state's budget. Second, as discussed further below, because lotteries are generally politically popular, and can be considered a voluntary tax, they can make an important contribution to a politician's objective of minimizing taxpayer resistance per dollar of state revenue collected.

Another justification given for enacting state lotteries is to reduce illegal gambling in the state, by providing a competitive legal alternative. This however has been proven ineffective. To obtain maximum revenue, state lotteries usually

have adopted a high takeout rate (the amount not returned in prizes), as compared to illegal numbers. This has made the effective "price" of state lotteries high relative to the "price" of illegal gambling. In order to eliminate illegal gambling, the government's price would have to be more closely comparable to that of the illegal gamble. Also, state lotteries are marketed in neighborhoods where illegal numbers are not really operative. The result is that two kinds of markets begin to exist in the state (legal and illegal), both catering to different segments of the society.²¹

Stability/Instability of Revenues

Although lotteries may make a significant contribution to state revenues on the margin, it is important to note that lotteries have not proven to be a stable source of revenue. The data in Table 3 give the annual growth in net revenues by state for fiscal years 1977-78 through 1983-84. Of the 17 states, thirteen experienced reductions in their lottery revenue in at least one year. Moreover, there are sizeable variations in growth rates both within and across the states from year to year. Some of this variance is due to reductions in sales after an initial burst in popularity, to successful adoptions of new games, or to the enactment of lotteries in neighboring states. Some of the variance is probably directly correlated with the ups and downs of the business cycle.

Tax or Voluntary Activity

There is currently no consensus whether the lottery is a form of taxation or a voluntary activity. According to Charles T. Clotfelter and Philip J. Cook, since the lottery revenue earned by the state treasuries is used to support other activities of these governments, it is appropriate to call this transfer an

TABLE 3
GROWTH OF NET REVENUE FOR STATE LOTTERIES
BY STATE, 1977-1984
(PERCENT CHANGE)

State	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Arizona	-	-	-	-	-	-49.7	-13.4%
Colorado	-	-	-	-	-	-	-19.8
Connecticut	50.4	2.2	47.67	8.7	12.6	18.1	31.4
Delaware	72.7	152.6	31.3	22.2	10.4	17.7	30.0
Illinois	-28.9	-24.8	28.3	143.0	62.6	51.9	75.9
Maine	12.5	-22.2	-50.0	57.1	118.2	58.3	21.1
Maryland	64.7	16.2	42.5	-7.6	21.5	-4.9	9.4
Massachusetts	15.3	-0.8	21.4	-29.9	7.1	21.5	26.3
Michigan	48.3	23.4	17.0	-16.6	0.8	8.3	7.0
New Hampshire	20.0	-6.7	32.1	5.4	35.9	7.6	-3.5
New Jersey	18.4	26.8	21.8	27.4	18.5	37.5	20.6
New York	-	-9.5	-2.5	16.5	84.5	50.2	41.7
Ohio	-37.4	0.0	-6.3	214.3	33.3	-2.1	67.0
Pennsylvania	97.8	32.1	11.9	6.9	34.3	56.5	45.1
Rhode Island	33.7	33.3	12.2	-28.9	8.5	12.5	20.8
Vermont	-	-	-	150.0	100.0	10.0	9.1
Washington	-	-	-	-	-	-	-12.9
Total	46.9%	13.3%	19.8%	9.7%	31.6%	32.8%	21.3%
District of Columbia	-						

Source: U.S. Department of Commerce, Bureau of the Census, State Government Finances, assorted years. Compiled by John L. Zikesell and C. Kurt Zorn in "State Lotteries as Fiscal Savior or Fiscal Fraud: A Look at the Evidence," Public Administration Review, (July/August 1986).

"implicit tax" on the operation of lotteries.

According to Thomas Jefferson, lotteries have always been an ingenuous way to "tax the willing." At the same time it is also argued that lottery participation is voluntary and thus revenues from the lottery are not raised in a compulsory manner. Using this argument, state lotteries can then be considered as a monopoly business operated by the public sector where profits accrue to state use.²²

Roger E. Brinner and Charles T. Clotfelter argue that by legalizing a lottery the government provides a "new" consumer good, leading to an increase in consumer welfare. At the same time the government also assesses a 'tax' (take out rate) on the good. "[therefore].....the decision to both provide and tax lottery tickets yields a net increase in consumer surplus, but the decision to impose a tax, given the decision to legalize the lottery, creates a deadweight loss. as long as some other tax can be raised with less efficiency loss, it would be preferable for states to make lotteries available, but to reduce the rate of taxation on them."²³

Lotteries Impose a Regressive "Implicit Tax"

In a forthcoming book on lotteries, Charles Clotfelter and Philip Cook review a number of studies of the incidence of implicit taxation through state lottery operations.²⁴ These studies rely on data from 1971 through 1986 collected for the U.S. as a whole and for nine states and Western Canada. Each of these studies concludes that as an implicit tax, lotteries are regressive.

Specifically, Clotfelter and Cook have calculated a statistic for each study that summarizes the degree of regressivity of the lottery tax. This statistic, known as a tax concentration index or Suits index, can vary from -1 to +1, with -1 indicating maximum regressivity, +1 indicating maximum progressivity, and 0 indicating a proportional tax. According to

Clotfelter and Cook's survey, the calculated tax concentration indices for state lotteries range from $-.10$ to $-.48$, with an average of $-.36$. This information indicates that as a tax, lotteries are among the most regressive. Clotfelter and Cook calculate the tax concentration index for alcohol taxes as $-.21$ and tobacco taxes as $-.38$, while the federal income tax is measured at $+.14$ and state and local income taxes at $+.09$.

Although the incidence of all lottery games appears to be regressive, these games vary in the degree of their regressivity. The data compiled by in a paper by Clotfelter and Cook, as well as an earlier study by Clotfelter imply that numbers games may be the most regressive form of lottery, while lotto games, particularly during the times they promise a large jackpot, may be the least regressive.²⁵

The evidence that a state-run lottery imposes a regressive implicit tax does not necessarily rest on evidence of disproportionately higher lottery sales among low income households. Some studies show that lottery expenditures increase with income; the Clotfelter and Cook paper finds no clear relationship between income and level of expenditures. Even if low income groups spend about the same on lotteries as high income groups, though, this represents a larger proportion of their income, and makes the implicit tax from lotteries regressive. The following section will examine some of the other dimensions of the demographic profile of the lottery ticket purchaser.

Who Plays the Lottery?

One of Clotfelter and Cook's most important findings was that lottery expenditures are more heavily concentrated within a small group of the population than are expenditures on other consumers, even including such items as tobacco and alcohol.²⁶ For example, in their analysis of data from a Maryland survey they conclude:

Especially striking is the very heavy play among the most active players in the lowest income classes. For the most active 20 percent in the under \$10,000 class, average weekly spending on the lottery was an astounding \$30. The dispersion in lottery expenditures within income classes shown here makes it clear that a relatively small proportion of households in each income class is contributing a disproportionate share of the revenue from the lottery.²⁷

The Clotfelter and Cook paper as well as another recent study by Borg and Mason present further information on the demographic characteristics of those most likely to purchase lottery tickets.²⁸ Clotfelter and Cook reported results from a Maryland survey; Borg and Mason used data from a survey of lottery winners in Illinois.

- o Both studies found that blacks spend more than whites on lottery tickets on average. According to Clotfelter and Cook, blacks spent about \$4.50 more per week. According to Borg and Mason, blacks spent about \$6 more per week than whites.
- o Borg and Mason found that the amount of money spent on lottery tickets increased with age; Clotfelter and Cook found that lottery purchases were highest for individuals in their peak earning years, all else equal.
- o Clotfelter and Cook found that college graduates spent less on average than non-graduates. Borg and Mason found a significant negative correlation between years of schooling and purchases of lottery tickets.
- o Because the Borg and Mason data were for households, they did not include an independent variable representing sex of the lottery player. Clotfelter and Cook did include such a variable and found that spending on lottery tickets was higher for males than for females.

Earmarking

Earmarking lottery revenue is viewed as one method of bolstering political support for their establishment. Out of the 27 states and the District of Columbia that are operating or have enacted lotteries in 1988 and for which information is available, 17 earmarked lottery revenues while the remaining channelled lottery revenues into the general fund. Eight states dedicated their revenue to education, while the others earmarked their funds for transportation, capital construction, senior citizens, economic development, parks, or state revenue sharing to local governments. The only state earmarking lottery proceeds for a use related to lotteries is New Jersey, which earmarks a small proportion of net proceeds for studies of compulsive gambling. (Table 4.)

However despite the prevalence of earmarking lottery proceeds, the issue of earmarking is somewhat controversial. The debate centers around the fungibility question. That is, do the lottery revenues really increase monies allocated to the earmarked function, or do they simply substitute for revenues that would have been otherwise appropriated?²⁹ An empirical test on this issue by Mikesell and Zorn yielded inconclusive results.³⁰

Because such a large proportion of states' net lottery proceeds are earmarked for particular expenditure purposes, it is useful to examine an alternative concept of the lottery's incidence. Rather than analyzing the incidence of the "implicit tax", one might analyze the incidence of the entire tax-expenditure package.

Mary Borg and Paul Mason have examined the Illinois lottery, which is earmarked for educational spending, from such a perspective. They include that "deducting the benefits of education received by the average lottery playing household in Illinois from their lottery ticket expenditures reduces the regressivity but falls far short of eliminating it."³¹

TABLE 4
 earmarking of net lottery proceeds

<u>State</u>	<u>Purpose</u>
Arizona	Transportation
California	Education
Colorado	Parks and recreation, capital construction
Connecticut	—
Delaware	—
District of Columbia	—
Florida	Education
Illinois	Education
Iowa	Economic development
Kansas	Economic development
Maine	—
Maryland	—
Massachusetts	Local government
Michigan	Education
Missouri	—
Montana	Local schools
New Hampshire	Education
New Jersey	Education, institutions also studies of compulsive gambling
New York	Education
Ohio	Education
Oregon	Economic development
Pennsylvania	—
Rhode Island	—
South Dakota	—
Vermont	—
Washington	—
West Virginia	—
Wisconsin	Property tax relief

Source: ACTR, Significant Features of Fiscal Federalism 1988 Edition, Volume II, July 1988, p. 90.

"Price" of the Lottery

State governments extract a higher percentage of the handle, or gross sales from lotteries, than they do from any other form of commercial gambling. This percentage, called the takeout rate, is what constitutes the price of betting to the bettor. The greater the takeout rate, the greater the average loss per dollar bet. Therefore from the consumer's point of view this makes lottery tickets the most costly of all commercial gambles.³²

Takeout rates vary widely from game to game. The take out rate for lottery states shown in Table 5, averaged 50.9% in fiscal 1985 (49.1 percent returned to players) and ranged from 45.8 to 56.7 percent. Recent percentages returned to players in other games averaged 89 percent in slot machines, 94.7 percent in roulette, 98.5 percent in baccarat, and 98.6 percent in craps, indicating that returns from the lottery are very low, and that the state government's monopoly position is a heavily exploited one.³³

Another way to look at this is to compare the rate of state and local implicit taxation of lotteries to tax rates for liquor, wine, beer, and tobacco products. Clotfelter and Cook have made these calculations for 1985.³⁴ According to their figures, the average state and local tax rate on lotteries in 1985 was 35 percent, which was followed by an average 20 percent rate on tobacco products, 14 percent on liquor, 9 percent on wine and 7 percent on beer.

General issues relevant to adoption of a state lottery have been examined in the previous pages. From the point of view of Nevadans, the relationship between lotteries and casino gaming is of particular interest. The following sections compare and contrast the two products, then report empirical evidence on the effect of lottery sales on casino revenues and vice versa.

TABLE 5
Distribution of the Income Tax Liability Under
Alternative Tax Structures: 1990*
(Dollars in Millions)

	<u>Option 1</u>		<u>Option 2</u>		<u>Option 3</u>		<u>Option 4</u>	
<u>Income Class</u> <u>(Thousands)</u>	<u>Tax</u> <u>Liability</u>	<u>% of</u> <u>Total</u>	<u>Tax</u> <u>Liability</u>	<u>% of</u> <u>Total</u>	<u>Tax</u> <u>Liability</u>	<u>% of</u> <u>Total</u>	<u>Tax</u> <u>Liability</u>	<u>% of</u> <u>Total</u>
\$ 0-10	\$ 2.5	0.7%	\$ 7.6	2.3%	\$ 2.9	0.8%	\$ 2.4	0.7%
10-20	20.2	6.1	27.1	8.3	23.0	6.5	19.7	5.8
20-30	29.0	8.7	32.5	10.0	31.7	9.0	27.3	8.0
30-40	26.4	7.9	27.5	8.5	28.8	8.2	25.1	7.3
40-50	34.0	10.2	33.3	10.2	36.2	10.3	31.9	9.3
50-75	73.6	22.0	68.7	21.2	77.3	22.0	71.9	21.0
75-100	32.4	9.7	29.2	9.0	33.3	9.5	33.0	9.6
100-200	34.3	10.3	30.2	9.3	34.5	9.8	35.9	10.5
200 and over	<u>81.5</u>	<u>24.4</u>	<u>68.6</u>	<u>21.1</u>	<u>84.5</u>	<u>24.0</u>	<u>95.2</u>	<u>27.8</u>
Total	\$333.9	100.0%	\$324.5	100.0%	\$352.1	100.0%	\$342.5	100.0%

*Tax liabilities are for calendar year 1990.

LOTTERIES AND CASINO GAMES

There are both similarities and differences between lotteries and casinos. The similarities are few - basically their purposes, i.e. to provide entertainment to the public and revenue for the government. The differences are seen in product mix, availability, and basic administration.

Similarities

- o Entertainment is defined as--the act of diverting, amusing, or causing someone's time to pass agreeably; something that diverts, amuses or occupies the attention agreeably.³⁵ Both lotteries and casinos can therefore be considered as a source of entertainment.
- o From the state's point of view, a primary purpose of both lotteries and casinos may be to provide revenue for the government.
- o All lottery games (instant, numbers, lotto, passive and others) and some casino games (roulette, craps, big six wheels, and slot machines) are considered to be games of pure chance.
- o The instant games of lottery, and slots and craps of casino gaming involve 'player participation'. This may give rise to the erroneous perception on the part of the player that his/her participation can affect the games outcome. Therefore an illusion of control over the event is produced when actually it is a game of pure chance.
- o The lottery instant game is very similar to casino slot machines and is sometimes referred to as a "paper slot machine." The game of keno is also being adapted to serve as a lottery.
- o Earmarking of lottery and casino revenues is usually one way of getting public approval for legalization.

Differences

o Lottery games are few in number (passive, instant, number, lotto, video and keno). Casinos offer a greater variety of games (poker, blackjack, pai-gow, craps, roulette, baccarat, keno, bingo, pari-mutuel, jai-alai, bookmaking and slot machines).

- o Lottery games do not require any skill to be played. On the other hand certain casino table games, roulette and others, require a certain amount of skill and knowledge.
- o In the United States, lottery operations are agencies of State government. Casinos in Nevada and Atlantic City are privately-owned but regulated by state government.
- o State lotteries have a larger number of sales outlets than any other form of legal commercial gambling. Lottery tickets are available at newsstands, supermarkets, gas stations, hotels, restaurants and other retail establishments that act as state lottery ticket agents. Casino games in Atlantic City and Nevada are available in far fewer locations, with the exception of slot machines in Nevada which are operated by a large number of nonrestricted operations.
- o Unlike lotteries which involve a casual purchase,... "casino games [with the exception of slot machines in nonrestricted locations] are played in a timeless, hermetic environment of elaborate unreality."³⁶ For instance, casino floors have neither clocks nor windows.
- o Lottery tickets usually cost 50 cents to a dollar. Slots are the only casino games comparable to this. The majority of casino games involve very high stakes.
- o Casino gaming is the only form of commercial legal gambling offered on a credit basis.
- o Lotteries have a high takeout rate - usually between 50 to 60% of the gross sales or handle. Casinos extract only 2% or less of the gross handle.
- o There exists a strong debate about the question of whether state use of monopoly profits from lotteries constitutes a form of taxation--voluntary or otherwise. On the other hand, explicit taxes are imposed on casino in the form of casino and entertainment taxes. Further taxable revenues on casinos are derived from licence fees.
- o As a form of implicit taxation, lotteries have

a regressive incidence. Revenues raised from taxation of casinos may have a less regressive, or under some circumstances, even a progressive incidence. For example, to the extent that gaming taxes in Las Vegas are borne by tourists who can afford to travel to Las Vegas from the East Coast, these taxes may have a progressive incidence.

THE EFFECT OF LOTTERIES ON GAMING REVENUES

The adoption of the lottery by California in 1985 and its unsurpassed success has caused concern in Nevada about the possible effects it could have on Nevada's gaming revenue. This section seeks to evaluate that concern by using the empirical method of regression analysis. Two batches of regressions were run, one dealing with the effect of the lottery and other factors on Nevada's gaming revenues, and the second dealing with the effect of the Atlantic City casino on the New Jersey lottery. The experience of the two states cannot be considered parallel, because New Jersey experienced a reversed situation, first having the lottery (1971) and then the Atlantic City casinos (1978). Therefore results of the New Jersey regression are included in the appendix and only briefly described in the following text.

William R. Eadington, professor of economics at the University of Nevada-Reno has put forward three alternative hypotheses regarding the potential effect of the California lottery on Nevada's casino industry.³⁷

- o Lottery may whet the appetite for further gambling, and therefore the lottery in California could lead to increased gaming in Nevada. In other words, lotteries and casino gaming might be complementary goods.
- o Individuals face limited budgets, and therefore spending on lotteries could decrease spending on other gaming activities. In other words, the two goods may be substitutes.
- o The lottery is a new product, and therefore consumers may slightly decrease their expenditure on other broad ranges of goods to consume the lottery. In this situation lottery and casino games would be independent of each other and therefore be independent goods.

According to Eadington, the most likely scenario is that lotteries and casino products will go through the cycle of first being independent goods, then complementary, and finally substitutes. Thus the negative effect of the lottery on casino gaming would not be seen immediately, but rather only in the long

run. However data are not yet available to empirically test Eadington's hypothesis.

The view within the Nevada gaming industry ranges between the belief that the California lottery has had a minor negative impact on Las Vegas, to the belief that the negative impact, if it exists, has fallen only on Reno. The reason for the latter belief arises from the fact that the California lottery can be considered as a substitute for casino gaming only for those individuals who are on the middle income bracket, elderly and retired, and who make day trips from the Bay area of California into the Washoe and Douglas counties of Nevada. Las Vegas on the other hand, caters to an nationwide and international clientele, and day trip customers account for a very small percentage of its market. At this point it is important to note that the growth slowdown for casino gaming revenue in Nevada after the start of the California lottery is due to the combined effect of several factors, and cannot be attributed solely to the California lottery.³⁸

REGRESSION ANALYSIS

The Data

The first batch of regressions deal with the effect of lotteries and other factors on Nevada's gaming revenue. Table 6 shows the four regressions that were run.*

The first two regressions use Nevada real casino gaming revenues as the dependent variable. Since it is felt that the negative impact of the California lottery has fallen more on Reno rather than Las Vegas, the third and fourth regressions consider this impact individually on Washoe and Clark county casino gaming revenues respectively. Since tourists account for approximately 90% of Nevada's casino gaming revenue, it was felt more appropriate to use the United States real disposable personal

* A copy of this table may be obtained from the Urban Institute

income as one of the independent variables. Only the regression on Washoe county, (which caters more to local and neighboring state's customers), involves the use of Nevada real disposable personal income. Also since tourist spending accounts for such a large percentage of Nevada's gaming revenue, United States CPI air fare and CPI gasoline prices have been included as independent variables. A more detailed analysis of the effect of the tourist industry on Nevada's gaming revenue has already been dealt with on the chapter on tourism.

Since data for the California lottery is available only for 1985 and 1986, the missing variables for the earlier years make it statistically impossible to use the sales of the California lottery as an independent variable. Instead a dummy variable was inserted (dummy = 1) for the years of the California lottery-1985 and 1986. The impact of sales of lottery only in the neighboring states of Nevada (Oregon, California and Arizona) on Nevada gaming revenue showed some very interesting results. More specifically only the impact of Arizona and California lottery on Clark county casino gaming revenue; and Oregon and California lottery on Washoe county casino gaming revenue were considered. All the regressions were run in logs. The method of ordinary least square estimation was used.

The Analysis

The U.S. real disposable personal income has a significant positive effect on casino gaming revenue in all four regressions. This direct positive effect reconfirms the existing trend, i.e. with an increase in income people tend to increase their spending on casino gaming. U.S. air fare has a strong negative effect on casino gaming revenue for all equations except the one including Washoe County gaming revenues only. The increase in air fare a few years ago did lead to a decrease in gaming revenue in Nevada. The U.S. gasoline prices show a small positive impact on gaming revenue for the state of Nevada, and for Clark county. Washoe

county which has a lot of day customers coming from across the California border, is effected negatively by an increase in gasoline prices. This negative effect however is not statistically significant.

The effect of the lottery sales either as a dummy variable or a combination of the neighboring state sales on the total Nevada casino gaming revenue is seen to be negative. However none of these coefficients are statistically significant. It is interesting to note that while the Arizona and California lottery has a weakly positive (but not statistically significant) effect on the casino gaming revenue of Clark county (Las Vegas), the Oregon and California lottery do have a statistically significant, negative effect on Washoe county (Reno). This is by far the most interesting result of the analysis, and confirms the feeling in the casino gaming industry - that the California lottery has lead to a decrease in the casino revenues only in Reno. This coefficient predicts that for every extra \$100 of lottery ticket sales in California or Oregon, Washoe gaming revenues will drop by \$2.

After running the regressions and analyzing the results, it seems reasonable to assume that the California lottery has had a slight negative impact on Nevada's casino gaming revenues to the extent that it has effected the revenue of one county - namely Washoe. However it is important to note that Oregon started the lottery only in 1985 as did California, and Arizona started the lottery only in 1982. Therefore the various combinations of sales of lottery tickets for the neighboring states exists only for the years 1985-1986, or 1982-1986. This omission or lack of variables for the earlier years (1970-1982) could raise questions regarding the validity of the estimated negative impact. The availability of additional data in future years could increase the precision of the results.

A regression run on New Jersey data, described in the* appendix, produces an alternative assessment of the relationship between casino gaming and lottery sales. In New Jersey the

* The Appendix may be obtained from the Urban Institute

lottery was started in 1971, while casino gaming in Atlantic City came on line in 1978. According to one interpretation of the regression result, lottery sales and casino gaming in New Jersey are complementary goods, rather than substitutes.

ENDNOTES

1. Eadington, William R., "Possible Effects of the California Lottery on Nevada's Casino Industry: The Early Evidence," Nevada Public Affairs Review, 1986, Number 2, p. 7.
2. Eadington, William R., "Possible Effects of the California Lottery on Nevada's Casino Industry: The Early Evidence," p. 7.
3. Although the Nevada Constitution currently prohibits a lottery (Article 4, Section 24), which would increase the difficulty of legalizing a lottery because of the lengthy process involved in a constitutional change, this does not mean that Nevada should not consider the pros and cons of such a policy change.
4. Craymer, Dale K., "Texas and the Lottery," A Background Analysis for The Select Committee on Tax Equity, 1988.
5. Abt, Vicki, James F. Smith, Eugene M. Christianson, The Business of Risk, University Press of Kansas, 1983, p. 55.
6. Vogel, Harold L., Entertainment Industry Economics, Cambridge University Press 1986, p. 240.
7. Esenwein, Gregg A. and Gary W. Shorter, "A National Lottery: Overview and Economic Analysis," CRS Report for Congress, October 7, 1987, p. 2-3.
8. Craymer, Dale K., "Texas and the Lottery," p. 3.
9. North Dakota voters have twice rejected lottery proposals and the issue is not expected to be on the ballot this year. However, it appears likely that voters will have another opportunity to vote on legalizing lotteries in the near future.
10. Witt, Elder, "States Place their Bets on a Game of Diminishing Returns," Governing, November 1987.
11. Witt, Elder, "States Place their Bets on a Game of Diminishing Returns," Governing, November 1987.
12. Craymer, Dale K., "Texas and the Lottery," p. 6.
13. Abt, Vicki, James Smith and Eugene Martian, The Business of Risk, p. 67-68.
14. Adler, Bill Jr., The Lottery Book, p. 14.

15. Carol, Jane, "The Lure of the Lottery," State Legislatures. April 1986, p. 26.
16. Craymer, Dale K., Texas and the Lottery, p. 8.
17. Mikesell, John L. and Zorn C. Kurt, "State Lottery Sales: Separating the Influence of Markets and Game Structure," Growth and Change, Fall 1987.
18. Clotfelter, Charles T. and Philip J. Cook, "Implicit Taxation in Lottery Finance," National Bureau of Economic Research Working Paper No. 2246, p. 4 and Figure 1.
19. Subscription games. In some states, players may purchase "subscription" to lotto and draw lotteries. Tickets are automatically issued for each drawing. In a number of states subscription games are separate from lotto and the draw lotteries.
20. John L. Mikesell and Kurt Zorn, "State Lotteries for Public Revenue," Public Budgeting of Finance, Spring 1988, p. 40.
21. Abt, Vicki, James F. Smith and Eugene M. Christianson, "The Business of Risk," p. 67.
22. Mikesell, John L. and Kurt Zorn, "State Lotteries for Public Revenue," Public Budgeting and Finance, Spring 1988, pp. 41-42.
23. Brinner, Roger E. and Charles T. Clotfelter, "An Economic Appraisal of State Lotteries," National Tax Journal, Volume 28, 1973, p. 398. Deadweight loss is the amount of welfare lost by the consumer which is not transferred over to the society or government. Overall, the welfare gain generated by the introduction of the consumer good will not be fully offset by the welfare loss produced by the tax and therefore there will be a net increase in consumer welfare.
24. Clotfelter, Charles T. and Philip J. Cook, Selling Hope: State Lotteries in the U.S., forthcoming, Table 11.1, "Evidence on the Incidence of Implicit Lottery Taxation and Other Selected Tax Bases."
25. Clotfelter, Charles T. and Philip J. Cook, "Implicit Taxation in Lottery Finance," National Bureau of Economic Research Working Paper No. 2246, pp. 11-13 and Charles T. Clotfelter, "On the Regressivity of State-Operated "Numbers" Games," National Tax Journal 32 (December 1979), pp. 543-548.
26. Clotfelter and Cook, NBER Working Paper, Figure 4.
27. Clotfelter and Cook, NBER Working Paper, p. 14.

28. The following statistics come from Clotfelter and Cook, NBER Paper, and Mary O. Borg and Paul M. Mason, "The Budgetary Incidence of a Lottery to Support Education," National Tax Journal 41 (March 1988), pp. 75-85.
29. Scott, Loren C. and Earl Ryan, "The Economics of State Lottery," Louisiana Tax Study, sponsored by Louisiana State University and Council for a better Louisiana, January 1987, p. 16.
30. Mikesell, John L. and Kurt C. Zorn, "State Lotteries as Fiscal Savior or Fiscal Fraud: A Look at the Evidence," Public Administration Review, July/August 1986, p. 314-316.
31. Borg, Mary O. and Paul M. Mason, "The Budgetary Incidence of a Lottery to Support Education," National Tax Journal 41 (March 1988), p. 75.
32. Abt, Vicki, James F. Smith and Eugene M. Christianson, "The Business of Risk," p. 64.
33. Mikesell, John L. and Kurt Zorn, "State Lotteries for Public Revenue," p. 43.
34. Clotfelter and Cook, NBER paper, Table 11.
35. Webster's Third New Unabridged International Dictionary, G.& C. Merriam Company, Springfield, Massachusetts, 1967.
36. Abt, Vicki., James F. Smith and Eugene M. Christianson, The Business of Risk, p. 79.
37. Eadington, William R., "Possible Effects of the California Lottery on Nevada's Casino Industry: The Early Evidence," Nevada Public Affairs Review 1986, Number 2, pp. 7-8.
38. Various factors which could lead to the reduced growth in casino gaming revenues in Nevada are as follows:
 - o The introduction of Regulation 6A in May 1985 (which mandated that casinos must report all cash transactions in excess of \$10,000 that take place in a casino).
 - o The lengthy Culinary union strike in April and May 1984, which decreased gaming revenues in Las Vegas during and after the strike.
 - o Record snowfall and rainfall in February 1986.
 - o Fog problems.

39. Gaming and Wagering Business apparently assumed a constant relationship between potential government revenues and a state's personal income.

40. Charles T. Clotfelter and Philip J. Cook, Selling Hope: State Lotteries in the U.S., forthcoming.

CHAPTER 14

THE SALES AND USE TAX

INTRODUCTION

The General sales and use tax is the single most important source of revenues for Nevada state and local governments. The \$495 million generated in 1986 accounted for 20 percent of total general revenues (a number that includes federal aid) for all state and local governments.

Unlike all other states that utilize the sales tax as a major broad based revenue source for State general fund uses, Nevada's sales tax is largely earmarked for use by local governments. In fact, only about a third of general sales tax revenues are free to go the state treasury--an amount (\$171 million in 1986) that accounts for 36 percent of total General Fund proceeds.

The three other statewide taxes--the 0.5 % Basic City County Relief Tax (BCCRT), the 1.75 % supplemental City/County Relief Tax (SCCRT), and the 1.5 % Local School Support Tax (LSST) account for the remaining two thirds of the tax. All four statewide sales taxes utilize the same tax base definition.

History of the Tax

A broad based general retail sales and use tax has been adopted by 45 states plus the District of Columbia. More than half of these states (24) adopted the tax during the decade of the 1930s as a response to budget problems of the Great Depression.

It was not until much later, however, that Nevada even seriously considered the use of the tax. As post WWI pressures grew for a more active public sector role in the economic affairs of the State, particularly with regard to the finance of public

education, the Sales tax began to receive increasing attention.

As Eleanore Bushnell writes, the start of Nevada's consideration of a sales tax can be dated by the publication of a February 1949 editorial by the fiscally conservative Nevada State Journal that concluded that in order to "meet ever increasing costs...perhaps (Nevada has) reached the point where a sales tax is necessary.... "1.

Then in March the Speaker of the Assembly (Peter Burke, D-Washoe), introduced a bill to impose a two percent sales tax, only to see it be defeated in a close vote due largely to the efforts of fellow Democrat James Ryan (Clark). Nevertheless, the Burke proposal got the sales tax debate rolling, with both political parties becoming involved on both sides of the policy debate.

Though the sales tax continued to be discussed during the 1951 and 1953 regular sessions of the legislature, no formal legislation was introduced. By 1954, however, the State was facing a financial crisis in public schools compelling Governor Russell (who had been elected in 1950 on a "no new taxes" platform) to call for a special session of the legislature to deal with the concern that rapid increases in enrollments during the past several years had led to the "distinct threat" of a "collapse of the educational system, due to deficit spending...."2

The Governor then backed away from the issue, thereby forcing the Legislature to take the lead. Proponents (largely from the small counties) argued for the tax based on the state's fiscal need, while the opponents (led by organized urban labor) held out for a tax source that would not force low income taxpayers to bear a disproportional share of the new tax solution. The proponents prevailed, winning majority votes in both the Republican Senate and the Democratic Assembly. As a result, school aid increased dramatically.

By the next year, however, the sales tax was met by a repeal petition. Concerned that the repeal of the two percent state sales

tax would again lead to a school finance crisis, a "Save our Schools Coalition" took the vote to the people in the form of a Constitutional referendum. The referendum won approval by a 2-1 majority of the voters in the 1956 General Election.

But there was a catch of historical accident that the proponents of the sales tax appeared to have not foreseen: a provision of the Constitution that provides that once a referendum is so approved no modifications can be made in it without the express voter approval at another general election. As a result, not only did the two percent tax rate become "Constitutional" but so did all the regulatory and administrative language.

The next severe public budget pressures came in the early 1960s. But, when the 1963 Legislature raised the sales tax rate from two to three percent, tax boost was rejected at the General Election.

The total dollar problem was resolved over the next few years by very creative Legislators (lead by Senator Carl Dodge, R-Fallon) who devised a plan to circumvent the two percent limitation through the enactment of the three additions to the basic two percent rate (1967, 1969, and 1981), with the proviso that these additions were local--not State--revenues.

In addition to the dollar problem, however, there remained the problem of the voters having written the administrative language of the sales tax into Constitution. Thus, in 1981, the electorate approved an amendment to the Constitution that would permit administrative and regulatory matters to be made through normal statutory and regulatory procedures.

But, once again, there was a "catch." As a tradeoff for getting the administrative law freed up, the amendment also called for the Constitutional exemption from the tax base of food for home consumption. (Art. X. Sec 3(a)).

As a result, what Nevadans have now--quite apart from the merits and demerits of the non-taxability of food, which is discussed below--is a sales tax in 1988 that still has embedded it in many

of the problems of 1956. As important as overall sales tax revenues are to the State, it is not the fully flexible tool of Legislative fiscal policy that a sound public administration requires. As discussed in Chapter 2, Nevadans would be well to not only consider removing all of the sales tax laws from the Constitution, but also firmly resolve to avoid going any further down a path of fiscal-policy-by-Constitutional initiative or referendum.

Sales Tax Overview

A sales tax is a tax on part of the disposition of income (consumption) rather a tax on the source of income (such as an income, inheritance, or gift tax). General sales taxes apply to expenditures on a broadly inclusive (but usually not comprehensive) set of taxable commodities; a selective sales tax, in contrast, is levied on a specific commodity such as gasoline, tobacco, or alcohol. General and selected sales can be and often are used simultaneously.

States that levy a sales tax also levy a compensating "use tax." The use tax applies at the same rate as the sales tax and is imposed on purchases made (e.g., by a Nevada resident) of taxable items made outside the state for use within the state. The use tax is complimentary to the sales tax and does not apply if the taxable property already has been, or will be, subjected to the sales tax.

The use tax would also apply to items initially purchased as exempt items (e.g., for resale at retail) but then taken out of inventory for personal or business use, and to items purchased from an in-state seller who does not collect the sales tax.

Several types of expenditures are normally excluded from the general sales tax base for any of five reasons. First, policymakers might exempt certain items, such as expenditures on food purchased for home preparation and consumption or those on rent, from the general sales tax to assist lower-income taxpayers

by reducing the regressivity of the tax structure. Second, expenditures believed to be socially desirable, such as those on newspapers or charitable contributions, might be excluded from the tax base to encourage such expenditures by reducing their cost.

Third, some items such as gasoline might be exempted from the general sales tax because they are subject to a separate sales or excise tax. Fourth, intermediate goods used by businesses in producing finished goods for consumption might be excluded to avoid "pyramiding" taxes--the application of a tax on a commodity at more than one stage of the production and/ or distribution process. Finally, some items such as imputed rent are excluded because of the administrative difficulty of defining or quantifying expenditures subject to the tax.

For similar reasons, expenditures by some consumers are exempted from the sales tax. For example, Nevada exempts from the tax base sales to non-profit organizations of items used for non-profit purchases.

CRITERIA FOR EVALUATION

Of the criteria for judging a tax structure that are presented in the Executive Summary to this Report, there are five that are particularly important for evaluation the performance of a general sales tax. This section introduces each criterion and outlines the relevant policy issues facing the State of Nevada. In the following sections the current Nevada general sales tax structure and a number of alternative formulations are evaluated against these five criteria.

Revenue Production

The first criterion is that of the revenue production of the general sales tax system. As noted, the Nevada general sales tax accounts for 20 percent all state tax revenues, and--given the

trends in the structure of Nevada's economy (Chapter 1), it can be expected to remain one of the most significant revenue sources for the foreseeable future. Therefore, in discussing any potential change in the sales tax system it is important to estimate the gain or loss in revenues that would be caused by the changes contemplated.

The two primary means by which general sales tax revenues can be increased are by raising the statutory rate and by expanding the base of expenditures subject to the tax. Expanding the tax base would usually be more effective in raising revenues than is increasing the tax rate, because a rate increase applying to a relatively narrow tax base would cause some consumers to reduce their expenditures on taxable items and increase spending on items exempt from the sales tax.

Closely related to the issue of the amount of revenues generated by a sales tax is the stability of the revenue stream. Revenue stability is important for two reasons: first, because it makes it easier for policymakers to predict the availability of funds to finance government programs; and second, because a stable source of revenues tends to decrease the interest rate that the government must pay to borrow money, thus reducing debt service expenditures. The general sales tax in Nevada, as in most states, provides one of the most stable sources of government revenues; thus it is important to consider the effect of any change in the sales tax on the stability of the revenue stream.

The two means by which sales tax revenues can be stabilized are by restricting the base to only its most stable components and by expanding the tax base to include most components of consumer expenditures. In general, a sales tax system with a broadly inclusive tax base provides a more stable source of revenues than does a narrow base of taxable expenditures, because unexpected fluctuations in each component of the tax base tend to offset each other.

An additional issue related to the revenue production of the sales tax is the administration cost of the tax, or the cost incurred by the government in assessing and collecting tax payments. Simply put, it is important to keep in mind that the revenues generated by a given tax system are of value to the government only as they exceed the cost of administering the tax.

In general, the cost of administering a general sales tax can be reduced by expanding the tax base, since the government incurs a cost in identifying and quantifying each item or consumer exempted from taxation. Thus the net tax revenues--gross revenues less the cost of administering the tax system--can usually be increased more effectively by expanding the tax base than by increasing the tax rate.

A final consideration relating to revenue production is the share of the tax burden that falls on the residents of the taxing jurisdiction. To the extent that sales tax revenues are paid by residents of other states, the taxing state can provide more public goods and services to its own residents. Thus each state will attempt to maximize tax "exporting," or the share of taxes paid by out-of-state residents, to increase the net benefits from the tax.

Compliance Costs

The second criterion used to evaluate general sales tax systems is the difficulty and expense of complying with the requirements of the tax system. Although Nevada allows retail businesses to retain 1.5% of the sales tax revenues that they collect as the agents of the state government, it is important that the burden of calculating and collecting taxes remain insignificant.

There are two benefits to reducing the compliance costs associated with any tax system. The first is related to efficiency and neutrality: the effort and expense that the tax collecting agents (for the sales tax, retail businesses) must devote to

complying with sales tax requirements represent another interference with the private decisions of producers. The second is related to revenue production: if compliance costs become high enough, agents will simply refuse to comply, and the state will lose tax revenues as businesses understate receipts or misrepresent taxable sales as exempt sales.

Again, the most effective way to minimize the effort and expense of complying with the requirements of the sales tax is to broaden the tax base to include most goods and services, so that very little effort or expense is required to define and quantify taxable sales. In this respect the goal of minimizing compliance costs conflicts to a certain extent with that of promoting efficiency by reducing tax "pyramiding," because it is generally difficult to separate sales to final consumers from sales of intermediate items to be used in the production of taxable final goods. Nevertheless, most tax pyramiding can be avoided simply by excusing production and wholesale distribution operations from attention to the sales tax altogether. Comprehensive taxation of retail goods and services then would reduce compliance costs but would not exacerbate tax pyramiding significantly.

Neutrality

The third criterion for evaluating a general sales tax system is the neutrality of the tax, or the extent to which it minimizes any effect on decisions by consumers and producers. Almost every tax influences decisions by consumers and producers by changing the relative prices of goods and services in the economy, but this interference can be minimized by taxing uniformly all commodities that Nevada residents purchase.

There are three primary means by which a general sales tax system interferes with decisions by producers and consumers. First, assessing different statutory sales tax rates may affect consumption patterns by changing the relative prices of goods and

services. If sales taxes comprise a larger share of the selling price of one commodity than another, consumers will tend to purchase more of the latter commodity.

This problem is most severe when a relatively high statutory sales tax rate is applied to a relatively narrow base of taxable commodities, so that consumers can substitute exempt for taxed goods and save up to the full amount of the sales tax. For example, since in Nevada fresh foods purchased at a delicatessen are subject to the sales tax while the same foods purchased at a grocery store are exempt, the tax base definition may induce consumers to buy less food at delicatessens and more at grocery stores, with no evident benefit to the State or its populace.

The second major source of interference in private decisions is the tax pyramiding problem. This problem is closely related to the issue of differential tax rates, since it involves the cumulative share of sales taxes in the final selling price of a commodity.

To minimize this problem many the State should assess the sales tax only on retail sales of finished commodities to final consumers, exempting sales of intermediate goods and services that either become a physical ingredient or are used directly in the production of a final product that is subject to the tax. Although this strategy is effective with respect to unfinished goods, it is difficult to implement with respect to commodities such as office supplies and equipment, business services, or lodging, which may be purchased by consumers or by producers.

The third major source of interference in private decisions is the "border effect," in which a statutory tax rate or base of taxable goods that is substantially different from that in a neighboring state influences consumption patterns in areas along the border with that state. For example, the State of California exempts purchases of clothing from its general sales tax but does not exempt food purchased for home consumption, as Nevada does. Thus Nevada residents near the border may cross to California to

purchase clothing, while California residents may purchase food in Nevada. Similarly, the State of Oregon imposes no general sales tax, so that Nevada residents near the border with that state may cross to make large purchases. This effect would be more pronounced as the difference in tax rates increases, since the amount that could be saved by travelling to a lower-tax jurisdiction would be greater.

Because of the border effect, Nevada must consider the impact on its own retail goods and service providers of having a tax system very different from those of its neighbors. In general, however, the border effect can be reduced most effectively by broadening the tax base and reducing the statutory tax rate, since Nevada cannot bring its sales tax system into conformity with those of its five neighbors simultaneously.

Horizontal Equity

The fourth criterion used to evaluate a general state sales tax system is the principle of horizontal equity, which holds that consumers in the same economic circumstances (e.g., with the same income) should pay equal amounts in taxes. Consumers earning the same income may pay different amounts in taxes if their total consumption is different or if they distribute their consumption differently between taxed and exempt commodities.

It is important to keep in mind that the goal of horizontal equity applies to the entire tax structure of a state and not just to its general sales tax. Thus a horizontally inequitable sales tax may be corrected by a compensating horizontal inequity in another tax. In short, horizontal equity is properly understood as a cumulative effect of all taxes.

Horizontal equity is generally maximized by broadening the tax base to include most consumer expenditures, so that consumers with the same income will not pay substantially different amounts in taxes simply because their spending patterns differ. The

combination of a relatively high statutory rate with a narrow base of taxable expenditures, such as that characterizing the Nevada sales tax system, generates substantial horizontal inequities arising from different consumption patterns.

For example, a consumer purchasing personal care products (such as shampoo) must pay the sales tax while another consumer purchasing personal care services (such as those of a hair stylist) pays no tax. Similarly, sports equipment is subject to the tax while a ticket to a sports event is exempt. Thus horizontal equity can be increased by extending the tax to most services and tax-exempt goods.

Vertical Equity

The last of the five criteria used to evaluate a sales tax system is that of vertical equity, which holds that any consumer earning more income (or, equivalently, consuming more) than another should pay a correspondingly greater amount in taxes. Usually a tax is considered vertically equitable if it is progressive--that is, if taxes paid as a share of income increase as income increases; vertical equity demands that taxes be at least a constant share of income (proportional) as income increases.

The most common criticism of the general sales tax is that the distribution of the tax burden between income levels is regressive--that is, that lower-income consumers pay a higher share of their incomes in taxes than do higher-income consumers. This occurs because a portion of income is dedicated to items such as food, clothing, and shelter that are consumed regardless, for the most part, of income. For low-income taxpayers, this "autonomous" consumption and the sales taxes assessed on it comprise a relatively large share of total income; higher-income taxpayers, in contrast, are able to save a larger share of their income and pay relatively less sales tax.

Regressivity may be exacerbated by the combination of a high tax rate and the exemption of services from the tax base, because higher-income consumers may spend a higher share of their income on services. For example, business services such as legal and accounting assistance are exempt from the sales tax in Nevada even though higher-income taxpayers generally spend a greater share of their income on these items than do low-income taxpayers. Thus regressivity can often be reduced by lowering the statutory tax rate and expanding the tax base to include services.

In addition to expansion of the tax base, there are two general approaches to reducing the regressivity of the sales tax. The most common is to restrict the tax base by providing an "over-the-counter" exemption for specific goods that comprise a larger share of total consumption expenditures as income falls--that is, for the major components of "autonomous" consumption. This is, in fact, the approach that Nevada has taken in exempting such items as food purchased for home consumption, utilities, and rent from the sales tax.

The second approach is to broaden the tax base to include most goods and services but to provide income-related tax relief to offset a portion of the sales tax liability of low-income consumers. As with the principle of horizontal equity, it is important to keep in mind that vertical equity is properly understood as a cumulative effect of all taxes in a state rather than a characteristic solely of the sales tax. Thus there is no reason to prefer on equity grounds a progressive or proportional sales tax over, for example, a regressive sales tax offset by an adequately progressive personal income tax.

There are two primary ways to provide income-related tax relief to offset the regressivity of the general sales tax. First, the state can provide a fixed or income-variable tax credit for low-income taxpayers either directly or (because of the administrative burden of a direct payment) through a personal income tax system. Second, the state can structure a personal

income tax with low statutory rates for low-income taxpayers and higher rates for higher-income taxpayers. (It should be remembered that progressivity demands only that the share of income paid in taxes increase as income increases, not that the statutory rate increase or that tax credits be available only to low-income taxpayers.)

An approach packaging a broadly inclusive sales tax base with income-related relief by another means is generally superior to the exemption of specific consumption items from the tax base for five distinct reasons. First, while the exemption approach tends to help low-income consumers more than it does high-income consumers, all taxpayers benefit from the exemptions regardless of their actual income--that is, the exemption approach provides unnecessary relief to those who do not need it.

Second, exempting groups of expenditures from the sales tax base can result in very substantial revenue losses beyond that generated by income-related relief. Third, the exemption approach provides sales tax relief to out-of-state residents, reducing tax "exporting" and therefore the quantity of public goods and services that can be provided to in-state residents.

Fourth, the combination of a broadly inclusive sales tax base and income-related relief promotes horizontal equity, since it provides the same benefits to households with the same income regardless of their particular consumption patterns. And finally, the credit approach can be easier to administer than commodity exemptions--particularly if it is handled through another existing system such as a personal income tax--because the exemption requires retailers to determine what portion of their products and services are taxable (not an easy task) and to maintain separate records for taxed and tax-exempt sales.

DESCRIPTION AND ANALYSIS OF THE TAX

It is important to understand the benefits and shortcomings of the current sales tax system in Nevada to develop ways to improve the performance of the system. This section analyzes and evaluates the current Nevada sales tax system with respect to the criteria presented in the previous section, and reviews the sales tax systems of neighboring states for comparison with Nevada. The following section explores specific potential revisions of the Nevada sales tax in light of this evaluation.

Statutory Provisions

Tax Rates

The current statewide Nevada sales and use tax system is composed of several legally distinct but operationally indistinguishable components:

- o the 2% state Sales and Use Tax the revenues of which are deposited in the state General Fund;
- o a 1.5% statewide Local School Support Tax most of the revenues of which are returned to the counties in which they were generated;
- o a 0.5% statewide Basic City/County Relief Tax most of the revenues of which are returned to the counties in which they were generated for distribution; and
- o a 1.75% statewide Supplemental City/County Relief Tax distributed to local governments according to assessed property values, property tax rates, and need of financial assistance.

In addition to these statewide taxes, counties may impose a tax of up to 0.25% to support public mass transportation, construct public roads, or promote tourism. Seven counties have elected to impose

this tax, but it is not treated in this discussion because it is not at the discretion of the state government.

When the 2% state Sales and Use Tax was first imposed on July 1, 1955 and approved by the voters in a statewide referendum on November 6, 1956, there were 34 other states imposing general sales taxes (including the District of Columbia) at an average statutory rate of 2.32%. On June 5, 1979 the law was revised by special election to exempt food purchased for home consumption as of July 1, 1979.

The Local School Support Tax was originally imposed at 1% on July 1, 1967 and raised to 1.5% on May 1, 1981. The Basic City/County Relief Tax was adopted in 1969 as an optional tax imposed by counties at the discretion of their local governing boards; in 1971 the law was revised to permit any county to impose the tax. On May 1, 1981 the Supplemental City/County Relief Tax was added, and both taxes were made mandatory in all counties.

At present, of the 50 state only five do not utilize a broad based sales tax--Alaska, Delaware, Montana, New Hampshire, and Oregon--impose no sales tax. Nine states impose sales taxes higher than that in Nevada and the average statutory tax rate is 4.83%. The states bordering Nevada, with the exception of Oregon, have statutory tax rates ranging from 4.75% in California to 5.0938% in Utah.

In comparison, in 1978 the same forty-six states and D.C. imposed sales taxes at an average statutory rate of 3.93%, and twenty-nine states imposed sales taxes at rates higher than the 3% rate in Nevada. The states bordering Nevada had statutory rates ranging from 3% in Idaho to 4.75% in California, again with the exception of Oregon.

In sum, the statutory sales tax rate is higher in Nevada than in most other states, though not substantially so. The 2.75% cumulative rate increase passed in 1981--originally scheduled to be rescinded on July 1, 1983 but then made permanent--changed Nevada from a relatively low tax rate state to a relatively high

tax rate state.

The Taxable Base

The Nevada sales and use tax applies to the gross receipts from retail sales, lease, rental, barter, storage, use, or other consumption of tangible personal property in the state. The tax generally does not apply to services; a few exceptions are (1) that 1% city and county occupancy taxes are imposed on gross receipts from the rental of transient lodging; (2) that photographic, photofinishing, and photocopying services are taxed; (3) that sign painting services are taxed unless they are for painting on real property; and (4) that all or a portion of repair charges in which the value of parts and materials is insubstantial relative to the total charge and in which labor and other service charges are not stated separately from the fair retail selling price of the parts and materials are subject to the tax.

Nevada is one of 20 sales tax states that include virtually no services in the tax base; 7 states tax most or all services, while 19 tax some services such as laundry or dry cleaning, repair services, or parking.

The major categories of retail goods exempted from the sales tax include (1) food prepared for home consumption or meals prepared by schools for students or teachers; (2) motor vehicle fuels; (3) domestic heating fuels, gas, electricity, and water; (4) newspapers; and (5) prescription medicines. Nevada is one of 45 states (including the District of Columbia) exempting prescription drugs from sales taxation; 31 other states exempt consumer utilities, while 27 others (including D.C.) exempt food.

Of the five states bordering Nevada, Oregon, as noted, imposes no sales tax. California exempts prescription drugs, consumer utilities, and clothing (one of only 8 states to do so) from sales taxation, and does not include most services in the sales tax base. Arizona exempts prescription drugs and food but taxes some

services, while Idaho exempts prescription drugs and consumer utilities and does not tax most services. Utah exempts prescription drugs and charges a reduced rate of 2.0938% on consumer utilities, but taxes many services.

In addition to the exemption of services and several classes of commodities, Nevada exempts from taxation sales of any items to religious, charitable, or eleemosynary institutions. Several states permit such an exemption of sales to non-profit institutions, although most specify that the items purchased must be for use in performing charitable, religious, or educational functions.

With respect to its sales tax base, then, Nevada is generally consistent with the majority of other states in its taxation of retail goods but taxes fewer services than most states.

EVALUATION OF THE CURRENT STRUCTURE

Revenue Production

Tax Yield. As was noted above, in 1986 the State Sales and Use Tax generated more than \$170 million and accounted for almost more than a third of state General Fund Revenues. In the five years from 1981 through 1986 total statewide sales tax revenues increased from \$243 million to \$494 million, and increased in importance from 47% of total statewide revenues to 54%.

Effective Rate. The total statewide sales tax rate of 5.75% is one of the highest in the country--indeed, only nine states (including the District of Columbia) impose a higher rate. However, because of significant differences in the sales tax bases between states it can be very misleading to compare states on the basis of the statutory tax rate. Instead, it is more meaningful to compare states on the basis of standardized measures such as "effective" tax or tax "effort."

The "effective" sales tax of a state is the total share of the average income of each person that is spent on sales taxes. Thus the effective tax takes into account the definition of the sales tax base and consumption patterns in the state as well as the statutory tax rate.

Column 1 of Table 1 presents the estimated effective sales tax rates of the United States, Nevada, and several other states for 1985. As these estimates indicate, Nevadans spend approximately 3.4% of their total personal income on sales taxes. Only eight states, including the neighboring states of Arizona and Utah, have higher effective sales tax rates than does Nevada.

There is one major drawback to the use of the effective tax rate in comparing state sales tax structures: the measure fails to reflect the importance of tax exporting. Instead, the effective tax calculation rests on the implicit assumption that all sales taxes are paid by in-state residents.

Representative Tax System. A more sophisticated measure of the importance of sales taxes is tax "effort," a concept developed by the staff of the U.S. Advisory Commission on Intergovernmental Relations (ACIR) as a means of comparing how intensively states are taxing their available revenue sources. As with the effective tax rate, tax effort can be calculated on the basis of total revenue sources or of specific revenue instruments such as the general sales tax.

The tax effort measure is developed using a representative tax system (RTS) composed of twenty-six commonly used revenue sources including general and selective sales taxes, personal and corporate income taxes, license taxes, estate and gift taxes, property taxes, and severance taxes. The base for each type of tax is estimated as if each state administered identical taxes, and the national average tax rate is applied to each base to generate tax "capacity," or the revenues that would be generated by each state if it applied the representative tax rates to the representative tax bases.

It is important to recognize that the representative tax system is no more than a hypothetical tool to evaluate and compare how intensively each state is utilizing the revenue sources available to it. Thus the representative tax rates are applied in every state regardless of whether or not in practice a given state actually levies a particular tax. For example, the tax "capacity" for Nevada is computed as if it imposed personal and corporate income and estate and gift taxes; similarly, the tax capacity for Oregon is computed as if that state imposed a general sales tax similar to those imposed by other states.

It is also important to understand that the term tax "capacity" does not reflect the actual maximum revenues that could be generated in a given state; similarly, the term tax "effort" has no normative or prescriptive significance.

Tax capacity is expressed as an index number relating the estimated capacity per capita for each state to the national average tax capacity per capita. Thus, for example, a state with a tax capacity index of 120 would have a 20% higher representative tax base per capita than the national average; a capacity index of 80 would indicate 20% lower representative tax base per capita than the national average.

Column 2 Table 1 presents the tax capacity index calculated by the ACIR for each state in 1985. As these index numbers indicate, Nevada enjoys by far the highest sales tax capacity in the country, more than 150% greater than the national average and more than 80% greater than the next highest state, Alaska. In comparison, of its neighboring states only California has a higher sales tax capacity than the national average; only Mississippi and Alabama have lower sales tax capacities than does Idaho.

This result emphasizes the important role of tax exporting in the Nevada sales tax system. Since the representative sales tax base encompasses retail sales of most goods and services including hotels and lodging, amusements and recreation, and business and personal services (but excluding food and drugs), the dominant

TABLE 1

Comparison of State Utilization of Sales Taxes

State	Effective Tax Rate	Rank	Sales Tax Capacity	Rank	Sales Tax Effort	Rank
Alabama	2.76%	22	70.9	50	118.3	14
Alaska	0.55%	47	140.4	2	20	47
Arizona	4.01%	6	95.2	27	152.3	3
Arkansas	3.05%	13	77	47	119	13
California	2.86%	19	115.4	10	113.3	16
Colorado	2.92%	15	115.4	9	106.2	18
Connecticut	2.70%	23	114.7	11	119.8	12
Delaware	--		113.8	12	--	
Washington, DC	2.91%	16	110.5	15	136.1	9
Florida	3.00%	14	116.1	8	100.5	22
Georgia	2.68%	25	96.8	22	97.7	24
Hawaii	4.66%	2	127.9	3	143.8	7
Idaho	2.13%	34	75.5	49	89.2	28
Illinois	2.48%	27	94.2	32	110.2	17
Indiana	3.06%	12	94.8	29	115	15
Iowa	2.08%	35	84.8	43	87.9	29
Kansas	1.99%	39	94.4	31	81.9	35
Kentucky	2.05%	37	77.6	46	80.5	38
Louisiana	4.36%	4	85	42	164	2
Maine	2.55%	26	98.6	21	87.5	31
Maryland	1.58%	43	110.1	16	64.4	42
Massachusetts	1.51%	44	122.2	5	57.3	44
Michigan	2.07%	36	95.4	26	83.2	33
Minnesota	2.29%	30	111	14	82.8	34
Mississippi	3.89%	8	69.2	51	146.3	6
Missouri	2.79%	21	103.1	18	102	20
Montana	--		991.3	38	--	
Nebraska	1.87%	41	95.1	28	73.8	40
NEVADA	3.43%	9	254.4	1	55.2	45
New Hampshire	--		126.8	4	--	
New Jersey	1.74%	42	113.3	13	74.9	39
New Mexico	4.54%	3	92.5	35	152.2	4
New York	2.79%	20	96	25	132.3	10
North Carolina	2.20%	33	89.5	40	81	36
North Dakota	2.27%	31	109.5	17	70.9	41
Ohio	2.24%	32	93	34	89.9	27
Oklahoma	2.70%	24	96.4	23	96.5	26
Oregon	--		96.3	24	--	
Pennsylvania	1.89%	40	89.6	39	80.7	37
Rhode Island	2.04%	38	94.6	30	85	32
South Carolina	2.87%	18	83.7	44	102.3	19
South Dakota	2.90%	17	92	36	99.6	23
Tennessee	4.22%	5	93.4	33	143.4	8
Texas	2.35%	28	102.1	19	87.5	30
Utah	3.91%	7	78.3	45	148.9	5
Vermont	1.36%	46	116.7	7	40	46
Virginia	1.50%	45	98.9	20	62.7	43
Washington	4.95%	1	91.5	37	213.4	1
West Virginia	3.34%	10	76.6	48	126.9	11
Wisconsin	2.32%	29	88.7	41	97.3	25
Wyoming	3.26%	11	120.2	6	101.5	21
United States	2.54%		100		100	

impact of expenditures by visitors on these consumption categories is revealed by the state's high capacity index.

Finally, the sales tax effort of each state is calculated as actual sales tax revenues per capita divided by the revenues per capita that would be generated under the hypothetical representative sales tax system. Since many states tax items that are not included in the representative tax system, it is possible for actual revenues to exceed tax "capacity." Again, effort is expressed as an index number related the effort of each state to the national average.

In the third column of the Table the estimated tax effort index for each state in 1985 is presented. As this exhibit indicates, Nevada is among the lowest states in terms of tax effort: only Alaska and Vermont of the states levying sales taxes show less sales tax effort than does Nevada.

This result clearly suggests the impact of the exemptions that are provided in Nevada for such items as utilities, and hotel lodging and other services, particularly when one recognizes that failure to fully tax food and drugs is not reflected in the capacity estimates. Moreover, as is discussed below, by forgoing the taxation of certain services Nevada is missing an opportunity to export additional taxes to non-residents. (e.g., visitors).

Summary. In short, the Nevada sales tax system is potentially one of the most productive revenue sources in the country relative to the population of the state. Nevertheless, by exempting services as well as certain goods from the sales tax, Nevada has elected not to take full advantage of the revenue-producing and tax-exporting potential of the sales tax.

Exporting Part of the Direct Tax Burden

For most states a discussion of the question of "who pays the sales" tax could immediately proceed to an examination of the distribution of the components of consumer spending across income

class. For Nevada, however, this step of the analysis, which was carried out and which will be discussed below, must be preceded by a more global issue: how much of the sales tax that collected in Nevada actually comes falls on Nevada families in their role as Nevada retail consumers?

Fortunately, due to the comprehensive nature of this entire study, it is relatively easy to answer the questions by combining the analysis used for this chapter relating to the size of the actual and potential tax base in the state and the materials developed in Chapter 6 (Tourism) above.

In Table 2 below estimates are presented of the percentage breakdown between the amount that is directly borne by Nevada residents as retail consumers (column 5) and the amount that is "exported" --or, in the terms here, paid by individuals in a role other than that of Nevada resident retail consumers. Thus, according to the data shown in the table, of the \$494.5 million revenues generated from the application of the 5.75 percent tax rate to the existing base of the Nevada sales tax, only about \$171.5 million or 34.7 percent is paid by resident consumers. That is probably about half the number it would be in many (but not all) other states.

The question then arises: who pays the other 65.3 percent. There are two groups. The first is the tourist. And, from the data independently computed in the analysis of the tourist industry (Chapter 6), we know that \$139.7 million of the sales tax was directly shifted to the visitor. That accounts for another 28.3 percent of the direct burden of the sales tax paid.

Then, who or what pays the remaining \$183.3 million--the other 37 percent of the tax? That burden falls on Nevada institutions--primarily businesses. This occurs despite the attempts by lawmakers to levy a tax only at the consumer retail level--i.e., at the final stage of the purchase of a good or service by an consumer for his/her own use.

Although its not hard to readily come up with illustrations of the "retail" sales tax falling on non-retail parts of the economic process (e.g., beauty and barber shops paying tax on supplies that are ultimately used at the next stage of the hair styling, etc; the tax telephone companies pay on the purchase of central office equipment, and the sum of many other kinds of office supplies and equipment that a business must pay because its either bought at the retail counter has not been specifically exempted by statute.)

Does this residual make sense? The answer is that we do have confidence in that number since it is just about in the middle of the range of what empirical studies of the general sales taxes in other states have shown. That this "residual" of the business share of direct sales tax paid does fall in that range of other studies also gives us a further check on--and confidence in--the independently derived data on tourism (Chapter 6) and the remainder of the material presented in Table 2.

Thus, to summarize: with respect to the global question of who paid Nevada sales taxes in 1986:

Tourists:	28.3 %
Nevada Consumers	34.7 %
Businesses (mostly Nevada)	37.1 %

One final note is warranted on this topic: no estimates were made of the indirect or second and third round" shifting of the burden of that part of the Nevada sales tax that initially falls on Nevada businesses. Clearly, businesses as entities have no ability to pay taxes. Rather the tax is shifted in some combination to the businesses' consumers, resource and goods suppliers, landlords, and shareholders. Just what the share that all these players will pay will vary by different types of activities. Suffice it to say that whatever portion of the tax is

shifted back to Nevada consumers or laborers can be expected to add to the overall regressivity of the sales tax.

Regressivity of the Tax Base

Having addressed the direct exporting issue, the most basic of the policy tradeoffs with respect to the sales tax can now be addressed--revenue productivity vs. vertical equity.

An important criticism of the sales tax--in Nevada's debates over at the time of its enactment to the present day--centers on the regressivity of the tax. This regressivity can be explained by two reasons. First, a significant share of the total income of the families with very low incomes (e.g., less than \$5000 income per year) is devoted to "autonomous" consumption--e.g., for some, engaging in spending beyond the family's level of income (negative savings). Second, even as income increases across low to middle and then to the higher income ranges, the ratio of consumption to income falls. It follows, then, that the tax burden on consumption will fall as income rises. That is, the tax burden will be "regressive" in its effect.

Exhibit A-1 in the Appendix to this chapter presents the average after-tax household income of Nevada residents in 1986, in total and separated into six income categories. The exhibit also indicates the average total expenditures of households in each income group, and the estimated average share of total household after-tax income and of total household expenditures that is spent on several categories of consumption items subject to the Nevada sales tax.

As is apparent from the exhibit, expenditures by households in several of the lower income groups exceed their income. This result probably arises from the "permanent income effect," which suggests two situations in which consumption would exceed income. First, a family experiencing a sudden or unanticipated income loss that is expected to be temporary--even if for more than a year--

will not reduce consumption to the same extent as the drop in income. Thus, for example, an employee who has been laid off or injured, or an independent proprietor who has gone out of business, may draw on past savings or borrow money before reducing consumption significantly.

Similarly, a family that has accumulated savings (wealth) in anticipation of a reduction in income will tend to maintain its previous consumption level after the decrease in income occurs. Thus retired persons continue to consume from accumulated savings after their current income ends.

As the Table (A-1) shows, as income increases there is a steady decrease in total expenditures as a percentage of income, reflecting the increased saving by higher-income households. There is also a steady decrease in taxable expenditures as a percentage of income, a trend that is most pronounced in such items as food, alcohol, clothing, tobacco, reading materials, and medical supplies.

The regressivity of the sales tax and its individual items of consumption can be summarized by the regressivity index, a number that indicates the approximate increase in sales tax payments that would accompany a 1% increase in income. If the regressivity index equals 1.0, the tax is proportional: tax payments increase at the same rate as does income. If, however, the index is less than 1.0, the tax is regressive: tax payments do not increase at the same rate as does income, so higher-income consumers pay a smaller percentage of their income in taxes. Conversely, an index greater than 1.0 indicates progressivity.

Exhibit A-1 presents the regressivity index computed for the overall Nevada general sales tax structure, as well as for several expenditure components. Because expenditures by households in the lowest income group (those earning less than \$5,000 per year) differ so significantly from those of households in other income groups--probably because this group includes wealthy retired people with substantial accumulated savings but very little current

TABLE 2
SALES TAX ALTERNATIVES
STATE OF NEVADA
1986

	Gross Tax Revenue (\$ m)	Percent Increase	Equal Yield Rate	Tax Paid By Nevada Resident Consumers	Nevada Resident % of Total	Non- Consumer Resident Percent	Regressi- vity Index ³
Current Base	\$494.5	—	5.75	\$171.5	134.7	65.3	.750
Current Base Plus Additional Hotels & Lodging	216.4	43.8	4.00	3.9	1.8		
Food and Drugs	116.1	25.5	4.66	60.5	52.1	46.9	.530
Services to Person	15.0	3.0	5.58	11.6	77.0	33.0	.730
Amusement & Recreation	66.0	13.4	5.07	10.8	16.3	83.7	.873
Business Service	75.0	15.2	5.00	14.0	18.7	81.5	.751
Domestic & Motor Fuels	85.3	17.2	4.90	30.6	33.9	64.1	.564
Newspapers	1.7	.3	5.73	1.2	73.0	27.0	.697
Hotels and Food	332.5	67.2	3.44	64.4	19.4	80.6	.556
Food, Fuels, News	203.1	41.1	4.08	92.3	45.5	54.5	.543
Telephone & Household Fuels ²	14.3	2.9	5.58	9.3	35.9	64.1	.564
Hotels & Service to Persons	231.4	46.9	5.25	4.9	14.0	86.0	7.0
Comprehensive Base	1,067.3	115.8					

¹ Rate Increased from present 1% to 5 3/4%.

² Telephone net of sales tax apid on equipment purchase (\$10 M) (Operating company plus interchange carriers)

³ Index for the addition to the tax base. An index of 1.00 shows proportional tax burden across income classes. An index less than 1.00 is regressive. An index greater than 1.00 shows progressivity.

Source: Urban Institute

income--those households in the lowest income group have been excluded from the calculation of the regressivity index.

This exhibit suggests that the current Nevada sales tax is in fact regressive: for a family initially earning at least \$5,000 and then enjoying an increase in income, the percentage increase in total sales tax payments would be just 75% of the percentage increase in income.

In summary, the current Nevada general sales tax structure appears to be significantly regressive notwithstanding the exemption of several classes of expenditure from the sales tax base. The sales tax thus distributes the cost of government more heavily toward lower-income families.

Horizontal Equity and Neutrality

There is not a great deal to be added to the discussion of the neutrality and horizontal equity of the tax that had been presented above. Suffice it to say that both of the goals tend to be achieved if the Legislature pursues a policy of (a) limiting the tax as best as it can to retail activities only, and then (b) expanding the tax as broadly as it can to the range of retail transactions.

Evaluation of Alternative Sales Tax Structures

The foregoing evaluation of the Nevada sales and use taxes suggests three major potential revisions to the tax system: (1) an increase or decrease in the statutory tax rate, (2) an expansion or reduction of the tax base, and (3) the inclusion of an income-related tax relief mechanism to offset the regressivity of the sales tax. This section discusses each of these potential changes both in general and in terms of specific proposals. In accordance with this evaluation, the final section following this presents our recommendations.

Increase or Decrease the Statutory Tax Rate

The most straightforward revision of the Nevada sales tax would be an increase or decrease in the statutory tax rate. It is clear that, because demand for the bulk of consumption items is fairly unresponsive to changes in prices, an increase in the sales tax rate would generate increased tax revenues. Thus if Nevada foresees increased public outlays, the government might finance them by increasing the sales tax rate. However, it should be clear from the previous discussion that increasing the sales tax rate and retaining the current narrowly defined tax base would exacerbate many of the problems with the sales tax, particularly those of revenue instability, horizontal and vertical inequity, and the border effect.

Nevada might address these problems by decreasing the sales tax rate, thereby stabilizing revenues, improving horizontal and vertical equity, and reducing the impact of the border effect. On the other hand, this would unquestionably reduce tax revenues and put substantial pressure on other current and potential sources of revenue in the state. That is, Nevada would have to turn to other broad based revenue sources such as gaming, mining, and/or income.

Expand or Restrict the Base of Taxable Expenditures

Because of the conflicting demands of revenue adequacy on the one hand and revenue stability, equity, and neutrality on the other, a change in the tax rate unaccompanied by any revision of the tax base would not be a promising course of action. Instead, Nevada would do well to consider addressing the goals of tax policy by expanding or restricting the tax base. Once the proper tax base is determined, the corresponding statutory rate arithmetically "falls out" given the desired revenue yield.

As noted in the previous discussion of vertical equity, the vertical equity of the sales tax structure can be improved by restricting the tax base generally to items of "discretionary" consumption--that is, by exempting items that comprise a large portion of the expenditures of lower-income consumers.

However, this approach has several negative corollaries: it exacerbates the problems of horizontal inequity and revenue instability, strengthens the impact of the border effect, increases compliance costs, and wastes an opportunity to export tax payments to out-of-state residents. Because of these problems and because the major items comprising "autonomous" consumption (with the exception of clothing) have already been exempted, the option of restricting the tax base is not considered attractive.

Instead, there are several distinct categories of consumption that could be added to the tax base, individually or together, to increase sales tax revenues while addressing the goals of revenue stability, horizontal equity, tax exporting, neutrality, and compliance. These categories include the following items:

- o Hotels and Lodging: Lodging in hotels, motels, tourist courts, rooming houses, boarding houses, trailer parks, camps, and membership-basis organization hotels.
- o Business Services: Legal, architectural, accounting, advertising, mailing, reproduction, cleaning, maintenance, protective, and other business services.
- o Food and Drugs: Food purchased for home preparation and consumption, meals prepared by schools or hospitals and served to teachers, students, or patients, and prescription medicines.
- o Amusements and Recreation: Admission to motion pictures, sporting events, concerts, plays, club memberships dues, recreational lessons, and cable TV.
- o Motor Vehicle Fuels: Gasoline, diesel, and other motor vehicle fuels.

- o Automotive and Repair Services: Parking services, car washes, towing charges, landing and docking fees, moving charges, and all repair services.
- o Personal Services: Laundry and dry cleaning, clothing storage, beauty and barber shops, gardening, shoeshine, shoe repair, funerals, babysitting, and day care.
- o Household Fuels: Natural gas, and fuel oil or other home heating fuels.
- o Newspapers.

The addition of any or all of these consumption categories to the sales tax base would tend to address the goals of revenue yield, revenue stability, horizontal equity, tax exporting, and administrative and compliance cost reduction; in fact, it is important to keep in mind that these goals are addressed by any expansion of the rate base without regard to the commodities involved. In addition, if base expansions were accompanied by a corresponding reduction in the tax rate, that would tend to address the goals of neutrality and vertical equity.

In this section four of these potential additions to the sales tax base is evaluated with respect to its estimated effect on three specific concerns: (1) revenue yield, (2) tax exporting, and (3) vertical equity.

The implications of each potential expansion with respect to these three goals are summarized Table 2. Column 1 of this exhibit presents the additional revenues and the percentage increase in revenues that would be generated by including each group of expenditures in the general sales tax base. Column 2 indicates what the statutory rate of the sales tax would be if each component were included in the tax base and if total tax collections were to be maintained at an "equal yield" level.

Column 3 shows the additional revenues and the percentage of total additional revenues that would be paid by Nevada residents; a lower percentage indicates that a larger share of the sales tax would be exported to non-residents. Finally, Column 4 provides

the regressivity index estimated for each base component, and indicates whether the addition of that component would make the sales tax more regressive (MR) or less regressive (LR) than the current base. The significance of these findings are discussed separately for each base component.

Hotels and Lodging

As mentioned in the previous discussion of the Nevada sales tax base, gross receipts from the rental of transient lodging are subject to 1% mandatory city and county occupancy taxes, but are not subject at all to the statewide general sales taxes.

As the Table shows, by extending the statewide general sales taxes to transient lodging the state would have realized increased tax revenues of approximately \$216.4 million. And, if these added revenues were used to for tax rate reduction, the statutory tx rate would fall by a full 1.75 percent. Moreover, the overwhelming amount of the tax would be exported, and that (n this case, small) amount remaining on taxpayers would be progressively distributed.

Business Services

By adding business service into the sales tax base, Nevada would add another \$75 million to total sales tax revenues; or, alternatively, be able to lower the statutory rate to about 5 percent. As for hotels, the tax would be largely paid by persons other than Nevada residents as consumers.

At present only three states (Hawaii, New Mexico, and South Dakota) aggressively tax business services as retail sales. The idea is an attractive one, especially from the viewpoints of horizontal equity and revenue productivity.

There are, however, three important problems with the taxation of business services. First, there is the issue of tax enforcement

and administration. Some service firms (e.g., accountants, attorneys) could avoid the tax by billing from an out of state office. This would require Nevada tax officials to make cumbersome case-by-case decisions as to what is and what is not a taxable sale.

Second, some business service firms are especially footloose. That is, they can more easily move their base of operations across borders than can many other businesses. Thus for example, taxing advertising may be conceptually attractive; but practical considerations may argue for maintaining the status quo of exemption.

And finally, there is the question of neutrality. As discussed at some length above, the sales tax is more likely to satisfy the goals of "good" tax policy the more it is confined to taxation only sales at retail. And, with respect to business services, whether the "sale" (e.g., legal advice, advertising) is --from the point of view of the customer/client--personal or business is a difficult call to make even by experienced professionals. And, to the extent that the call is made incorrectly and the tax ends up on an intermediate (e.g., pre-retail) level of the economic process, tax pyramiding will result.

Food And Drugs.

Here is tough one for many political leaders: making the tradeoff between the attributes of the stability and revenue productivity of taxing food and drugs for home consumption vs. the severe regressivity that the tax entails. As Table 2 shows, taxing food would be a great revenue producer (and, since it tends to be "recession proof," a stable one); but of the alternatives shown it is most likely to be paid by Nevada resident consumers and is clearly very regressive. It is for this reason that at present 28 states (including Nevada) provide for an exemption of food from the tax base. Although many states tax over-the-counter drugs, all

45 exempt prescription drugs from taxation.

Does this mean that Nevada should discard the idea of a food and/or drug tax? Not at all. As the next section suggests, if this sales tax base expansion is combined with a special tax credit targeted to low income families the tax can actually become a vehicle for enhancing the overall equity of the state tax structure.

Services to Persons

Unlike for the taxation of business services, adding personal services to the tax base can be accomplished without having to deal with special problems of tax compliance and administration and neutrality. Moreover, the taxation of personal services makes even better sense with respect to the improvement of the horizontal equity of the system as the national as well as Nevada economy becomes more service oriented at the retail level. It is for these reasons that more and more states are actively considering expanding their base to personal retail services. Such an expansion for Nevada would add \$15 million to total state revenues given the present statutory rate.

Combine Expansion of the Tax Base with Income-Related Relief

As explained previously, an alternative to exempting groups of consumption items as a means of pursuing vertical equity is to expand the tax base--to enhance horizontal equity, revenue stability, neutrality, and revenue yield--and simultaneously to provide income-related relief to lower-income taxpayers through a separate mechanism. It was suggested, for example, that an income-related tax credit could be provided as part of a personal income tax system to offset, at least in part, the regressivity of the general sales tax system.

Income-related sales tax relief would be particularly attractive in Nevada as a corollary to inclusion of such items as

household fuels, food and drugs, and motor vehicle fuels in the general sales tax base, since these components would reduce the progressivity of the tax.

The effect of an income-related credit to offset sales taxes can be illustrated with a simple example. A typical Nevada household with an income of \$30,000 spends about \$2,900 per year, or 10% of its income, on tax-exempt food and drugs. If these items were taxed, the household would pay about \$167 in additional sales taxes on food and drugs. In contrast, a household with an income of \$11,000 spends about \$2,034 or 18% on tax-exempt food and drugs, and its additional tax bill would be about \$117. Although the dollar amount of the tax paid by the lower-income household is less than that of the higher-income household, the burden--sales tax payments as a percentage of income--is clearly regressive, almost twice as high for the lower-income household than for the higher-income household.

Now consider the situation in which the state granted a special tax credit of \$46 per dependent available only to households earning less than \$23,000 (near the median in Nevada). The \$11,000 household qualifies and, in effect, is refunded the taxes it paid on the first \$800 (\$46 divided by 5.75%) of food and drugs consumed by each dependent. If this is a three-member household, the first \$2,400 of groceries becomes tax-free.

The important point here is that this refund is paid for by the two groups of taxpayers--Nevada resident households earning more than \$23,000 (in this example) and out-of-state residents consuming food in Nevada--who fail to qualify for the credit. Moreover, the refund system would bring in more revenue to the state than does the current exemption system. In this example, rather than losing \$284 in tax payments from both households through an over-the-counter exemption for food and drugs, the state limits its loss to \$138 (\$46 multiplied by three dependents).

To illustrate the operation of an income-related sales tax relief mechanism, Tables 3 and 4 summarize a cases in which the

TABLE 3

**EXPAND SALES TAX TO FOOD AND DRUGS 57.5% AND
PROVIDE \$28.4 MILLION VARIABLE TAX CREDIT, 1986**

Nevada Gross Income Class	Food and Drug Tax Per Dependent	Credit Per Dependent	Net Tax Paid	Effective Tax Rate (%)	
				Before Credit	After Credit
Less than \$ 5,000	\$53	\$60	-7	17.1%	-2.13%
\$ 5,000 - \$ 9,999	51	60	-9	.69	- .13
\$10,000 - \$14,999	55	60	-5	.46	- .04
\$15,000 - \$19,999	54	55	-1	.33	- .01
\$20,000 - \$29,999	56	40	16	.25	.07
\$30,000 - \$39,999	57	0	57	.19	.19
\$40,000 and above	66	0	66	.12	.12

Exhibit (\$ millions)

Additional Sales Tax Revenue at 5.75% Without Credit	\$116.1
Additional Sales Tax Revenue at 6% with Credit	87.7
Cost of Credit	28.4
Equal Yield Nominal Tax Rate	4.0

Source: The Urban Institute

state grants an income-variable credit (declining to zero as income increases) for each dependent. As the table suggests, the credit, whether fixed or income-variable, is a highly flexible policy instrument: the tax credit can be reduced to enhance revenues or increased to lower the net tax burden on lower-income households until the proper balance is attained between these two goals.

Consider, for example, the Table 4 illustration that combines the extension of the retail sales tax to hotel lodging and food and drugs. If there were no reduction made in the basic statutory rate of 5.75 percent, under existing arrangements \$332.5 million would be added to the treasuries of state plus local governments. If, however, this base broadening were to be used to reduce the statutory tax rate, the rate required to maintain an equal yield of total taxes would fall to 3.44 percent.

And finally, there is the credit option: increase the tax but rather than drop the statutory rate provide a variable vanishing credit designed to offset the added regressivity of the tax base expansion for household earning \$40,000 or less. As the Table shows, the tax base expansion-with-credit scheme not eliminates most of the regressivity (more than fully for the lower groups), but still provides a substantial boost in net revenue yield.

FINAL COMMENT: DID FEDERAL TAX REFORM WEAKEN THE SALES TAX?

When Congress enacted the Tax Reform Act of 1986 it eliminated, for the tax years beginning after 1986, the ability of individuals to itemize as deductions the amount of state and local taxes paid. Itemized deductions for state and local income and real property taxes remain, however. Thus, before the Federal Tax Reform Act, Nevada taxpayers could offset or export part of their sales taxes paid (by an amount equal to the sales tax deduction multiplied by the taxpayer's top federal bracket rate.) That offset is gone under existing law.

The elimination of sales tax deductibility raises an important question as to whether the retail sales tax will not become a less preferred source of revenue in state budgets.

At first glance, especially when the elimination of the federal deductibility provision is viewed in isolation, the answer would seem to be "yes." After all, if faced with having to raise an extra dollar to finance state services from a property or income tax, which remain deductible items in computing one's federal tax, and the now non-deductible sales tax, why not look first to a tax that can be fully exported to Washington?

The incentive to avoid the sales tax certainly exists since its "tax price" has risen. but a closer look at the entire federal-state tax system interplay suggests that there will not be a substantial change in the state (and, where relevant, local) use of the sales tax.

Why? There are several factors

The first is that Congress made two other changes in the federal-state and local tax relationship: it reduced the top marginal rate from 50 percent to 33 percent (as of 1988) and, by enacting a relatively large standard deduction and personal exemption as a replacement for the old federal "zero bracket" amount, reduced the number of federal income tax itemizers. The reduction in the marginal rates reduces the relative disadvantage of the sales tax as compared to the income tax since the federal offset factor has declined for those who itemize. And, the reduction in the number of persons how will itemize on their federal return simply reduces the number of taxpayers who will deduct state and local personal tax payments of any kind.

Recent research indicates that although when taken as a whole state and local taxes (the sum of individual income, sales, and property) do tend rise as tax price declines, it is the income tax and not the sales tax that is sensitive to "tax price."

In addition to these factors, there are two other practical considerations. The firs is that even when the "tax price" effect

TABLE 4

EXPAND SALES TAX TO HOTEL LODGING AND FOOD AND DRUGS
 PROVIDE \$30.6 MILLION COMPREHENSIVE VARIABLE TAX CREDIT, FY 1986

Gross Income Class	Tax Paid Per Dependent	Credit Per Dependent	Net Tax Paid	Effective Tax Rate (%) Before Credit	After Credit
Less than \$ 5,000	\$56	\$65	-9	17.9%*	-2.93%
\$ 5,000 - \$ 9,999	52	65	-13	.71	- .18
\$10,000 - \$14,999	57	65	-8	.48	- .07
\$15,000 - \$19,999	56	55	1	.35	- .01
\$20,000 - \$29,999	58	45	13	.26	.06
\$30,000 - \$39,999	60	0	60	.19	.19
\$40,000 and above	73	0	73	.13	.13

Exhibit (\$ millions)

Additional Sales Tax Revenue at 5.75% Without Credit	\$332.5
Additional Sales Tax Revenue _____ with Credit	301.9
Cost of Credit	30.6
Equal Yield Nominal Tax Rate	3.44

* Denominator includes income returns with negative or zero income.

Source: The Urban Institute.

was larger prior to the federal tax reform, legislators have nonetheless been increasingly willing to turn to non-deductible revenue sources such as user fees to finance public sector activities.

Second, to look at state and local policy as being only concerned with "tax prices" is to take too narrow a view of the state and local policy process. State and local officials are concerned with several attributes of a tax system, such as revenue stability (on which the sales tax can rank very high depending on the nature of its base), equity (which has been somewhat enhanced since one effect of deductibility was to increase the after-federal tax regressivity of the sales tax), and a desire to rely more heavily that meet the benefits-received test of fairness and efficiency (some general business levies and user charges and other special revenues).

In sum, a revenue system that concentrates too much on the lowest tax prices may very well incur very high costs in revenue instability and eroding support for a tax system that is considered horizontally and (in the case of systems with an income tax or some other progressive devices) vertically equitable.

TABLE A-1

ADDITIONAL TAX PAID

PER CONSUMER UNIT	Comprehensive	Current
Income Level	Base	Base
Less than \$5,000	\$421	\$204
\$5,000-\$9,999	380	182
\$10,000-\$14,999	533	271
\$15,000-\$19,999	594	322
\$20,000-\$29,999	723	393
\$30,000-\$39,999	860	477
\$40,000 or more	1326	767

ADDITIONAL TAX PAID

PER DEPENDENT	Comprehensive	Current
Income Level	Base	Base
Less than \$5,000	\$222	\$107
\$5,000-\$9,999	190	91
\$10,000-\$14,999	232	118
\$15,000-\$19,999	258	140
\$20,000-\$29,999	278	151
\$30,000-\$39,999	287	159
\$40,000 or more	402	232

TOTAL ADDITIONAL

REVENUES (thousands)	Comprehensive	Current
Income Level	Base	Base
Less than \$5,000	\$12,334	\$5,985
\$5,000-\$9,999	17,461	8,350
\$10,000-\$14,999	25,776	13,119
\$15,000-\$19,999	26,717	14,465
\$20,000-\$29,999	54,475	29,633
\$30,000-\$39,999	48,626	26,982
\$40,000 or more	126,211	72,944

311,600 171,477

EFFECTIVE TAX RATE Comprehensive Current

Income Level	Base	Base
Less than \$5,000	104.18%	50.56%
\$5,000-\$9,999	5.07%	2.43%
\$10,000-\$14,999	4.29%	2.18%
\$15,000-\$19,999	3.44%	1.86%
\$20,000-\$29,999	2.93%	1.59%
\$30,000-\$39,999	2.51%	1.39%
\$40,000 or more	2.13%	1.23%

REGRESSIVITY INDEX

(natural logarithms) Comprehensive Current

Total Income	Base	Base
9.379	9.420	8.697
12.749	9.768	9.030
13.306	10.157	9.482
13.563	10.193	9.579
14.437	10.906	10.297
14.479	10.792	10.203
15.596	11.746	11.197
Regressivity Coefficient (minus <\$5,000)	0.688	0.750

ADDITIONAL TAX PAID

PER CONSUMER UNIT Income Level	Hotel & Lodging	Business Services	Food & Drugs	Amusement & Recreation	Vehicle Fuels	Automotive & Repair	Personal Services	Household Fuels	Consumer Utilities	News Papers
Less than \$5,000	\$5	\$22	\$101	\$16	\$34	\$7	\$19	\$11	\$58	\$2
\$5,000-\$9,999	2	15	101	9	34	12	13	11	55	1
\$10,000-\$14,999	4	24	126	15	49	11	17	14	67	2
\$15,000-\$19,999	5	23	124	17	53	15	21	12	70	2
\$20,000-\$29,999	7	34	145	24	61	14	27	15	81	3
\$30,000-\$39,999	8	32	172	28	77	18	29	16	90	3
\$40,000 or more	24	65	216	53	86	37	51	22	117	5

ADDITIONAL TAX PAID

PER DEPENDENT Income Level	Hotel & Lodging	Business Services	Food & Drugs	Amusement & Recreation	Vehicle Fuels	Automotive & Repair	Personal Services	Household Fuels	Consumer Utilities	News Papers
Less than \$5,000	\$3	\$12	\$53	\$8	\$18	\$4	\$10	\$6	\$31	\$1
\$5,000-\$9,999	1	7	51	4	17	6	7	5	27	1
\$10,000-\$14,999	2	10	55	6	21	5	8	6	29	1
\$15,000-\$19,999	2	10	54	7	23	7	9	5	31	1
\$20,000-\$29,999	3	13	56	9	24	5	10	6	31	1
\$30,000-\$39,999	3	11	57	9	26	6	10	5	30	1
\$40,000 or more	7	20	66	16	26	11	16	7	35	2

TOTAL ADDITIONAL

REVENUES (thousands) Income Level	Hotel & Lodging	Business Services	Food & Drugs	Amusement & Recreation	Vehicle Fuels	Automotive & Repair	Personal Services	Household Fuels	Consumer Utilities	News Papers
Less than \$5,000	\$141	\$654	\$2,971	\$456	\$982	\$216	\$548	\$333	\$1,714	\$48
\$5,000-\$9,999	103	682	4,642	400	1,578	536	610	497	2,521	65
\$10,000-\$14,999	216	1,156	6,085	714	2,377	509	844	653	3,242	105
\$15,000-\$19,999	227	1,012	5,590	766	2,387	675	938	558	3,169	99
\$20,000-\$29,999	546	2,567	10,910	1,779	4,609	1,075	2,034	1,104	6,095	218
\$30,000-\$39,999	454	1,799	9,718	1,604	4,355	998	1,617	906	5,115	192
\$40,000 or more	2,246	6,179	20,583	5,073	8,176	3,525	4,899	2,101	11,096	485
	3,933	14,050	60,499	10,791	24,464	7,534	11,488	6,151	32,952	1,213

EFFECTIVE TAX RATE Income Level	Hotel & Lodging	Business Services	Food & Drugs	Amusement & Recreation	Vehicle Fuels	Automotive & Repair	Personal Services	Household Fuels	Consumer Utilities	News Papers
Less than \$5,000	1.19%	5.53%	25.10%	3.85%	8.29%	1.83%	4.63%	2.81%	14.47%	0.41%
\$5,000-\$9,999	0.03%	0.20%	1.35%	0.12%	0.46%	0.16%	0.18%	0.14%	0.73%	0.02%
\$10,000-\$14,999	0.04%	0.19%	1.01%	0.12%	0.40%	0.08%	0.14%	0.11%	0.54%	0.02%
\$15,000-\$19,999	0.03%	0.13%	0.72%	0.10%	0.31%	0.09%	0.12%	0.07%	0.41%	0.01%
\$20,000-\$29,999	0.03%	0.14%	0.59%	0.10%	0.25%	0.06%	0.11%	0.06%	0.33%	0.01%
\$30,000-\$39,999	0.02%	0.09%	0.50%	0.08%	0.22%	0.05%	0.08%	0.05%	0.26%	0.01%
\$40,000 or more	0.04%	0.10%	0.35%	0.09%	0.14%	0.06%	0.08%	0.04%	0.19%	0.01%

REGRESSIVITY INDEX

(natural logarithms) Total Income	Hotel & Lodging	Business Services	Food & Drugs	Amusement & Recreation	Vehicle Fuels	Automotive & Repair	Personal Services	Household Fuels	Consumer Utilities	News Papers
9.379	4.946	6.484	7.997	6.122	6.889	5.376	6.305	5.807	7.446	3.881
12.749	4.634	6.525	8.443	5.992	7.364	6.284	6.413	6.208	7.833	4.175
13.306	5.375	7.053	8.714	6.570	7.774	6.232	6.738	6.481	8.084	4.651
13.563	5.424	6.919	8.629	6.641	7.778	6.515	6.844	6.325	8.061	4.596
14.437	6.303	7.851	9.297	7.484	8.436	6.980	7.618	7.006	8.715	5.386
14.479	6.118	7.495	9.182	7.380	8.379	6.906	7.388	6.810	8.540	5.259
15.596	7.717	8.729	9.932	8.532	9.009	8.168	8.497	7.650	9.314	6.184
Regressivity Coefficient (minus <\$5,000)	1.025	0.751	0.530	0.873	0.580	0.667	0.730	0.505	0.526	0.697

**ADDITIONAL TAX PAID
PER CONSUMER UNIT**

Income Level	Other Services	Other Exempt	Hotels & Food	Hotels & Services	Hotels & Amusement	Food & Services	Food & Amusement	Food & Other	Services & Amusement
Less than \$5,000	\$48	\$47	\$106	\$53	\$20	\$150	\$117	\$148	\$64
\$5,000-\$9,999	40	47	103	42	11	141	110	148	49
\$10,000-\$14,999	52	65	130	56	19	178	141	191	67
\$15,000-\$19,999	58	68	129	63	22	183	141	192	75
\$20,000-\$29,999	75	79	152	83	31	220	168	223	99
\$30,000-\$39,999	78	96	180	86	36	250	200	268	106
\$40,000 or more	153	113	240	177	77	370	270	329	207

**ADDITIONAL TAX PAID
PER DEPENDENT**

Income Level	Other Services	Other Exempt	Hotels & Food	Hotels & Services	Hotels & Amusement	Food & Services	Food & Amusement	Food & Other	Services & Amusement
Less than \$5,000	\$25	\$24	\$56	\$28	\$11	\$79	\$62	\$78	\$34
\$5,000-\$9,999	20	23	52	21	5	70	55	74	24
\$10,000-\$14,999	23	28	57	25	8	77	61	83	29
\$15,000-\$19,999	25	29	56	28	10	79	61	84	33
\$20,000-\$29,999	29	30	58	32	12	85	65	86	38
\$30,000-\$39,999	26	32	60	29	12	83	67	89	35
\$40,000 or more	47	34	73	54	23	112	82	100	63

**TOTAL ADDITIONAL
REVENUES (thousands)**

Income Level	Other Services	Other Exempt	Hotels & Food	Hotels & Services	Hotels & Amusement	Food & Services	Food & Amusement	Food & Other	Services & Amusement
Less than \$5,000	\$1,418	\$1,363	\$3,112	\$1,559	\$596	\$4,390	\$3,427	\$4,334	\$1,874
\$5,000-\$9,999	1,827	2,139	4,744	1,930	503	6,469	5,042	6,781	2,227
\$10,000-\$14,999	2,508	3,134	6,301	2,724	930	8,593	6,799	9,219	3,222
\$15,000-\$19,999	2,625	3,044	5,816	2,852	993	8,215	6,356	8,634	3,392
\$20,000-\$29,999	5,676	5,931	11,457	6,222	2,326	16,586	12,690	16,841	7,455
\$30,000-\$39,999	4,414	5,454	10,172	4,868	2,058	14,132	11,322	15,172	6,018
\$40,000 or more	14,603	10,762	22,829	16,849	7,319	35,186	25,656	31,345	19,676
	33,072	31,828	64,432	37,005	14,724	93,571	71,290	92,327	43,863

EFFECTIVE TAX RATE

Income Level	Other Services	Other Exempt	Hotels & Food	Hotels & Services	Hotels & Amusement	Food & Services	Food & Amusement	Food & Other	Services & Amusement
Less than \$5,000	11.98%	11.51%	26.29%	13.17%	5.04%	37.08%	28.95%	36.61%	15.83%
\$5,000-\$9,999	0.53%	0.62%	1.38%	0.56%	0.15%	1.88%	1.47%	1.97%	0.65%
\$10,000-\$14,999	0.42%	0.52%	1.05%	0.45%	0.15%	1.43%	1.13%	1.53%	0.54%
\$15,000-\$19,999	0.34%	0.39%	0.75%	0.37%	0.13%	1.06%	0.82%	1.11%	0.44%
\$20,000-\$29,999	0.30%	0.32%	0.62%	0.33%	0.12%	0.89%	0.68%	0.90%	0.40%
\$30,000-\$39,999	0.23%	0.28%	0.52%	0.25%	0.11%	0.73%	0.58%	0.78%	0.31%
\$40,000 or more	0.25%	0.18%	0.38%	0.28%	0.12%	0.59%	0.43%	0.53%	0.33%

**REGRESSIVITY INDEX
(natural logarithms)**

Total Income	Other Services	Other Exempt	Hotels & Food	Hotels & Services	Hotels & Amusement	Food & Services	Food & Amusement	Food & Other	Services & Amusement
9.379	7.257	7.217	8.043	7.352	6.391	8.387	8.139	8.374	7.536
12.749	7.511	7.668	8.465	7.565	6.221	8.775	8.525	8.822	7.709
13.306	7.827	8.050	8.748	7.910	6.835	9.059	8.824	9.129	8.078
13.563	7.873	8.021	8.668	7.956	6.901	9.014	8.757	9.063	8.129
14.437	8.644	8.688	9.346	8.736	7.752	9.716	9.449	9.732	8.917
14.479	8.393	8.604	9.227	8.490	7.630	9.556	9.335	9.627	8.703
15.596	9.589	9.284	10.036	9.732	8.898	10.468	10.153	10.353	9.887
Regressivity Coefficient (minus <\$5,000)	0.722	0.569	0.556	0.749	0.912	0.596	0.576	0.543	0.755

Endnotes

1. This discussion is based on the article by Donald Driggs in Eleanore Bushnell's Sagebrush and Neon, Bureau of Governmental Research, University of Nevada, Reno (1976), Chapter 5.
2. See Driggs, op. cit.

CHAPTER 15

SELECTIVE SALES AND EXCISE TAXES

CIGARETTES, TOBACCO AND ALCOHOL

The excise taxes on tobacco and alcohol products are among the most widely used taxes in the United States, however there is some disagreement as to the rationale of taxes on these products. These excise taxes can be seen as sumptuary taxes; taxes that will discourage consumption. This sumptuary purpose is justified by the health threat that alcohol and tobacco pose to the user. But the excise taxes on tobacco and alcohol fall short of their sumptuary objective for they do not halt consumption, which is the purpose of a sumptuary tax.

A more pragmatic justification for the taxation of tobacco and alcohol is the inelasticity of demand for these products; as there are no close substitutes for cigarettes, tobacco or alcohol, demand for these products is not very responsive to small changes in price. This enables states to tax these products without significantly affecting consumption.

Regardless of the rationale behind the imposition of these excise taxes, they are an important and relatively stable source of state revenue, and on that basis, merit close study.

Nevada, like all state governments, levies sales taxes on selective transactions in addition to a general sales tax. This chapter treats the selective sales or excise taxes that Nevada levies on tobacco products and alcohol.

DESCRIPTION OF THE NEVADA SYSTEM

A summary of the bases, rates and exemptions of Nevada's selective excise taxes on tobacco products and alcohol appears in Table 1.1.

TABLE 1.1

**NEVADA SELECTIVE SALES TAXES
BASE, RATES AND EXEMPTIONS**

Tax	Base	Rates	Exemptions
Cigarette Tax	Cigarettes sold or offered for sale or gift within the state of NV.	10 mills per cigarette, but not less \$.20 per pkg.	Cigarettes exported for sale outside the state. Sales of cigarettes aboard inter- state carriers.
Other Tobacco	All tobacco sold or offered for sale or gift within the state of NV.	30% of whole- sale price.	Any tobacco ex- ported for sale outside of the state. Sales of tobacco aboard inter- state carriers.
Liquor and Beer	All liquor including beer, 1/2 of 1% or more of alcohol by volume used for beverage purposes.	liquor more than 22% alcohol is taxed at \$2.05 per gal. Over 14% to 22% is \$.75 per gal. 1/2% to 14% at \$.40 per gal. Malt beverage liquor \$.09 per gallon.	---

SOURCE: Nevada Tax Reporter, Congressional Clearing House, Chicago, Il.
Paragraphs 35 and 55.

The excise tax on cigarettes is levied on a per unit basis, that is, the tax is assessed on all cigarettes that are distributed and sold in Nevada, on a per cigarette basis. Dealers prepay the tax by purchasing and affixing tax stamps or meter impressions of tax stamps on the cigarette package or container. Although it is the dealer who prepays the tax, the cigarette tax is designed as a tax that is relatively easily shifted from the dealer to the final consumer (the purchaser at retail price) due to the fact of relatively inelastic demand. Thus, the consumer effectively pays the tax by paying a higher price for a pack of cigarettes than s/he would pay in the absence of an excise tax.

The rate is currently set at 10 mills (.010%) per cigarette, or 20 cents per package of 20. Although the State cannot directly or indirectly tax cigarettes sold on Indian reservations,¹ cigarettes sold to and by eligible Indian smoke shops are required to have tribal cigarette stamps on packages sold. Cigarettes sold on Indian reservations are taxed at the same rate as those sold in Nevada. Tobacco products other than cigarettes are taxed on an ad valorem basis of 30% of the wholesale price. This tax is paid to the wholesale dealer at the time of the wholesale purchase.

Wine and distilled spirits are taxed on a per unit basis, the rate of which is based on the percentage of alcohol by volume, with the exception of malt liquor. Alcohol other than malt liquor is taxed at 40 cents, 75 cents and 2.05 dollars per gallon, depending upon the percent alcohol by volume. All malt liquor is taxed at 9 cents per gallon. (See Table 1.1) The tax is levied on all licensed importers and liquor manufacturers in the state who import, possess, store or sell liquor.

RATES AND DISTRIBUTION

A table that summarizes forms of collection and disposition of Nevada's selective excise taxes appears in Table 1.2. Five mills from the sale of each cigarette go to the State General

TABLE 1.2

**NEVADA SELECTIVE SALES TAXES
COLLECTION AND DISPOSITION**

Tax	Collection	Disposition
Cigarette	Dealers prepay the tax by purchasing and affixing tax stamps or meter impressions thereof from Dept. of Taxation	5 mills to General State Fund. 5 mills to counties for distribution between cities and counties based on population and the number of cities.
Other Tobacco	Tax on tobacco products is collected by the wholesale dealer and paid to the Dept. of Taxation.	State General Fund.
Liquor and Beer	Licensed importers and manufacturers of liquor pay tax to the State Tax Commission.	State General Fund, except for liquor more than 22% alcohol by volume. Of each \$2.05 for alcohol > 22%, \$.15 goes to alcohol programs and \$.50 goes to counties to be distributed between cities and counties, by population.

SOURCE: The Nevada Tax Reporter, Commerce Clearing House, Chicago, IL, paragraphs 35 and 55.

Fund. The remaining five mills from the sale of each cigarette go into the cigarette tax account in the intergovernmental trust fund. The money in the cigarette tax account is appropriated to Carson City and to each of the counties in proportion to their respective populations. In Carson City and county, all revenues go to the city treasury. For other counties, the appropriations among cities are done on the basis of population within the county, with slight differences in distribution for counties with populations of 5,000 or more, and for smaller counties.

In counties with a population of 5,000 or more, all of the money appropriated to the county goes to the county treasury if there are no incorporated cities within the county. If there is one incorporated city within the county, then the revenue is divided between the city and the county on the basis of the proportion of the county population living within the city and the proportion of the county population living outside of the city. If there are two or more incorporated cities within the county, then all revenues are appropriated to the cities, and are divided among the cities according to the relative proportions of the population living in each city.

Counties with a population of less than 5,000 differ only in that unincorporated towns as well as cities are given money. This means that if there are no incorporated cities or unincorporated towns in a county, then all of the tax revenue goes to the county. If there is either one incorporated city or one unincorporated town, then the money is split between the county and the city, or town, by the proportion of the county population that lives within the city, or town, and the proportion that lives outside of the town. If there is more than one incorporated city, or more than one unincorporated town, or one of each, then the unincorporated towns and the incorporated cities receive all tax revenues, distributed by the proportion of the population that lives in each town or city.

All taxes collected from the sale of other tobacco products go to the State General Fund. All revenues collected from the sale of alcohol go to the State General Fund, except those collected from the sale of alcohol that is greater than 22% alcohol by volume. Of the revenues collected from the sale of alcohol that is greater than 22% alcohol by volume, 15 cents of each \$2.05 is earmarked for alcoholic rehabilitation programs and 50 cents is distributed between cities and counties by the same population proportion formula used for the distribution of cigarette taxes.

The revenue collected from these taxes is shown in Table 1.3. Of these taxes, the combined revenue from cigarettes and other tobacco products is the most important, accounting for \$25.96 million in FY 1986. Revenues collected from taxation on alcohol totalled \$14.12 million in FY 1986. Although the total dollar amount collected has risen each year for both tobacco and alcohol, the percent that each of these taxes has contributed to the total collected revenue of the state has fallen.

Indeed, when viewed over the last 20 years, the decline in the relative share of total revenues is rather dramatic. As shown in Table 1.4, in 1965 the revenue from tobacco excise taxes accounted for 5.6% of the Nevada's total revenue from state taxes and the revenue collected from the excise taxes levied on alcohol accounted for 4.3% of the state's revenue. In contrast, in FY 1986, the combined contribution of tobacco and liquor excise taxes was a little less than 4% of Nevada's total state revenue.

INTERSTATE COMPARISONS

The declining contribution that tobacco and alcohol excise taxes are making to total tax revenues suggests that perhaps tobacco and alcohol are not being taxed at as high a rate as they could support. One important impediment to increasing tax rates, however, is the threat of competition from other states and of illegal bootlegging whereby cigarettes are purchased in lower tax states and smuggled into higher tax states to undersell

TABLE 1.3
NEVADA SELECTIVE SALES TAXES
COLLECTIONS OF TAX REVENUE (IN MILLIONS)

Tax	1980	1981	1982	1983	1984	1985	1986
			(\$ millions)				
Cigarette and Other Tobacco	\$11.95	13.12	13.52	13.40	17.49	20.23	25.96
Percent Change		9.8	3.0	-.9	30.5	15.7	28.3
Liquor and Beer	10.89	11.37	11.78	11.56	13.19	13.10	14.12
Percent Change		4.4	3.6	-1.9	14.1	-.7	7.8

SOURCE: U.S. Dept. of Commerce, Bureau of the Census, State Government Tax Collections (Various fiscal years.)

TABLE 1.4
NEVADA SELECTIVE SALES TAXES
COLLECTIONS AS A PERCENT OF TOTAL TAX REVENUES

Tax	1965	1970	1980	1986
Cigarette and Other Tobacco	5.6%	5.2%	2.3%	2.5%
Liquor and Beer	4.3	3.6	2.1	1.4
Sum	9.9	8.8	4.4	3.9

SOURCE: U.S. Dept. of Commerce, Bureau of the Census, State Government Tax Collections (Various fiscal years.)

Note: 1986 Tax revenue was 1,048.3 million.

legitimate businesses. To understand the importance of these threats, one must compare Nevada to its neighboring states to help gauge the appropriateness of the level of excise taxation in Nevada.

Tobacco

For cigarettes, it is misleading to compare the levels of taxation by simply comparing the excise tax rates imposed in Nevada with those rates imposed in the region. The simple comparison of excise rates on cigarettes in Nevada and its border states puts Nevada somewhere in the middle of the range with California at the low end with a rate of 10 cents per pack, and Oregon at the high end with a rate of 27 cents per pack. This range is likely to narrow soon, as California approved a significant increase in the November 8 elections. Nevada's 20 cent rate falls in between this 17 cents difference. (See Table 1.5) What this comparison ignores is that cigarettes are taxed under the general sales tax in some states, as is the case in Nevada, but they are not included in the general sales tax base in other states. Therefore, to do an accurate comparison of levels of taxation, it is important to consider the nominal excise plus sales tax rate imposed on cigarettes by the combination of excise and general sales taxes. This comparison is shown in Table 1.6. Here the difference between the highest western state, Utah, and the lowest state, California, is only 11 cents. This 11 cents is dramatically lower than the 17 cents difference found when simply examining the excise rates. In this comparison, Nevada's nominal excise plus sales tax rate is on the high side for the Western region, and is exceeded only by Washington's and Utah's nominal excise plus sales tax rate. Assuming that there is competition between states, then it is important to keep tax rates at about the same level as surrounding states. As Nevada's nominal excise plus sales tax rate falls within the same range as its neighboring states, the

TABLE 1.5
STATE EXCISE TAX RATES ON
CIGARETTES (1987)

State	Cigarettes (cents/pkg 20)
NEVADA	20
Arizona	15
California	10 *
Colorado	20
Idaho	18
Montana	16
New Mexico	15
Oregon	27
Utah	23
Washington	31
Wyoming	08
Florida	24
Hawaii	30
Texas	26
Low State	
N. Carolina	02
High State	
Minnesota	38
Regional Av.	18.45
U.S. Av.	18

Source: The Tobacco Institute, The Tax Burden on Tobacco, Washington, D.C., vol.22, 1987.

Note: Hawaii's per unit excise tax estimated for 1987 based on an ad valorem tax rate of 40% of wholesale.

On November 8, 1988, California voted to increase the tax rate on cigarettes from \$.10 to \$.35, an increase of \$.25.

TABLE 1.6
STATE EXCISE TAX RATES ON
CIGARETTES (1987)

State	Cigarettes (cents/pkg 20)	Applicable General Sales Tax Rate	Nominal Rate (cents/pkg 20)
NEVADA	20	5 3/4% ^{ab}	28
Arizona	15	5% ^c	21
California	10	6% ^{ab}	18
Colorado	20	--	20
Idaho	18	5%	24
Montana	16	--	16
New Mexico	15	4 3/4% ^c	21
Oregon	27	--	27
Utah	23	4 38/64% ^{bc}	29
Washington	31	6 1/2%	41
Wyoming	08	--	08
Florida	24	5%	31
Hawaii ^d	30	4%	36
Texas	26	4 1/8% ^c	34
N. Carolina	02	3%	05
Minnesota	38	6%	47
Regional Av.	18.45		23
U.S. Av.	18		

Source: The Tobacco Institute, The Tax Burden on Tobacco, Washington, D.C., vol.22, 1987.

Note:

a. Includes state-collected local sales tax where local rates are uniform and statewide.

b. Additional taxes which are not uniform and are collected by the state not included here.

c. Certain states and/or counties impose general sales taxes not here included that are collected by the state.

d. Hawaii's per unit excise tax estimated for 1987 based on an ad valorem tax rate of 40% of wholesale.

raising its level of taxation much and remaining competitive as it already ranks among the highest rates in the area. However, because California just approved such a significant tax rate increase, and because California is such an important neighbor to Nevada, California borders Nevada on two of its four sides, and many visitors to Nevada come from California, a rate increase seems very plausible and attractive. If competitiveness is a concern, then Nevada cannot get too out of step with California since a large Nevada-California difference in tax (which is likely to be nearly fully represented in a difference in final prices) will lead to bootlegging. So Nevada should consider raising its tax rates on cigarettes to keep in line with California.

Further evidence supporting a rate increase is found within the state itself. In Nevada, the demand for cigarettes varies little with changes in price.² This means that the a tax rate increase will result in only a very small decline in consumption. The interstate comparisons should be used as guidance when setting the appropriate level of taxes, particularly if the state is considering a tax rate increase.

In a 1983 study by the U.S. Advisory Commission on Intergovernmental Relations, Nevada was estimated to lose only about 1.1% of its possible cigarette revenues to bootlegging.³ The two states most affected by bootlegging in the western region were Utah and Washington, the two states in the region with the highest taxation rates. This is not meant to imply that bootlegging automatically comes with higher rates, for Oregon only loses .7% of its total revenues, and it too levies one of the highest rates in the western region on cigarettes. These observations are intended only to point out that bootlegging can be a concern if a state levies rates that are considerably higher than those of the surrounding states.

The comparison of tax rates on other tobacco products, shown in Table 1.7, shows that Nevada has one of the lowest taxation rates for other tobacco products of any state in the region. It should be pointed out that, with the exception of California,

TABLE 1.7

**STATE EXCISE TAX RATES ON
OTHER TOBACCO PRODUCTS (1987)**

State	Other Tobacco	Applicable General Sales Tax Rate
NEVADA	30% of Wholesale Sales Price	5 3/8% ^{ab}
Arizona	d	5% ^c
California	Little cigars taxed as cigarettes	6% ^{ab}
Colorado	20% of Manufacturing Price	3%
Idaho	35% of Wholesale Sales Price	5%
Montana	12.5% of Wholesale Sales Price	--
New Mexico	25% of Product Value	4 3/4% ^{bc}
Oregon	35% of Wholesale sales Price	--
Utah	35% of Wholesale Sales Price	4 38/64% ^{bc}
Washington	64.9% of Wholesale Sales Price ^e	6 1/2%
Wyoming	--	3%
Florida	25% of Wholesale Sales Price	5%
Hawaii	40% of Wholesale Sales Price	4%
Texas	f	4 1/8% ^c

Source: The Tobacco Institute, The Tax Burden on Tobacco, Washington, D.C., vol.22, 1987.

Note:

- a. Includes state-collected local sales tax where local rates are uniform and statewide.
- b. Additional taxes which are not uniform and are collected by the state not included here.
- c. Certain states and/or counties impose general sales taxes not here included that are collected by the state.
- d. Cigars retailing for: 5 cents or less, 2 cents/ea. 3 cigars, more than 5 cents, 2 cents/ea. Little cigars: 4 cents/ea. for 20 or fraction thereof. Smoking and chewing tobacco and snuff: 2 cents/oz. Plug tobacco: .5 cents/oz. or fraction thereof.
- e. Smoking and chewing tobacco and snuff.
- f. Tax on cigars and tobacco is based on weight/1,000 and retail selling price.

TABLE 1.8
COMPARING RATES OF TAXATION
CIGARETTES AND OTHER TOBACCO PRODUCTS (1987)

State Cigarette Excise Taxes as % of Wholesale Price ^a		Other Tobacco Excise Taxes as % of Wholesale Price
NEVADA	29%	30% of Wholesale Price
Arizona	22%	b
California	16%	Cigars taxed cigarettes
Colorado	30%	20% of Manufact.Price
Idaho	28%	35% of Wholesale Price
Montana	25%	12.5% of Wholesale Price
New Mexico	23%	25% of Product Value
Oregon	38%	35% of Wholesale Price
Utah	35%	35% of Wholesale Price
Washington	38%	64.9% of Wholesale Price ^c
Wyoming	13%	--
Florida	33%	25% of Wholesale Price c
Hawaii	40%	40% of Wholesale Price
Texas	38%	d

Source: The Tobacco Institute, The Tax Burden on Tobacco, Washington, D.C., vol.22, 1987.

Note:

a. The wholesale price was estimated based on the wholesale price for cigarettes in Hawaii, adjusted by the ratio of the retail price in each state divided by the retail price in Hawaii. (Hawaii retail/Hawaii wholesale)x(state retail).

b. Cigars retailing for: 5 cents or less, 2 cents/ea. 3 cigars, more than 5 cents, 2 cents/ea. Little cigars: 4 cents/ea. for 20 or fraction thereof. smoking and chewing tobacco and snuff: 2 cents/oz. Plug tobacco: .5 cents/oz. or fraction thereof.

c. Smoking and chewing tobacco and snuff.

d. Tax on cigars and tobacco is based on weight/1,000 and retail selling price.

Texas and Arizona, all of our comparison states use an ad valorem tax rate for other tobacco products but a per unit tax rate for cigarettes. This results in some interesting comparisons in rates of taxation as shown in Table 1.8. Note that in some cases in Table 1.8 cigarettes are taxed at a higher rate than other tobacco products, but in other cases other tobacco products are taxed at a higher rate.

Alcohol

Comparing the excise taxes levied on alcohol by Nevada, which is a license state, with the rates levied by other states in the region is complicated by the large number of liquor control states in the western region. In control states, the state has a monopoly on the wholesale distribution of distilled spirits. In some control states, the state also controls retail sales, while in others this is left to private retailers and in still other states, there is a combination of private and state stores for retail sale. In most control states, revenue is generated by a mandatory mark-up from the wholesale price, which is set by the state distributor. In control states where there are private retailers, there are excise taxes levied in the privately operated stores, and mandatory mark-ups in the state-owned stores. In license states such as Nevada, the wholesale and retail distribution and sale of distilled spirits is done privately; and all state revenue is generated by levying excise taxes.

These disparate methods of generating revenue make tax burden comparisons between control and license states difficult to implement since in control states revenues are a mix generalized by mandatory mark-ups that yield profits for state governments and excise taxes.⁴ Meaningful comparisons can be further complicated by the fact that because the state is the sole wholesale dealer in a control state and because many controlled states do not impose a per unit tax on alcohol, it is difficult to make meaningful

TABLE 1.9
SELECTED ALCOHOLIC BEVERAGES, 1987
LICENSE STATES

	Beer over 3.2%	Wine + (dollar/ gallon)	Spirits ++ (dollar/ gallon)	Other Taxes
NEVADA	.09	.40	2.05	general sales
Arizona	.16	.84	3.00	---
California	.04	.01	2.00	---
Colorado	.08	.28	2.28	---
New Mexico	.18	.95	3.94	4.75% gross receipts
Florida	.48	2.25	6.50	
Hawaii	.81	1.30	5.20	.5% wholesalers' tax 4% retail tax
Texas	.20	.25	3.25	4.18% sales tax

+ Rates for wine given for 14% or less in states where rates differ with varying alcoholic content.

++ Rates for distilled spirits given for 80 proof or less in states where rates differ with varying alcoholic content.

TABLE 1.10
SELECTED ALCOHOLIC BEVERAGES, 1987
CONTROL STATES

	Beer over 3.2%	Wine + (dollar/gallon)	Spirits ++ (dollar/gallon)	Other Taxes
Idaho	.15	.45 private 80% state markup	45% markup additional 3%	
Montana	.14	1.02 40-60% markup	26% tax 40% markup	
Oregon	.085	.67	99% markup	
Utah	.355 68.5% state markup	.17	12.50 103% markup	
Washington	.09 private 70% markup	.83	7.42 17.1% sales tax 44% markup	
Wyoming	.19	\$28 private outlet 17.6% markup	.94	

+ Rates for wine given for 14% or less in states where rates differ with varying alcoholic content.

++ Rates for distilled spirits given for 80 proof or less in states where rates differ with varying alcoholic content.

comparisons between mandatory mark-ups and per unit taxes.

Removing all control states from the comparison leaves California, Arizona, New Mexico, Colorado, Texas, Florida and Hawaii as the comparison states for Nevada. Of these eight states, Nevada has the second lowest tax rate on distilled liquor (California is the lowest.) Nevada has the fourth lowest tax rate on wine (California, Texas and Arizona are the lowest,) and Nevada has the third lowest tax rate on beer (California and Arizona are lower.) It seems that it would be difficult for Nevada to significantly raise its excise taxes on alcohol and still retain its competitiveness with its closest neighbors, California and Arizona. (Table 1.9 and Table 1.10) There is also always the danger that sales will decline as a result of higher taxation rates, either because consumers are purchasing less or because they are purchasing alcohol in another jurisdiction, or because bootlegging has increased.

ANALYZING THE CURRENT SYSTEM

The section on interstate comparisons suggests that the tax rates on alcohol, cigarettes and other tobacco products are comparable with those of the surrounding states. While the rates of excise taxation may be appropriate as they are, the determination of these rates deserves closer scrutiny because it does not seem internally consistent. It seems inconsistent to tax cigarettes on a per unit basis but other tobacco products on an ad valorem basis.

It would be more consistent to tax all tobacco products the same way, and as units vary across types of tobacco (e.g. a can of snuff is different from a pack of cigarettes or a pouch of tobacco) it would probably be administratively easier to apply an ad valorem tax to all tobacco products than to try to make different types of tobacco into units of comparable value so that you could apply a single per unit tax.

There are two advantages to levying an ad valorem tax. The first addresses the issue of horizontal equity; the taxation of products of equal value at the same rate. When adhered to, the principal of horizontal equity guarantees that no consumer is penalized, through higher taxes, for his or her preferences. Violation of the horizontal equity principle is demonstrated in Table 1.8: Different consumers face differential tax rates because of their tobacco preferences. The advantage of levying taxes on an ad valorem basis is to increase the income elasticity (an automatic tax response as the economy grows) of revenue collections. With a per unit tax, revenues will only increase if consumption increases, that is, if the total number of packs of cigarettes sold in the state of Nevada increases. In addition, per unit taxes make no allowances for the devaluation of the per unit rate over the course of time, that is, over a period of years, an excise tax rate of \$.15 per pack is worth less and less as inflation erodes the dollar. This means that each year more cigarettes have to be sold in the state of Nevada to increase revenues so that, after adjusting for inflation, the revenues in 1987 are at least equal to those collected in a previous year, i.e. the consumption of cigarettes has to rise just to offset inflation. Accordingly, in order to keep its revenues growing as fast as the general level of prices, the legislature must change the rate every few years to adjust for inflation. And, as noted above in Table 1.4, Nevada has failed to make the necessary adjustments.⁵

An ad valorem tax, on the other hand, tends to rise with nominal income (income including inflation.) Indeed, revenues from an ad valorem tax will rise as consumption and/or wholesale prices rise. If, for the purpose of demonstration, one assumes that the level of consumption stays constant, an ad valorem tax will still accommodate inflation. We can assume that the wholesale price will rise to keep pace with inflation. That is, as the wholesale price rises, the tax revenues will rise too because the tax is a

TABLE 1.11
COMPARING REVENUE COLLECTIONS FROM CIGARETTE TAXATION
PER UNIT AND AD VALOREM

Year	Number of Packs (in millions)	Collections (in thousands)	Percent Change
1984	123.6	17,606 (actual)	
(ad valorem)		17,606 (equal yield)	0%
1986	132.6	20,285 (actual)	
(ad valorem)		22,927 (potential)	13%
1987	139.0	20,932 (actual)	
(ad valorem)		25,979 (potential)	24.1%

Source: The Tobacco Institute, The Tax Burden on Tobacco, Washington, D.C., vol.22, 1987.

The Annual Report, Department of Taxation of Nevada, various years.

Note:

a. The wholesale price for cigarettes is estimated based on the wholesale price of cigarettes in Hawaii, adjusted by the ratio of the retail price in Nevada divided by the retail price in Hawaii.

For the given years, the wholesale price in Nevada was estimated at 55.23 cents/pack, 63.67 cents/pack and 68.84 cents/pack.

TABLE 1.12
COMPARING REVENUE COLLECTIONS FROM CIGARETTE
TAXATION PER UNIT AND INDEXED PER UNIT¹

Year	Number of Packs (in Millions)	Collections (in Thousands)	Percent Change
1984	123.6	17,606 (actual)	0%
(indexed)		17,606 (indexed)	
1986	132.6	20,285 (actual)	3.5
(indexed)		21,004 (potential)	
1987	139.0	20,932 (actual)	9.0
(indexed)		22,824 (potential)	

Source: The Tobacco Institute, The Tax Burden on Tobacco, Washington, D.C., Vol. 22, 1987. The Annual Report, Department of Taxation of Nevada, various years.

Note:

A. Indexed to U.S. Consumer Price Index, All Items.

B. 1986 per unit tax indexed to CPI was set at 15 cents; 1986 = 15.84 cents; 1987 = 16.42 cents.

percentage of the wholesale price. If consumption rises and the wholesale price rises, then revenues will rise even faster.

This is demonstrated in Table 1.11, which shows that if Nevada had replaced its per unit tax on cigarettes of \$.15/pack with an equal yield ad valorem tax of 28.67% ⁶ (so that collections on an ad valorem basis equalled those collected on a per unit basis for that year) then in just four years there would have been a dramatic increase in revenue collected by 1986 and 1987. This rise in revenues is a function of both the rising wholesale price and of the rising consumption that was experienced in Nevada over this period. By 1987, the equivalent per unit tax for the revenue collected on an ad valorem basis would have been 18.69 cents. This almost equals the 20 cents per unit rate that Nevada has recently adopted, showing that an ad valorem rate would have risen fast enough to equal the level that the Legislature has just set. Thus, not only does the ad valorem approach avoid an automatic inflation-erosion of tax revenues, but it also helps remove the state from the tenuous and contradictory position of wanting consumption of cigarettes to increase so that revenues will increase, in spite of the fact that cigarettes pose serious threats to both smokers and those around them.

An alternative to the shift to an ad valorem tax would be an indexation of the per unit tax that is currently in effect. In this scenario, the per unit tax is indexed to inflation or the consumer price index. While indexation does nothing to correct the horizontal inequities that currently exist, it does remove the inflation-erosion problem of the per unit tax.

Furthermore, it seems realistic to assume, due to an increasing awareness of the serious health threat posed by smoking, that sometime in the near future, consumption of cigarettes will begin to level off or even drop off in the nation as a whole. In this scenario, if Nevada tries to maintain its tax revenue collections, the per unit rate will have to be set each year at such a level as to make up for the decrease in number of packs

smoked. Using an ad valorem tax for cigarette taxation, the rate (a percentage of wholesale price) would only have to be increased if the wholesale price were no longer rising faster or at the same pace as inflation. Any rate changes would then be correcting for the difference between the rate of increase of inflation and the rate of increase of the wholesale price. The only instance where an ad valorem tax will yield less than a per unit tax is when the wholesale price is falling at such a fast rate that consumption cannot compensate. But as long as the wholesale price continues to rise at all, the difference between the rise in revenues due to an increasing wholesale price and the decline in revenues due to a decrease in consumption will be less than the difference in revenues collected on the per unit basis if the rate remained the same and consumption fell. In other words, in an era of reduced consumption, taxing on an ad valorem basis (or an indexed per unit basis) provides for a more stable revenue source than taxing on a simple per unit basis because ad valorem revenues are not as affected by variations in consumption as revenues collected on a per unit basis.

Compliance and Administration

Taxing all tobacco products at the same ad valorem rate will also ease the cost of tax compliance. Tobacco wholesale dealers would be freed from having to keep separate accounts for the sale of cigarettes and for the sale of all other tobacco products. If all tobacco products were taxed on an ad valorem basis, at the same rate, then wholesale dealers would only have to keep track of their total wholesale sales and pay a percentage of that in taxes.

The cost of tax administration of cigarette taxes would be reduced by eliminating the earmarking of the cigarette revenues to the county and local governments. If one looks through the history of the cigarette taxes, one sees an interesting pattern in the distribution of the revenues. When the cigarette tax was first

passed, all revenues went to the State General Fund. As the years passed, amendments were passed in 1949, 1961 and 1965 giving the city and county governments an increasing percentage of the revenues until in 1967 another amendment was passed that distributed all revenues to the cities and counties on the population distribution formula. Since 1967, successive amendments have been passed in 1983, 1985, and 1987 that have raised the per unit rates and have given an increasing portion of collected revenues to the State General Fund so that as of July 1987, the State General Fund now receives half of all revenues collected from the taxation of cigarettes. These changes are unwieldy and there is no clear rationale for earmarking in the first place.

This approach to the distribution of cigarette revenues reveals a policy inconsistency in the approach to cigarette and tobacco taxation. Moreover, this inconsistency results in added tax administration. If the state feels an increasing need for the revenue, then perhaps they should receive all of the revenue. Or, if the city and county governments feel a greater need for these revenues, then perhaps they should get all of the revenues.

But the current system of putting \$.10 in the State General Fund and \$.10 in the Intergovernmental Trust Fund from the sale of each pack of cigarettes seems extraordinarily administratively burdensome, and it does not seem surprising that in FY 1985-1986, \$280,306.00 was spent on administration costs for the cigarette tax. This money, had it gone to the State General Fund, would have represented a 3.4% increase in revenues.

Alcohol

As with the cigarette tax, the alcohol tax is levied on a per unit basis, with product differentiation defined by the varying alcoholic content by volume of different products. Although only one state, Hawaii, has ever employed an ad valorem tax on alcohol, the reasoning used above to advocate a switch to an ad valorem tax

still stands. It has been noted that⁷ it is unclear whether per unit taxes or ad valorem taxes are more regressive. What is clear, however, is that taxes levied on an ad valorem basis provide a more consistent revenue source when there is a decline in use. An ad valorem tax would also ease administration of alcohol taxes. With an ad valorem tax, sales accounts would not have to be kept separately for the four different types of alcohol as they are now defined. Rather, only a record of total sales would be necessary to determine taxes owed.

As with the cigarette tax, the distribution formula for the collected tax revenues from the sale of liquor imposes added administrative cost. To distribute \$.50 per gallon collected from the sale of alcohol over 22% alcohol to cities and counties and \$.15 to the Department of Human Resources for the account of Alcohol and Drug Abuse when all other revenues go straight to the State General Fund obstructs administrative simplicity to satisfy a rationale for distribution which is, at best, unclear.

Moreover, there seems no justification for using funds from the sale of alcohol that is greater than 22% alcohol by volume to finance the alcohol and Drug Abuse account, unless there is strong evidence that alcohol that is greater than 22% alcohol by volume is the alcohol drunk by alcoholics or that it is the alcohol which encourages or contributes to alcoholism. Otherwise there is no relation between those receiving the benefits offered by the Alcohol and Drug Abuse Program and those funding it. Even if there were a significant statistical correlation between the consumption of alcohol that is greater than 22% alcohol by volume and alcoholism, the case for earmarking still would be strained.

This is a case where general fund finance with legislative discretion must decide whether treating alcohol and drug abuse is a public (governmental) concern, and if it is, what is the appropriate level of the public support.

If the state of Nevada switched to an ad valorem tax on all alcohol, it is likely that revenues from the alcohol tax would

equal those from the cigarette and tobacco tax. Accordingly, one political compromise that would reduce administrative costs would be to dedicate all revenues from one tax to the State General Fund and all revenues from the other tax to the Intergovernmental Trust Fund. Or, in keeping with other policy recommendations, all tax revenue should be dedicated to the State General Fund to be distributed to localities on the basis of whichever criterion the Legislature decides is most appropriate.

ENDNOTES

1. Decision of the Supreme Court, Washington vs. Coleville Indian Reservation, June 10, 1980.
2. Through regression analysis on price and demand data from 1956-1987, the study found that with an r-square of .2197, demand was inelastic with respect to price.
3. Advisory Commission on Intergovernmental Relations, Cigarette Tax Evasion: A Second Look, Washington, D.C., 1985.
4. Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism, Washington, D.C. vol. 1, 1988.
5. The per unit rate was raised in 1987 to 20 cents/pack.
6. The rate of 28.67% was found by estimating the wholesale price of cigarettes, multiplying that by the actual number of packs sold in 1984, and then solving for the percentage rate that would have yielded the same revenue as was collected under a per unit rate. The wholesale price for cigarettes was estimated based on the wholesale price of cigarettes in Hawaii, adjusted by the ratio of the retail price in Nevada divided by the retail price in Hawaii. For the years shown in Table 1.12, the wholesale price was estimated at 55.23 cents/pack, 63.67 cents/pack and 68.84 cents/pack.
7. Suyderhoud, Jack P. "The lessons of Ignoring Sound Tax Policy: Hawaii's Liquor Tax," February, 1988, forthcoming.

CHAPTER 16

HIGHWAY TAXATION

INTRODUCTION

This Chapter examines the revenue productivity and equity of Nevada's highway taxation system. Revenue productivity is assessed in relation to the State's identified capital funding needs. Equity and efficiency requires that those who benefit from public services should pay for those services in proportion as they benefit. With respect to the highway system, users should contribute revenues for its construction and maintenance proportionate to the share of costs they impose on the system.¹ And, in the context of highway taxation, efficiency also requires a match-up between service benefits and revenues.

Both the revenue production and equity criteria tend to be satisfied by the use of user-fees to support highway investments. In Nevada, the principle of user-fee supported highway expenditures is accepted, and indeed, is enshrined in the Nevada State Constitution.² Nevada highway expenditures are almost entirely supported by user fees, and all user fees are used to fund highways and administrative costs related to highways. Further, fees are apportioned among various categories of users roughly in proportion to the costs these users impose on the system.

However, the level of revenues generated by fees as projected for the next 10 years does not meet the total funding need identified by the Nevada Department of Transportation (NDOT). If all projects identified by NDOT are to be funded, revenues will have to more than double; an increase not practicably supported from user charges alone. In addition, best estimates of local

roadway needs indicate a gap between revenues and investment required to fund an accumulated backlog of capital project work. Thus, even if user fees are increased above current levels to fund a portion of these costs, the state either will have to redefine what it considers a "needed" highway project, or supplement user-fee financing with general revenues.

It should be pointed out that tax efficiency does not require that current users pay the full costs of the system through user fees alone. Because of benefit spillovers and intergenerational effects, some general fund support for highway projects can be justified: residents who do not drive on the state-aided highway network enjoy some of its benefits—lower commodity prices, employment opportunities, and so on—and future generations benefit from present construction of infrastructure facilities. Accordingly, there is a case for current general fund support for a range of highway-related charges, and for spreading current capital costs over future years; e.g., through general-fund supported transportation bonds.

With these general issues in mind, this paper will examine the current system of highway financing, and the options before the State in meeting identified additional funding needs. Much of this discussion will reference recent work conducted by the Nevada Department of Transportation: the recently completed 1988 Cost Allocation Study, and the annual statement of 10-Year Highway Funding Needs.³ The remainder of the paper is organized into the following sections: 1) a presentation of the current Nevada system of highway finance; 2) an evaluation of the system according to criteria of equity and efficiency; 3) an examination of alternative financing packages; and 4) a summary of principal recommendations.

CURRENT NEVADA HIGHWAY FUNDING SYSTEM

The reliance on user fees to finance highway improvements is mandated by the Nevada State Constitution. Article 9, Section 5 states:

The proceeds from the imposition of any license or registration fee and other charges with respect to the operation of any motor vehicle upon any public highway in this state and the proceeds from the imposition of any excise tax on gasoline or other motor vehicle fuel shall, except costs of administration, be used exclusively for the construction, maintenance, and repair of the public highways of this state.⁴

This is the only revenue fund established by the State Constitution; and at present, only about one percent of total highway system funding is supported by general tax revenues. Nevada's highway funding system, then, represents an almost pure example of user-financed highway maintenance, capital repair, and construction.

Description of Current Taxes and Rates

Nevada generates revenues from all three of the classic types of highway user fees: fuel taxes, motor vehicle registration fees, and so-called "third structure" taxes—fees levied on motor carriers. Table 1 shows the current tax rates, base, and disposition of each tax now earmarked for support of the state highway system.

TABLE 1
NEVADA HIGHWAY TAXES
Rates, Bases, and Disposition

Tax	Base	Rates	Disposition
Motor Fuels	Gallons used by Highway vehicles	Gasoline: .18 Special: .20 Local: 1 cent & 1-4 cent	.1265 to State Highway Fund .0535 to Counties Total to State Highway Fund To county of origin for road improvements
Registration	Flat fee for light vehicles; per 1/2 ton for heavy vehicles; Pro-rata for interstate carriers.	\$17/22/32 for light vehicles; \$6 for heavy + misc. interstate fees.	State Highway Fund, with appropriations to Dept. of Motor Vehicles and other administering agencies.
Mileage Fee	All miles travelled by non-Nevada-based interstate carriers	4.25 cents/mile	To State Highway Fund, with appropriations to DMV and other

Registration fees are similar to an entrance fee for the use of the highway network, since their level does not vary with the extent of use. They are however, linked to vehicle weight through the graduated scale for light vehicles, and the per 1,000 pound levy for heavy vehicles.⁵ Fuel tax payments, of course, directly vary with the number of miles driven, and also by weight, since heavier vehicles consume more fuel per mile, on average, than light vehicles. Mileage fees are entirely based on miles driven, but apply only to heavy vehicles.

Excluded from the taxes described in Table 1 is a privilege tax on vehicles, levied at the time of registration. Discussed in more detail in the section on Registration, below, this ad valorem tax is not earmarked for highway purposes; only a small portion of the tax proceeds are allocated to the State Highway Fund. Nevertheless, this tax can be regarded as a user fee if treated as a vehicle owners "entry fee" to the highway system. (At present,

the tax is treated as general revenue to be shared with states and localities.) The following discussion will conform to state practice by regarding the privilege tax as general revenue.

Fuel Taxes. Nevada's total gasoline tax levy is 18 cents per gallon, an increased from the Fiscal Year 1988 rate of 16 cents. Of this figure, \$.1265, or just over 70 percent, is earmarked for the State Highway Fund, from which expenditures supporting only the State highway system are made. The remaining \$.0535 is distributed to Nevada counties based on area, population, street mileage, vehicle miles, and gallonage sold.

The State portion of the gasoline and gasahol tax, authorized by NRS 365, is levied on a per-gallon basis, and is wholly devoted to state highway improvements, and law enforcement. The county share is in fact the sum of three separate taxes, of 1.25 and 2.35 cents (combined for formula purposes to 3.60 cents) and 1.75 cents.

TABLE 2
NEVADA GASOLINE TAX RATES
1987-1989

	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>
State Share	10.00c	11.72c	12.65c
County Share	1.25	2.53	3.60
County Share	1.75	1.75	1.75
Total Tax	13.00c	16.00c	18.00c

The 1.25 cent county share is returned to counties based on the following formula: 1/4 in proportion to total area; 1/4 in proportion to population; 1/4 in proportion to road and street mileage; and 1/4 in proportion to vehicle miles of travel. This formula acts to ensure that while approximately 3/4 of the proceeds are allocated based on some measure of county infrastructure

responsibility and local demand (population, road mileage, and travel miles), at least some of the proceeds are available to serve minimum needs in sparsely populated counties. An additional 2.35 cent tax (increased from 1.28 cents in 1988) is distributed by the same formula to counties, and to incorporated cities within counties.

The final, 1.75 cent share is distributed to the county of origin, then divided between the county and the incorporated areas within the county. This allocation is based on assessed property valuation as a percentage of total property valuation within the county.

Both county taxes are restricted to construction, maintenance, and repair of streets and highways, and for bond redemption of projects covered by the regional plan. In addition, however, a fourth tax—a 1 cent excise tax—may be levied by the state if approved by county voters. This tax may be levied for repair and reconstruction of existing roads not on the Federal or State highway system. As of July 1, 1988, nine of seventeen Nevada counties have chosen to levy this additional one cent tax. Although the tax is optional and is returned to the counties in which it is collected, it is another portion of the state tax rather than part of the county option tax.

There are a number of optional county taxes of .01, .02, .03, or .04 can be levied to support regional highway and street construction, including bond redemption. Proceeds are made available to Regional Transportation Commissions to fund priority system improvements. Counties opting for additional levies, and the amounts, are shown in Table 3. Increases in these rates must be approved by the State Legislature.

TABLE 3
OPTIONAL FUEL TAX LEVIES
BY NEVADA COUNTIES
1989

<u>Counties with .04 Levy</u>		<u>Counties with .02 Levy</u>	<u>Counties with No Levy</u>
Carson City	Lincoln	Churchill	Eureka
Clark	Lyon	Elko	
Douglas	Nye	Mineral	
Esmeralda	Storey		
Humboldt	Washoe		
Lander	White Pine		
Pershing			

Source: State of Nevada Department of Transportation, Programs and Budget Division.

Diesel fuel is taxed at a slightly higher rate than is gasoline: .20/gallon, an increase from .17/gallon in FY1988. The proceeds of this tax are earmarked entirely to the Highway Trust Fund; i.e., they are not shared with local government. Other special fuels, including compressed natural gas (CNG) and liquid natural gas (LNG) are taxed at different rates. Table 4 shows the recent trend in special fuels rates.

TABLE 4
NEVADA SPECIAL FUEL TAX RATES
1987-1989

	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>
Diesel	13.00	17.00	20.00
CNG/LPG	10.00	11.72	12.65

Registration Fees and Licenses. The State's schedule of registration fees accords very different treatment to light and heavy vehicles. The light vehicle registrations are very straight-forward, based on the fee schedule displayed below:

**TABLE 5
STATE OF NEVADA
VEHICLE REGISTRATION FEE SCHEDULE**

<u>Vehicle Class</u>	<u>Fee</u>
Automobile, Motorcycles Trucks, Truck tractors & Buses, under 6,000 lbs.	\$17
Trucks—6,000–8499 lbs	\$22
8,500–10,000 lbs.	\$32
10,000+ lbs.	\$ 6/1000 lbs.
Trailers—below 1,000 lbs*	\$6
above 1,000 lbs.*	\$12

*Unladen weight

Source: NDOT, Overview of Transportation Financing in Nevada

The FY 1989 basic registration fee for automobiles, motorcycles, and trucks was increased \$2 over the FY 1988 rate. In addition to the basic fees, are a number of specialized charges: personal plates are \$25 initially, and \$15 for renewal; registration transfers are \$6; Dealer's Plates are \$12. Every vehicle pays a \$5 State Highway Patrol fee.

The licensing of heavy vehicles is a bit more complex than basic vehicle charges. Interstate carriers with a declared gross weight of 10,000 lbs. or more can choose to pay registration fees on an annual basis, though the actual amounts depend on whether the state in which the vehicle is has a reciprocity agreement with Nevada.⁶ For those 20 states with reciprocity agreements, annual fees include:

Public Service Commission	\$ 6.00
*Reciprocity Fee	\$ 4.00

These fees are designed only to cover regulatory costs. Vehicles from states not entered into a reciprocity agreement with Nevada pay Nevada motor carrier registration fees, pro-rated by the percent of Nevada mileage. Fees for these vehicles, per vehicle, per year, include:

Public Service Commission	\$ 6.00
*NV Highway Patrol	\$ 5.00
*Regis. Service Fee	\$ 4.00
*Registration Fees	\$ 6.00/1000 lbs.

*Vehicles over 26,000 lbs only

If one of these registration methods is not adopted and the vehicle is greater than 26,000 lbs gross weight, a temporary registration fee of \$20 must be purchased. Except for common carriers of passengers (buses), temporary permits are good for 48 hours.

Vehicles registered in Clark and Washoe counties are subject to emission control inspections. Authorized emission control stations must pay \$25 annually for licensing and \$3 per form for compliance certificates. These fees are retained in the pollution control fund for use by the Department of Motor Vehicles and Public Safety in administering the emission control program.

Motor Carrier Mileage Fees. As so-called third structure taxes, Nevada's motor carrier fees are designed to capture revenues based on the use of roadways in interstate commerce. Like the State's vehicle registration fees, they are intended to produce revenues corresponding to use, though not on vehicle weight as with registration fees, but on miles travelled.

All carriers that operate on Nevada roadways, but are not fully registered in Nevada, must pay mileage fees. Each vehicle must obtain a mileage license,

at \$8 per year, and pay an additional 4.25 cents on every mile travelled within the State.⁷ Further, carriers that register in Nevada only on a temporary basis—on a 48-hour registration—must obtain a temporary motor carrier license. Vehicles of 10,000 lbs Declared Gross Weight (DGW) must purchase temporary licenses, with annual fee increments based on the following schedule:

<u>Declared Gross Wgt.</u>	<u>Fee</u>
10,000 to 15,000	\$10
15,001 to 20,000	20
20,001 to 50,000	40
50,001 and over	90

In addition to the fees indicated here, privilege taxes are collected based on vehicle estimated value. For interstate carriers, privilege taxes are prorated based on Nevada miles driven. Because only a small portion of these fees are dedicated for highway purposes, they are not included in this analysis.

Vehicles fully registered in Nevada are exempt from mileage fees. Challenged successfully in Federal court, the mileage fee exemption was required to be extended to out-of-state carriers if they opt for full, "dual" registration in Nevada. Dual registered vehicles pay full rather than prorated vehicle registration fees, pay pro-rated privilege taxes, and pay no mileage fees. Furthermore, Nevada-based carriers may choose to prorate their registrations, and choose to pay mileage taxes; advantageous if they run sufficiently few miles in Nevada.

EVALUATION OF THE CURRENT SYSTEM

The highway finance system of the State is by and large, equitable with respect to the relative contributions made by light and heavy vehicles. Fee increases in all three principle revenues sources—fuel taxes, registration

fees, and mileage fees—and growth in the base on which fees are assessed, have produced substantial total revenue increases in recent years. Nevertheless, not enough revenues can be generated from the current level of fees to pay for more than about half the highway work considered needed by the Nevada Department of Transportation. Locally-estimated investment needs face a funding shortfall of similar magnitude.

Revenue Productivity

As indicated in the preceeding section, not all of the total revenues generated by those who own and operate motor vehicles are used to support the highway network. And of the revenues generated, a portion is used to cover various State-level administrative expenses, and other amounts are distributed to local governments to finance their own transportation expenditures. As a result, less than half of total receipts are earmarked for direct expenditures on state highway improvements. Table 5 summarizes the FY 1987 generation and disposition of total revenues.

Table 5

**SUMMARY OF REVENUES AND EXPENSES
STATE HIGHWAY REVENUES SOURCES
(Dollars in Millions)**

	<u>Gasoline</u>	<u>Department of Motor Vehicles</u>	<u>Total</u>
Total Collected	\$96.6	\$107.9	\$204.5
Less:			
Local Distributions & Administrative	(44.2)	(47.5)	(91.7)
Net SHF Revenue	\$52.4	\$60.4	\$112.7
Less:			
Appropriations	*	*	(22.5)
Net to NDOT			\$90.2

Note: Motor Vehicle proceeds include privilege tax collections. Administrative expenses include petroleum inspection, emission control, and highway patrol charges.

Sources: NDOT, The Nevada Highway Network—an overview, undated (1988); NDOT, Overview of Transportation Financing in Nevada, December 1987; and Department of Taxation, Annual Report, Fiscal 1986-1987.

In the discussion to follow, state highway user fee totals will include Net State Highway Fund revenue, plus amounts collected by the Department of Motor Vehicles for Nevada Highway Patrol and Vehicle Emissions and the share of vehicle privilege taxes allocated to highways. These additional amounts place the 1987 state highway revenue figure at \$121.1 million.

The total highway revenues estimated to be produced for State revenue sources in Fiscal Years 1988 and 1989 amount to \$242.3 million, and \$275.4 million respectively. Table 5 shows the total revenues generated by source for the support of the Nevada state highway system, including all capital, operating and maintenance, and administrative expenditures, for Fiscal Years 1988 and 1989.

TABLE 6
STATE HIGHWAY CONTRIBUTIONS REVENUE DETAIL
(Dollars in Millions)

<u>Fee</u>	<u>1988</u>	<u>1989</u>	<u>Percent of 1988 Total</u>
Gasoline	\$64.7	\$72.6	41.1%
Special Fuels	22.4	26.5	15.0
Registration/License	22.1	26.2	14.8
Pro-Rata Registration	3.1	3.3	1.9
Motor Carrier	21.8	30.4	17.2
Driver's License	5.6	5.9	3.3
NHP/Emissions	7.1	7.5	4.2
Privilege	2.5	2.6	1.5
PSC	1.5	1.6	1.0
TOTAL	\$150.8	\$176.5	100.0%

Source: Nevada Department of Transportation, Preliminary Cost Allocation Spreadsheets, September, 1988. Amounts available for State highway use only are reported.

As the table indicates, the total highway funding system is heavily reliant on gasoline taxation; 41 percent of total revenues. When the contribution of special fuels consumption is added, the total revenue stream attributable to fuel consumption comes to over half; 56 percent projected for FY 1989.⁸ Registration and pro-rata registration fees come to an additional 16.7 percent. Motor carrier fees, comprised principally of mileage taxes, amount to another 17.2 percent. All remaining fees, which are designed mainly to recoup administrative expenses for various portions of the highway network, produce some 10 percent of total revenues.

TABLE 7
STATE HIGHWAY CONTRIBUTIONS
1983-88
(In Millions)

<u>YEAR</u>	<u>Total</u>	<u>Gasoline</u> <u>Tax</u>	<u>Licenses</u> <u>And Fees</u>	<u>Other</u>
1983	\$ 84.2	\$ 41.4	\$ 37.0	\$ 5.8
1984	90.9	42.5	42.6	5.8
1985	95.6	43.6	45.2	6.8
1986	109.8	48.9	53.5	7.4
1987	121.1	52.4	60.3	8.4
1988	150.8	64.7	76.4	9.7
1989	176.5	72.6	93.8	10.1

Note: Detail may not add due to rounding and adjustments for consistency across sources. Excluded are amounts disbursed subsequently to local governments for street and road expenditures.

Source: Overview of Transportation Financing in Nevada, NDOT, December 1987. Fiscal 1988 and 1989 from NDOT Preliminary Cost Allocation Spreadsheets, September 1988.

From Fiscal Years 1983 to 1989, total highway fund revenues have just slightly more than doubled; an increase of 109 percent, or a compound annual increase in total funds generated of 13.1 percent (Table 6). At the same time, the operation and maintenance cost index published by the federal highway administration increased an estimated 6 percent per annum.⁹

Over the years, reliance on gasoline taxes has declined slightly. In 1983, for example, the share of total revenue generated from gasoline taxes, paid mainly by automobile and light truck drivers, amounted to about half; 49.2 percent. By 1989, this source of revenue comprised 41.1 percent of total revenue. This decline in part has been produced by deliberate policy, whereby fees paid by heavy vehicles have been increased relative to those paid by light vehicles. By now, the share of revenues derived from the operation of heavy vehicles very nearly matches their share of total costs for which they are responsible.¹⁰

At the same time, gasoline tax revenue increases, in contrast to fees produced by vehicle registrations and motor carrier fees, are relatively insensitive to growth in miles traveled or number of vehicles. Increases in average per-vehicle mileage-per-gallon almost completely offset increases in total miles traveled: in Fiscal Year 1981-1982, total State consumption amounted to 499 million gallons. The corresponding figure for Fiscal Year 1986-1987 was 504 million; a total 5-year increase of 1 percent.¹¹

Revenues generated from these sources support the Nevada Highway Fund, from which highway improvements expenditures are made. These revenues also support the NDOT administration, the bulk of operating costs of the Department of Motor Vehicles, gas tax collection costs of the Department of Taxation, legal services supplied by the Attorney General, and other highway-related activities of the Budget Office and the Public Service Commission. All told, the State Highway Fund receives about 70 percent of the total amounts collected from highway fees and taxes, and not otherwise earmarked for local highways.

Local Distributions. Revenues generated from user fees and available for local distribution for highway purposes amounted to \$49.8 million in FY 1988 and an estimated \$57.5 million in FY 1989. These sums are generated entirely from gasoline tax proceeds, and as such, represent 43.5 percent, and 44.2 percent respectively of total gasoline taxes collected from Nevada motorists. As suggested by the formula, noted above, and the size and number of incorporated jurisdictions in each county, the amounts received by counties vary widely.

Table 8 indicates, for FY 1988 (actual) and FY 1989 (expected), the amounts distributed to each county, including incorporated areas within counties.

TABLE 8
COUNTY GASOLINE TAX DISTRIBUTION
1988, 1989

COUNTY	1988			1989		
	<u>County Share</u>	<u>County Option</u>	<u>Total</u>	<u>County Share</u>	<u>County Option</u>	<u>Total</u>
Clark	10,336	15,348	25,684	12,986	15,962	28,948
Washoe	4,601	6,180	10,781	5,865	6,427	12,292
Carson City	\$ 729	\$ 1,377	\$ 2,106	\$ 860	\$ 1,432	\$ 2,292
Nye	1,239	474	1,713	1,535	493	2,028
Elko	1,146	455	1,601	1,609	474	2,083
Humboldt	826	529	1,355	1,123	550	1,672
White Pine	783	370	1,153	1,104	385	1,489
Douglas	463	598	1,062	594	623	1,217
Lyon	476	354	830	626	368	994
Pershing	480	280	759	674	291	965
Churchill	496	276	772	612	287	889
Lincoln	562	74	636	813	77	890
Lander	462	187	649	646	195	840

TABLE 8
COUNTY GASOLINE TAX DISTRIBUTION
1988, 1988 (CONT'D.)

Esmerelda	182	34	216	263	35	298
Mineral	245	83	328	307	86	393
Eureka	160	0	160	166	0	166
Storey	33	5	38	44	5	49
TOTAL	\$23,216	\$26,624	\$49,842	\$29,827	\$27,690	\$57,515
Median	496	354	830	674	368	994

Note: Counties ranked by share of gas tax proceeds received, FY 1989.

Source: "Estimated Gas Taxes to be Distributed to Nevada's Counties in State Fiscal Year 1989" Prepared by NDOT Programs and Budget Division, September, 1988.

Given the apportionment formula used for distribution of the county share of the Statewide gasoline tax, and local tax effort as demonstrated by county exercise of the 1 cent and 1-to-4 cent gasoline tax option, Nevada's urban counties account for the bulk of gas tax allocations. Total 1989 taxes for the top four counties in terms of collections — of Clark, Washoe, Carson City, and Nye amount to \$45.6 million; 79 percent of the total county take.

The amount received by each county is the combined product of the willingness of county citizens to vote gasoline tax hikes, and the productivity of the revenue source. Those counties that both levy the maximum allowable local option gasoline taxes, and sell large quantities of gasoline, generate over 50 percent of their total distribution through the invocation of the local tax option; these are Clark, Washoe, Carson City, and Douglas counties. (This is more than double the median local-option revenue share of 26 percent.) Nevertheless, some counties, though they levy the full local option tax allowable, produce a relatively small share of their total income from this source. Esmerelda and Storey counties levy the full 4 cent option and the 1

cent state-option, but generate only 12, and 10 percent of their total gasoline tax revenues by this method.

The increase in the gasoline tax rate for FY 1989 has centralized somewhat the gasoline tax distribution mechanism. While in FY 1988, the gasoline tax proceeds distributed by the combined formula comprised some 46.6 percent of total tax proceeds available to counties, in FY 1989, the corresponding figure was 51.9 percent. With local option rates unchanged from the prior year, the total increase in proceeds was linked entirely to the modest increase in gasoline sales; total county option taxes increased 4 percent. In contrast, the increase in state-imposed rates produced a 28.5 percent increase in gasoline tax proceeds to be distributed by the combined formula.

Projected Revenues and Estimated Highway Needs.

The Nevada Department of Transportation has just completed its annual assessment of the ten-year highway funding needs for the State highway system.¹² Each year NDOT estimates the short range (3-year) and long-range (10-year) highway funding need based on the identification of "needed" highway improvement projects. Based on the projects identified by this process, proposed needed improvements to Federal- and State-aid highway system amount to an estimated \$3,395 million, in 1988 dollars. (See Table 9.)

Revenue projections for the State Highway Fund depend on assumed annual growth rates for various components of the total revenue package. The Department's 10-year forecast is based solely on current dollar revenues and costs, and assumes for analysis purposes that the proceeds of State revenue sources remain constant. Nor are construction, maintenance, and operation costs adjusted for expected inflation. These assumptions are adopted for the current analysis. As estimated by NDOT, current funding from all sources

amounts to \$1,559.8 million; about 46 percent of the total needed. (Appendix A presents an alternative analysis, which suggests that projected expenditures will outstrip total revenues.)

TABLE 9
NEVADA 10-YEAR
ESTIMATED HIGHWAY FUNDING NEEDS
(In millions of 1988 dollars)

<u>Roadway Category</u>	<u>Funding Needed</u>	<u>Funds Available</u>	<u>Funding Shortfall</u>
Interstate	\$ 924.9	\$ 367.7	\$ 557.3
Primary	870.9	377.5	493.4
Secondary	279.6	71.3	208.3
Urban	297.3	54.4	242.9
State-aid	81.5	0.0	81.5
Cap. Impr.	36.8	30.0	6.8
Maintenance	793.4	548.3	245.1
Bridge & Other	110.7	110.7	0.0
TOTAL	\$3395.1	\$1559.8	\$1835.3

Source: NDOT "10 Year Highway System Needs"

Thus, should the State opt to fund the complete list of proposed projects, revenues of \$1.835.2 will be required over the next ten years. This amounts to an annual increase in total highway net revenues of \$184 million. (This assumes that no additional amounts for non-project related costs are required; collection and administration costs, equipment and other costs not chargeable to project costs, etc.)

At the same time, regional and local roadway needs not included in the State's list will require funding. The amount of this projected need is much more difficult to estimate, and subject to even greater inherent uncertainty than is the State estimate: each local government defines "need" differently, and basic data collection and analysis procedures differ widely from locality

to locality. One estimate placed "deferred" county and city capital construction costs at \$346 million.¹³

If deferred is understood as "unfunded" the state and local capital funding shortfall amounts to some \$34.6 million per year in current dollars. (This assumes, for the sake of analysis, that no additional capital needs beyond the unfunded total are identified.)

The scale of these estimated capital costs Statewide appear reasonable, if the two largest jurisdictions' estimates are at all accurate and indicative. The Clark County Regional Transportation Commission's (RTC) estimate of unfunded need in 1986 amounted to \$106 million; the Wahsco County RTC estimated about \$52 million, (together comprising almost half of total need, statewide). The magnitude of the funding gap reported by the two jurisdictions is roughly comparable. If averaged over 10 years, the level of expenditure needed to accomodate both current spending and currently-unfunded project need identified by the Clark Co. RTC would require an approximate doubling of current revenues; from FY 1989 revenues of \$12.8 million to 23.4 million. Wahsco County RTC revenues would have to double as well: from \$5.1 million to \$10.3 million.

It should come as no surprise that the bulk of capital investment projects identified by the State, and at least one local jurisdiction with major roadway responsibility, for which no source of funds has been identified, should consist of system capacity expansion projects. For example, the 55 projects on the Federal Aid Primary system that are identified by NDOT as unfunded total \$495 million, of which: \$159.6 million (2 projects) is for new freeway construction; \$34.3 million (5 projects) are new interchange construction; \$137.2 million (39 projects) are road widening jobs; \$113.5 million (2 jobs) are new roadway alignments; and \$50.4 million (7 projects) are grade separations and landscaping.

Local needs as well are heavily oriented to system expansion: every project on the Washoe County RTC list of unfunded capital projects includes at least some capacity expansion element. Roadway reconstruction projects invariably include some widening, and even the signalization work betokens efforts to address traffic control needs induced by growth.¹⁴

In sum, both the State and local highway network will require additional amounts of capital investment if the system is to be preserved and expanded. The methods for producing additional revenues, however, must be linked to equity concerns.

Equity of Highway Taxes.

Fairness dictates that the cost of highway construction and rehabilitation be borne by those who benefit, and in proportion of the degree of benefit. For practical purposes, however, it is impossible to quantify benefits from highway use precisely enough to permit even rough assignment of benefit to categories of highway user. Thus, studies of highway finance system equity allocate total highway funding costs to different types of highway user in proportion to the share of total costs they impose by system use.¹⁵

This analysis is concerned mainly with the equity of State highway user payments. Therefore, Federal Highway Trust Fund distributions are excluded from consideration: since any inequities in the federal levy would skew the overall revenue analysis, inclusion of revenues from this source would make sense only if State revenues were expected to compensate. Further, the State's privilege tax levied on the value of vehicles at the time of registration is not considered, since the proceeds are distributed to local governments for education and general fund support, after a deduction for collection costs. It is not a major funding source for highway work. The amounts distributed to

counties and local governments are only briefly considered, given data limitations.

Results of Nevada Cost Allocation Studies.

The State of Nevada in recent years has conducted two Cost Allocation studies treating the specific design and use characteristics of the Federal and State-aided highway network in Nevada, and a third is underway. By these analyses, over the last several years Nevada's highway financing system has become more equitable, as measured across broad vehicle classes. The share of revenues generated by the two principal vehicle groups roughly matches the costs they impose on the highway network, though preliminary results from the current cost allocation study that heavy vehicles continue to underpay slightly.¹⁶

The State's analysis of the revenue structure of highway funding in Nevada for the years 1982-83 and 1986-87 indicate that fee increases and changes in the base on which fees are charged resulted in a more equitable highway funding system. The State's most recent cost allocation study, for Nevada fiscal years 1986 and 1987, indicates that basic vehicles (those under 10,000 lbs gross weight) only slightly "overpay" based on the costs for which they are estimated to be responsible. While owners of basic vehicles--automobiles, motorcycles, and trucks under 10,000 lbs. gross weight--are estimated to be responsible for 63.6% of system costs, they contribute 65.5% of supporting revenues. (See Table 10.) In other words, owners of this category of vehicle overpaid by about \$4.2 million; \$2.1 million per year, or 3 percent of their total annual contribution. Conversely, owners of heavy vehicles underpaid by the same amount.¹⁷

By Nevada historical standards, this is a pretty fair apportionment of revenue responsibility: the 1984 Cost Allocation Study had estimated that

while 36 percent of cost responsibility was attributable to heavy vehicles, this group paid only 29 percent of total revenues. The study concluded that an additional \$14.5 million annually would be required from the heavy vehicle class to ensure that equity between classes would be served.

TABLE 10

COMPARATIVE NEVADA HIGHWAY COST BURDENS AND RESPONSIBILITY
BY VEHICLE CLASS
SELECTED FISCAL YEARS
(Dollars in Millions)

	VEHICLE CLASS	
FISCAL YEARS	<u>Basic</u>	<u>Heavy</u>
<u>1982-1983</u>		
Amount Contributed	\$146.9	\$ 60.9
(Percent Contributed)	(71.0%)	(29.0%)
(Percent Responsibility)	(64.0%)	(36.0>%)
<u>1986-1987</u>		
Amount Contributed	\$148.0	\$ 78.0
(Percent Contributed)	(65.5%)	(34.5%)
(Percent Responsibility)	(63.6%)	(36.4%)
<u>1988-1989*</u>		
Amount	\$196.1	\$131.2
(Percent Contributed)	(59.9%)	(40.1%)
(Percent Responsibility)	(59.0%)	(41.0%)

* Figures are preliminary.

Note: Basic Vehicles are Automobiles, Motorcycles, and Trucks and other vehicles under 10,000 lbs. Declared Gross Weight (DGW). Heavy vehicles are those over 10,000 lbs. DGW.

Source: 1982-1983 and 1986-1987 figures are from Nevada Cost Allocation Study(s) 1984 and 1986. 1988-1989 estimates are from the preliminary Cost Allocation Spreadsheets, 1988. Nevada Department of Transportation.

Between the time of first cost allocation study and the 1986 update, the Nevada legislature enacted fee increases totalling \$13.2 million. About half this increase came from each vehicle class with the net result of increasing

the overall share contributed by heavy vehicles: in addition to increases in gasoline and special fuels taxes, the State shifted from Registration fees based on unladen, to laden weight, thus more accurately capturing the true level of costs imposed on the highway system.

Between Fiscal Years 1986-1987, and Fiscal Years 1988-1989, the share of cost responsibility borne by heavy vehicles increased again, but proportionate to their increased cost responsibility. The estimates for FYs 1988-1989 show heavy vehicles contributing a payment share slightly under their cost responsibility: 40.1% of total payments, compared with 40.0% cost responsibility.

The trend to more equitable contributions is attributable to two state legislative changes: the sharper increase in special (principally diesel) fuel taxes than gasoline taxes, and increases in motor carrier fees. Table 11 indicates the proceeds from these sources:

TABLE 11
PROCEED FROM HIGHWAY TAX REVENUE SOURCES
(Dollars in Millions)

Revenue Source	FISCAL YEAR		
	<u>1987</u>	<u>1988</u>	<u>1989</u>
Gasoline	\$52.4	\$64.7	\$72.6
Special Fuels	13.2	22.4	26.5
Registration	23.1	25.2	29.5
Motor Carrier	15.5	21.8	30.4
Other	16.9	16.7	17.3
TOTAL	121.1	150.8	176.5

Source: Compiled by the Urban Institute based on material supplied by the Nevada Department of Transportation, and the Departments of Taxation and Motor Vehicles.

Equity Within Vehicle Classes

Within classes, vehicles support the highway system at different effective rates depending on whether they are base-plated in Nevada, on how many miles they are driven, and whether interstate carriers choose Nevada's "dual registration" option. As discussed previously, Nevada base plates are required for those vehicles owned by Nevada business and operated from a point of distribution within the state, or by out-of-state firms with an in-state base of operations. Vehicles otherwise base-plated in another state may choose to base-plate also in Nevada, to avoid payment of mileage fees.

Table 12 illustrates, for one category of vehicle, the range of difference according to three vehicle types: those registered as Interstate carriers, and those with dual registration or Nevada-based. The estimates are based on a Tractor-combination of 80,000 lbs. declared gross weight—chosen because it represents the modal category of interstate-carrier, and is the single-largest bearer of cost responsibility within the heavy vehicle class.

TABLE 12
ESTIMATED TOTAL AND PER-MILE PAYMENTS
BY TYPE OF REGISTRATION AND MILES DRIVEN

TOTAL MILES	REGISTRATION TYPE			
	INTERSTATE		DUAL and NEVADA-BASED	
	Total Payment	Per Mile	Total Payment	Per Mile
10,000	\$ 865	.086	\$ 848	.085
20,000	1635	.082	1193	.060
30,000	2404	.080	1537	.051
40,000	3147	.079	1882	.047
50,000	3944	.079	2227	.045
60,000	4714	.079	2572	.043
70,000	5484	.078	2917	.042

Note: Interstate carrier registration fees pro-rated based on assumed 15% of total miles in Nevada. Total payment excludes privilege tax.

Depending on the miles driven in the State, very different tax treatment is accorded to vehicles by registration type, as indicated by total vehicle payments. While at 10,000 miles, vehicles pay roughly similar amounts regardless of how they are registered, at higher mileages, interstate carriers pay substantially more than those choosing dual registration, or those base-plated in Nevada. At 70,000 total miles driven in Nevada, a vehicle registered as an interstate carrier pays total highway use taxes almost 90 percent higher than the same vehicle if dual registered.

This discrepancy widens with increased vehicle miles driven. Since interstate vehicles pay mileage fees directly proportionate to miles driven, total vehicle payments on a per-mile basis roughly keep pace with total miles. At 10,000 miles, interstate vehicle payments amount to about \$.086/mile. By 70,000 annual miles, these payments have declined slightly on a per mile basis; to .078/mile. In sharp contrast, per-mile fees for vehicles base-plated in Nevada, and dual-registered vehicles, decline by half: from \$.085 at 10,000 miles, to \$.042 at 70,000.

HIGHWAY TAX ALTERNATIVES

The future of the highway tax system should be decided based on the need for adequate revenue productivity and the promotion of fair allocation of cost burdens. The current system, by and large, fairly apportions the tax load among categories of users. Only modest changes are needed to meet the goal of equity. Maintaining equity while raising revenue however is a more daunting prospect, and great care must be exercised to ensure that the current balance is not upset. And as the following analysis shows, there are limits to the revenue-generating potential of user fees. It therefore seems likely that some general revenue source will have to be tapped to address a significant portion

of investment need. In addition, more local revenue-raising options will be needed to address that source of investment need.

Promoting Fairness in the Current System

As indicated in the preceding discussion, the current tax system is generally equitable from the standpoint of equity across classes of vehicles: i.e., the payments across categories of vehicles by type and weight is roughly proportionate to their estimated cost responsibility. The degree of equity within vehicle classes is, however somewhat less satisfactory. Vehicles within a weight class may be accorded different treatment depending on miles driven, and place of registry.

The preceding analysis has shown that the system of dual registration produces very different treatments to vehicles registered out-of-state as opposed to Nevada base-plating. The obvious first course is to require all vehicles regardless of registration to pay mileage fees.

There remains a slight distortion in the system based on the number of miles travelled, even for those who pay mileage taxes. In addition, the precise share of contributions within 10,000 lb. vehicle weight increments does not exactly match their relative contributions shares. This distortion is relatively slight however, and would not seem to require the remedy of weight-distance taxes; so-called because vehicle payments are assessed based on declared gross weight and the reported number of miles traveled. (Fees are expressed in ton-miles.) Theoretically, the weight-distance tax is set so that the marginal-user tax for major classes of vehicles is equal to the additional costs generated by each mile of travel. The gains to equity made possible by this approach are obvious, if the tax, properly set, produces per-mile payments for any specified vehicle-weight that are constant across miles travelled.

These equity gains, however, have to be weighed against the higher administrative and compliance costs of the tax.¹⁸

Raising Revenues to Meet Future Needs

If Nevada's highway needs over the next ten years as identified in NDOT's analysis are to be fully funded, and the principal of user-financing is strictly observed, highway fees and charges must more than double.¹⁹ As indicated in the preceding section some additional revenues would be produced through a marginal improvement to the equity of the current financing mechanism, though the amounts raised thereby will not produce additional revenues on the scale required.

The basic principle to keep in mind is that revenue increases must be consistent with equity among vehicle classes. If any part of the shortfall as identified by NDOT is to be funded, fee increases should be apportioned between basic and heavy vehicles consistent with their share of cost responsibility.

Raising sufficient revenues to fund the 10-year list of highway projects will be difficult from user fee increases alone. Over half the current total highway revenue is raised from gasoline and special fuels taxes, which now are among the highest in the country. Further increases in the short term would be difficult achieve.

A more likely source is motor carrier and registrations fees, though increases have to be carefully crafted to maintain the current balance between contributions and cost responsibility. Even so, the amounts raised given the most likely increase scenarios, though impressive, are insufficient. Table 13 presents a basic option registration fee increase, based on the following

criteria: 1) the floor registration fee is \$50;²⁰ 2) the registration and mileage fees paid by heavy vehicles are scaled to maintain equity between the broad vehicle classes.

TABLE 11
BASIC OPTION FOR INCREASED HIGHWAY REVENUES

	<u>Current Fee</u>	<u>Basic Option</u>
<u>Registration</u>		
Under 6,000 lbs. DGW	\$17	\$50
6,000—8,499 lbs. DGW	25	60
8,499—10,000 lbs. DGW	35	75
Trailers < 1,000 lbs	6	9
Trailers > 1,000 lbs	12	15
Per 1,000 lbs. > 10,000 lbs.	6	14.50
<u>Mileage Fees</u>	\$.0425	\$.09

Under this baseline scenario, an increase in the basic vehicle registration fee to \$50, with the \$60 and \$75 increments as noted, together with modest increases in the fees for trailers, would produce an additional \$32 million per annum from the basic vehicle classes. To ensure that heavy vehicles pay the appropriate share of the total cost increase, thus maintaining equity between vehicle classes, the per 1/2 ton weight registration fee must rise from \$6 to \$14.50, and the mileage fee from 4.25 cents to 9 cents per mile.²¹ Increases in heavy vehicle fees of this magnitude would produce an additional \$33.1 million. Table 14 indicates the revenue source and amounts generated under recent, current, and optional, fee levels.

TABLE 14
REVENUE PRODUCTIVITY OF BASIC OPTION FEE INCREASES
(Dollars in Millions)

<u>Revenue Source</u>	<u>YEAR</u>		<u>Basic Option</u>
	<u>1988</u>	<u>1989</u>	
Gasoline	\$64.7	\$72.6	\$72.6
Special Fuel	22.4	26.5	26.5
Registration/License	22.1	26.2	58.5
Pro-rata Registration	3.1	3.3	7.9
Motor Carrier Fees	21.8	30.4	46.5
Other*	16.7	17.3	17.3
TOTAL	\$150.8	\$176.5	\$228.7

*Other revenue includes Driver's License, Nevada Highway Patrol, Emission Control, Privilege taxes, and Public Service Commission Fees.

Source: Urban Institute simulations based on NDOT cost allocation spreadsheets. Note: NDOT figures are preliminary.

Table 15 presents the revised equity calculation based on this optional schedule of fees.

TABLE 15
EQUITY OF VEHICLE CONTRIBUTIONS
Current and Basic Option

	<u>1988—1989</u>			<u>Baseline Option</u>		
	<u>Basic</u>	<u>Heavy</u>	<u>Total</u>	<u>Basic</u>	<u>Heavy</u>	<u>Total</u>
Responsibility (Percent)	\$193.2 59.0%	\$134.1 41.0%	\$327.3	\$258.6 56.5%	\$198.7 43.5%	\$457.4
Contributions (Percent)	\$196.1 59.9%	\$131.2 40.1%	327.3	\$259.9 56.8%	\$197.5 43.3%	\$457.4
Difference	\$2.8	(\$2.8)		\$1.3	(\$1.3)	

Source: Urban Institute simulations based on cost allocation spreadsheets provided by NDOT. Note: NDOT figures are preliminary.

Are increases of this magnitude supportable? For the average automobile driver, the increase amounts to only \$32 per year, just slightly more than the

cost of a vanity plate; less than the cost of one new tire. Gauging the acceptability of additional payments by heavy vehicles is less straightforward. The additional amounts required from heavy vehicles are equitable: the added burden of sharply increased roadway construction and maintenance outlays match the costs this class of vehicle imposes on the system. However, tax and fee avoidance strategies gain in appeal with increased vehicle payments if total vehicle payments are out-of-line with other states. In addition, if payments are far higher than other states with the similar roadway responsibilities, the need for additional outlays is called into question.

Based on the fees currently in effect for the modal category of heavy vehicle—high mileage heavy trucks—the baseline option would place the annual payments for such vehicles at the high end of payments made by other Western states. Table 16 indicates the relative rank of Nevada's total per-mile payments currently, and under the baseline option, indicated as NV1.

TABLE 16
COMPARATIVE APPORTIONED STATE HIGHWAY USER FEES
FOR HEAVY INTERSTATE TRUCKS

<u>Natl Rank</u>	<u>State</u>	<u>Miles</u>	<u>Fuel Rates</u>	<u>Fuel tax Per Mile</u>	<u>Regis Fees</u>	<u>Regis Fees/Mile</u>	<u>3rd. St. Rates</u>	<u>Total/Mile</u>
1	CO	1265	20.5	3.6	35	.03	10.33	13.95
—	NV1	820	20.0	3.51	\$1,160	.92	9.0	13.43
2	AZ	1847	16.0	2.81	2,025	1.58	8.0	12.39
3	OR	1847	12.0	2.11	210	.16	11.33	11.49
5	NV	820	20.0	3.51	480	.38	4.25	8.13
6	ID	706	18.0	3.16	120	.09	4.49	7.74
8	NM	1286	16.2	2.84	127	.10	3.17	6.11
9	MT	735	20.0	3.51	2,531	1.98		5.49
18	WA	2132	18.0	3.16	2,182	1.70		4.86
26	WY	1249	8.0	1.40	120	.09	2.40	3.90
27	UT	967	19.0	3.33	600	.47		3.80
45	CA	11733	9.0	1.58	1,508	1.18		2.76

Source: Association of American Railroads, as of July 1, 1988.

Notes: based on 5-axle, diesel tractor semi-trailer (48') combination, travelling 128,000 miles annually, with DGW of 80,000 lbs., 5.7 miles per gallon, unladen weight of 27,000 lbs., 1985 model year, cost \$75,000 new. Miles are apportioned by the amount of fuel used in each state.

Even fee increases of this magnitude would not exceed on a per mile basis the payments made to the most expensive Western state. Moreover, interstate carriers that ordinarily would travel through Nevada do not have ready alternatives to using the state's interstates to transport goods. Carriers to and from Northern California that now use Interstate 80 cannot easily substitute travel through Oregon and Idaho without incurring substantial additional costs. Carriers to and from Southern California can choose, rather, to route through Arizona than take Interstate 15 through southern Nevada. However, as shown in the above table, the difference in the cost of hauling through Arizona compared to Nevada, is negligible and unlikely to offset the additional travel mileage required.

Even with fee increases of this magnitude, large amounts still are needed if the NDOT estimate of total highway investment shortfall is to be fully funded. Compared with a total annual increase in revenues of \$201 million needed to fully fund the 10-year project total, the fairly large increases contemplated here will produce only \$52.2 million; one-quarter of the amount needed.

The basic option assumes no increases in gasoline and special fuel taxes. Indeed, inasmuch as Nevada fuel taxes now are among the highest in the Nation, and recent fuel tax increases have been substantial, no further increases are likely in the near future. Nevertheless, it appears certain that Federal and other state fuel taxes will increase in the next five years, especially if the price of oil remains low compared to recent historical experience. Thus a

further option could include an additional 1.5 cent per gallon gasoline tax hike, say in the fifth year of an investment program. To maintain equity among vehicle classes, diesel and special fuel taxes would have to increase by 6 cents per gallon. (This "diesel differential" in fact has been formalized in several states.) The increase of \$16.3 million, under this option, and even if enacted immediately, produces total additional revenues far short of those needed to fully fund total investment need.

The state may wish to consider formalizing both increased revenue from the source and maintaining equity through the institution of indexed gasoline taxes, coupled with a diesel fuel differential. Beginning in 1978, states began to adopt various kind of variable rate gasoline taxes, providing for periodic increases in gasoline taxes linked to changes in some form of price or cost index.²¹ Some states tie the adjustment to the change in computed average price of fuel; an ad valorem tax. Decline in revenues if prices drop can be prevented by a floor established at the current year's rate. Tax revenues can be more directly linked to needed expenditures by linking fuel tax increases to construction cost inflation. Thus, while the current productivity of the gasoline is tied to volume consumed, which has remained relatively flat over the past 5 years despite increases in the number of vehicles operating on the highways, indexed taxes will increase consistent with required expenditures. Motorists would continue to pay based on miles travelled, but will not reap fiscal benefits due to improved fuel economies; per vehicle gasoline tax payments will not continue to decline.

Local Revenues. The foregoing analysis has assumed that revenues raised through increases in registration fees, or an eventual increase in gasoline

taxes, would not be shared with local governments. Nevertheless, local governments do face the need to raise additional revenue.

Proceeds from recent increases in the fuel tax have been shared with local jurisdictions, essentially according to a 70/30 split. (Increased from other revenue sources have not been so shared.) If the state were to share the potential fuel tax hike discussed above according to this ratio, and include for the first time special fuels in the distribution, an additional \$4.9 million could be made available to fund local needs. This amounts to about 14 percent of total local deferred capital project costs.

The other potential source of added funding for local roads is local revenue. The first such source, local option gasoline taxes (including the 1-cent state excise tax), is not fully used by counties. Future state gasoline tax distributions, including those from currently authorized levies, should include a local effort provision. As the principle rationale for state distributions to counties is the need to offset local revenue shortfalls in relation to local need, localities should demonstrate that the revenue potential of allowable tax sources is exhausted prior to receipt of additional state aid.

A second source of additional local funding is the widening of revenue options. Consistent with the principal that highway funding should be user-fee generated, local option registration fee add-ons would generate additional investment amounts. In addition, since local street and highway needs are so directly linked to growth, state authorization of local development impact fees in metropolitan counties should be considered. (Such fees, of course, will not address the growing street reconstruction needs expected in future.)

Further tax alternatives. The relative inadequacy of existing revenue sources to generate funds at a level approaching NDOT's \$200 million per annum figure suggests either that identified needs are overstated or that the state's roadway responsibility relative to its population and traffic is fundamentally mismatched. While the former explanation admits of a relatively simple solution—change the needs definition and lower the amounts of investment "needed"—NDOT's estimating procedure does not appear to generate excessive investment figures.²² The alternative suggests that as a "bridge" state, and one relatively underdeveloped considering its size and share of the nation's highway network, the funding shortfall in Nevada is structural.

If the latter explanation is correct, the state is justified in allowing limited departures from sole reliance on user-fees. How great a departure is contingent in part on how one regards the privilege tax, or any excise tax on motor vehicles, or motor vehicle-related purchases (auto parts, for example). While ad valorem real or personal property taxes typically are regarded as general fund revenue, excise taxes on motor vehicles have been justified as user fees, according basic access to the state and local road network to payers of the tax. As of 1986, 12 other states devote some portion of sales or excise taxes on motor vehicles or motor vehicle-related expenses.²³ Such taxes are far from ideal user taxes, however, insofar as they do not vary by mileage, and only weakly by weight. Thus payments are only weakly related to the costs associated with highway use, and are more properly considered contributions from general revenues.

Accordingly, some form of unearmarked general revenue support for highway improvements can be justified, and indeed, this source comprises a growing

share of total state highway current income nationwide. In 1986, 9.9 percent of State receipts for highways nationwide were derived from general fund appropriations, or other taxes and fees not imposed on highway users. In 1970, only 4 percent of State receipts came from these sources. All the citizens of the state benefit from a well-developed highway network, whether they directly use the system or not. Indeed, as the system's needs are so directly tied to the further economic growth of the State, and most citizens, and especially owners of real property, share in that growth, departures from a pure system of user fees are less objectionable.

This is especially true given the potential revenue that can be gained from that source, compared with the amounts from traditional user fees. A .5 percent general sales tax, for example, would generate approximately the same annual revenues as the entire package of fee increases discussed as the "baseline option." If a general sales tax increase, or increases on specialized categories of goods linked to highway use, were enacted, it should be accompanied by a statewide program of transportation bonds, or some other concentrated improvements program.

ENDNOTES

1. From the standpoint of equity, contributions should match benefits, rather than costs, if a practical way could be found to measure benefits and assess beneficiaries.
2. The principle also is of remote vintage: the first session of the Nevada Territorial Legislature in 1861 granted six toll road franchises to address pressing transportation issues. (See Russel Elliot History of Nevada, 2nd Edition, Rvised. Lincoln, University of Nebraska Press, 1987).
3. The NDOT needs estimates are used as a frame-of-reference and not as an accurate or inaccurate statement of projected needs. The potential weaknesses, and strengths, of such needs projections are well-known and are summarized in George Peterson, Nancy Humphrey, Ted Miller, and Christopher Walker. "Infrastructure Needs Assessments: A Critique" prepared for the National Council on Public Works Improvement, September 1986, and National Council on P.W.I., Fragile Foundations, A Report on America's Public works (U.S. G.P.O., Washington, February, 1988).
4. Cited in Overview of Transportation Financing in Nevada, NDOT, December 1987.
5. Throughout this paper, light vehicles are those under 10,000 gross weight--automobiles, pickup trucks and vans, motorcycles, and other such vehicles. Heavy vehicles are those over 10,000 gross weight.
6. Base-plated vehicles are those owned and operated by businesses either resident in the State, or with a major base of company operations there. The reciprocity states include: Arkansas, Connecticut, Delaware, Florida, Indiana, Kentucky, Maryland, Massachussetts, New Hampshire, New Jersey, New York, North Carolina, Ohio, Rhode Island, South Carolina, Tennessee, Virginia, and Wisconsin.
7. Major carriers throughout the Nation are audited annually by auditors paid by the State. Smaller carriers are audited less frequently, but each vehicle must have a cab card on hand, to be surrendered for inspection.
8. Nationwide, just about half of current state income for highway finance comes from motor fuel taxes. See Highway Finance, U.S. Department of Transportation, 1986.
9. Highway Statistics, U.S. Department of Transportation, 1986. 1987-1989 is extrapolation of last 1983-1986 annual average.
10. These issues are dealt with more fully in a subsequent section.
11. Nevada Department of Taxation, Annual Report, Fiscal Year 1986-1987, pages 22, 26.

12. NDOT, "Nevada Department of Transportation 10 Year Highway System Needs", Mimeo, Undated (1988).
13. See Study of the Fees and Taxes Which Produce Revenue for the Construction and Maintenance of the Highways, Legislative Commission of the Legislative Counsel Bureau, State of Nevada, August 1986; Figure 2, p.5
14. "Street and Highway Needs", Regional Transportation Commission of Washoe County, May 24, 1988.
15. The State of Nevada allocates costs using a so-called Modified-Incremental method, based on one of the two principal techniques to allocate costs. Both methods attribute portions of fixed and variable roadway construction, repair, maintenance, and Department administrative costs to classes of vehicle based on their weight, number of axles, and miles travelled.
16. Based on preliminary results of the 1988 Cost Allocation Study, now in draft. The overpayment is slight compared to total revenues paid.
17. Despite the imprecision of some of the estimates used to assign both revenue and cost responsibilities to vehicle types, no one can conclude for certain that equity has been achieved. Nevertheless, by U.S. standards and noting the wide difference in cost assignment methods, this is a remarkably fair apportionment of burden.
18. The trucking industry disputes even the equity gain produced because of the discrepancy between maximum gross weight, on which the fees are based, and average operating weight. See Richard A. Lill and Kenneth D. Simonson "The Siren's Song of Weight/Distance Taxes" in Tax Notes, September 12, 1988.
19. In this discussion, current dollars only are assumed. Increased fees produced by registration fee increases, in miles traveled, or gallons consumed, are assumed to be offset by inflation in construction, repair, maintenance, and administrative costs.
20. The relative contribution of heavy vehicles that comes from registration, versus, mileage fees is somewhat arbitrary. Under this option, the percent increase in weight fees and mileage fees are roughly equivalent.
21. Bowman, J.H., and Mikesell, J.L., "Recent Changes in State Gasoline Taxation: An Analysis of Structure and Rates", National Tax Journal, Vol. XXXVI, No. 2 (June, 1983.)
22. Unlike some needs assessments conducted at the state level in recent years, the State does exercise some constraint over the number and characteristics of projects included on its list. For a criticism of other State practice, see Fragile Foundations, National Council on Public Works Improvement, February 1988, and George Peterson, Nancy Humphrey, Ted Miller, and Christopher Walker, "Infrastructure Needs Assessments: A Critique", prepared for the National Council, September, 1986.

23. The states with motor vehicle sales and excise tax on motor vehicles, some portion of which is available for highway finance include: Colorado, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, New Mexico, Oklahoma, South Dakota, Texas (lube oil only), Washington.

Appendix A

HIGHWAY FUND PROJECTIONS

Nevada's State Highway is used to finance the maintenance, repair, and construction of the state highway system. The funds to carry out these highway projects are derived from transportation related user taxes and fees, such as the gasoline tax, special fuel tax, motor carrier mileage fees, and vehicle registration fees. Federal aid is also a major source of funding for highway projects.

In recent years, some of these taxes and fees have been raised in order to finance budgeted highway maintenance and improvement expenditures. On July 1, 1988, the gasoline tax, special fuel tax, and motor carrier mileage fees were all increased.

Highway Fund Revenues

The projections for state highway fund revenues assume that tax and fee rates will remain constant under current law. Any increase in baseline revenues is therefore caused by population and economic changes.

Gasoline Tax - Increases in gasoline prices do not lead to increased gas tax receipts since, unlike the sales and use tax, the gas tax is based upon volume rather upon price. In general, gallons of gasoline consumed will be positively affected by projected growth in both real per capita income and population.

However, some of this potential increase will be negated due to the influence of the improving average fuel economy of the stock of vehicles. In recent years, improvements in the fuel efficiency of vehicles has been dramatic. Nationally, from 1975 to 1985, average miles-per-gallon (MPG) of vehicles in use increased over 25 percent. Further improvements in the fleet MPG is projected to continue through the forecast period. Therefore, the positive impacts of the projected increases in personal income and population are expected to be partially offset by the improvements in fuel economy. As a result, gasoline tax revenue going to the state highway fund is expected to increase at an average annual rate of less than 2 percent from 1988 to 2010.

Special Fuel Tax and Motor Carrier Fees - The special fuel tax and motor carrier fees are more sensitive to economic conditions due to the cyclical nature of the motor carrier industry. In recent years, these revenues have been the fastest growing Nevada highway fund revenues and this trend is expected to continue. The moderate economic growth projected in the baseline economic forecast translates into an average annual increase of 5.8 percent in special fuel tax revenue and 5.2 percent in motor carrier fees, from 1988 to 2010.

Vehicle Registration Fees - Vehicle registration fees are a flat rate per vehicle. Therefore, growth in this revenue is highly correlated to the growth rate of the driving-age population. Therefore, vehicle registration fees are expected to increase by an average of 3.4 percent.

Federal Aid - The current federal highway aid program expires in 1991. By then, the interstate highway system should be completed. The new federal highway program will probably be focused on repair and rehabilitation programs, but the funding level is very uncertain. Over the past few years, funding for the overall federal highway aid program has declined slightly. Therefore, federal aid has been held constant at the 1988 level in this projection.

The revenue forecast is presented in Table 1. Overall, state highway fund revenues are expected to increase at an average annual rate of 3.7 percent. However, due to the projected constant level of federal aid, total highway fund revenue is projected to increase by only 3.0 percent per year.

Highway Fund Expenditures

Highway fund expenditures are projected by holding the current level of services constant on a real per capita basis by accounting for expected cost increases. Thus, the projected increase in expenditures reflects population growth and increases in the costs associated with highway maintenance and construction. To estimate the cost increase of highway related projects, the historical relationship between the overall inflation rate and highway maintenance and construction price increases, as measured by the Federal Highway Administration, was maintained. As a result of holding the 1988 level of real per capita spending constant, highway fund expenditures are projected to increase by an annual average rate of 6.8 percent from 1988 to 2010.

Overall Highway Fund Budget

The highway fund revenue and expenditure projections indicate that expenditures are expected to increase at a much faster rate than revenues. The expected divergence between revenues and expenditures is largely due to the nature of the highway fund revenue structure.

The major revenue sources earmarked for the highway fund are flat per-unit taxes or fees. For example, the gasoline tax is a flat 18 cents per gallon (of which 12.65 cents goes to the highway fund) and automobile registration fees are a flat \$17 per vehicle. The revenues from these sources do not increase as the price of gasoline or automobiles rise, but only increase as more gallons of gasoline are purchased and the number of vehicles operating on the roads increases.

On the other hand, highway related expenses tend to increase over time due to two factors: (1) increased usage of and need for more highways and (2) inflation. As population and economic activity increases, the need for highway maintenance and construction grows. At the same time, the costs of pavement materials, maintenance equipment and labor will increase due to inflation. Thus expenditures are projected to exceed revenues during the 1990's and the gap is expected to widen over time. By the year 2000, assuming the current law revenue structure and a current service budget approach, \$204 million is projected.

In order to maintain a balanced highway fund, revenue growth would have to increase by increasing taxes and fees, securing additional federal aid or by reducing the size of the current highway program.

Table 1
Highway Fund Projections: 1988-2010
(millions)

<u>Revenues</u>	<u>1988</u>	<u>1995</u>	<u>2000</u>	<u>2010</u>	<u>Annual Growth Rate</u>
Gasoline Tax	\$64.7	\$82.3	\$89.3	\$104.1	1.6%
Special Fuel Tax	22.4	36.8	47.6	77.0	5.8%
Motor Carrier Fees	24.0	35.1	45.4	73.5	5.2%
Vehicle Reg. Fee	21.1	27.1	32.2	44.0	3.4%
Other State Revenue	<u>76.0*</u>	<u>43.0</u>	<u>51.0</u>	<u>70.1</u>	3.6%
State Revenue	\$208.2	\$224.3	\$265.5	\$368.7	3.7%**
Federal Aid	<u>58.2</u>	<u>58.2</u>	<u>58.2</u>	<u>58.2</u>	0.0%
Total Revenue	\$266.4	\$282.5	\$323.8	\$426.8	3.0%**
Total Expenditures	\$232.9	\$378.9	\$528.0	\$985.5	6.8%
Difference (Revenue minus Expenditures)	+\$33.8	-\$96.4	-\$204.2	-\$558.8	—

*Includes \$43.8 million in bond proceeds.

**Adjusted, does not reflect the bond revenue in FY 1988.

CHAPTER 17

TAXATION OF MINING

Mining has had an important role in the Nevada economy throughout the state's history. In the 1980s, Nevada has once again experienced a boom in gold mining. Although it is a relatively small part of the state's total employment base, mining is the principal industry in a number of rural Nevada counties.

Legislative interest in mining tax policy has increased as gold mining production levels have surged in recent years. An understanding of the economics of the gold mining industry is essential to an analysis of mining tax policy issues. The first section of this chapter provides an overview of mining in Nevada. In the second section, economic analysis of the industry focuses upon factors affecting the supply and demand for gold. In the third section, the evolution of Nevada mining tax law is described and compared with tax policies in other states. The concluding section presents an analysis of mining tax policy options and their fiscal effects.

OVERVIEW OF NEVADA MINING INDUSTRY

Nevada produces more than 20 different types of mineral commodities and leads all other states in the production of gold. Because gold accounts for over 75 percent of gross mining revenue, the analysis in this chapter focuses mostly on the economics and taxation of gold mining.

Historical Trends

Physical Production. The development of the mining industry in Nevada has occurred in several distinct phases since the 1870s.

The Comstock Boom, which occurred from 1864 to 1889, marks the first phase of precious metals development in Nevada. During this phase, approximately 8.3 million ounces of gold and 192 million ounces of silver were produced. Before the boom, most production consisted of easily mined placer deposits. In the 1870s, however, the immigration of skilled miners, use of steam engines, and the discovery of dynamite caused the underground mining of lode deposits to play a major role in increased production.

The Tonopah and Goldfield Discoveries, the second phase of precious metals development, began in 1900 and ended with the Great Depression in 1929. There were precipitous drops in production between 1915 and 1920 associated with the First World War. Subsequent to the second precious metal phase, there were additional declines from 1930 to 1945 associated with the Great Depression and the Second World War.

The Ely Copper Mining Phase occurred at the same time as the second precious metals boom; together the second precious metal and copper booms accounted for approximately \$1.3 billion worth of production in terms of historical prices.

The Base Metal Interim occurred between the end of the second and current precious metals phases. From 1950 to 1969, \$2.7 billion worth of base metals such as copper, lead, mercury, magnetite, tungsten, molybdenum, and zinc were produced.

The Third Precious Metals Phase began in 1970 and is expected to be more productive and long lived than previous production phases. Gold production in Nevada increased more than tenfold from approximately 200,000 ounces in 1980 to 2.7 million ounces in 1987. Over the last 8 years, the growth rate of Nevada gold production has outpaced that of total U.S. production.

Consequently, the State has been increasing its margin over other states as the leading producer of gold.

Figure 17.1 shows trends in the volume of Nevada gold production since 1960 and demonstrates the magnitude of the current precious metals boom. Discovery and exploration during the current precious metals phase lead to a major production boom in the 1980s. The boom has centered on significant discoveries and exploration in the Carlin Trend where Newmont Gold is the largest producer. In addition to Newmont, American Barrick, Echo Bay Mines, and other producers in the Carlin area are projecting large increases in production¹. Table 17.1 indicates the percentage of total gross revenue from mineral production accounted for by each mineral in fiscal year 1986-87. Gold and silver accounted for approximately 90 percent of Nevada gross mining revenue. Oil accounted for less than 3 percent.

Gross Yield and Net Proceeds. Figure 17.2 shows the trend of gross yields and net proceeds of Nevada's mines since 1976 and illustrates two economic aspects of the current precious metals phase: 1) gross yields have increased even more sharply than physical output during the 1970s and 1980s, and 2) net proceeds have increased as a percentage of gross yield. An average annual increase in gold prices of over 30 percent since 1970 contributed to the rapid growth rate in gross yields. In 1972, gold prices began increasing from an average annual price of \$58.60 per ounce, peaked at an average of over \$600 per ounce in 1980 and have fluctuated at an annual average between \$350 and \$450 per ounce since 1981.

In 1987, gross yields from mining totalled 1.38 billion while net proceeds amounted to \$632 million. Net proceeds have increased as a percentage of gross yield as a result of an improved cost structure for precious metals mining together with increased prices. Net proceeds represented 46 percent of gross yield in 1987 versus 25 percent in 1976. Cost structure changes and consequent increases in net proceeds are due in part to technological improvements, such as heap leaching, which

TABLE 17.1

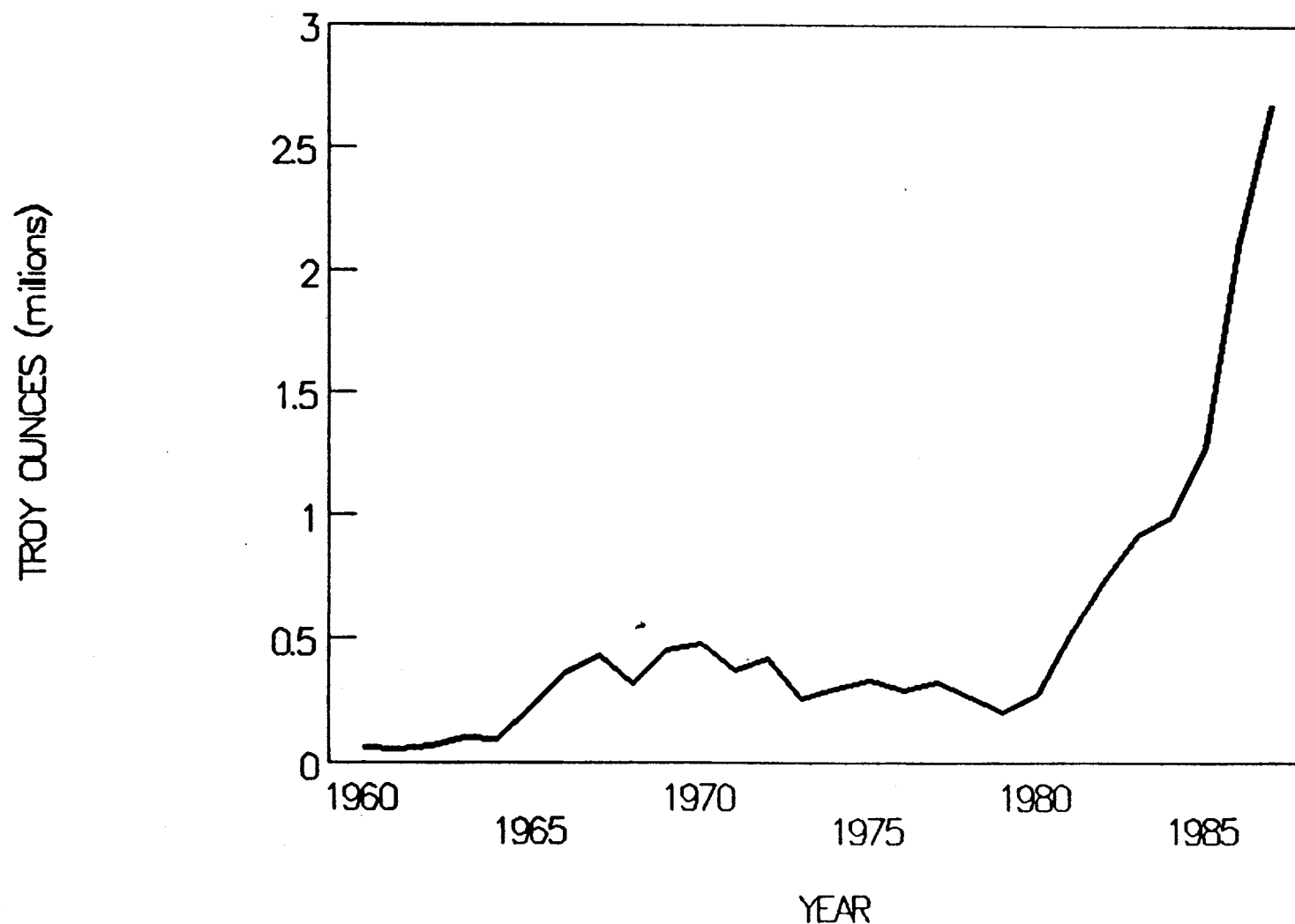
**COMPOSITION OF NEVADA MINERALS
1986-87**

		<u>Percent of Total Gross Revenue</u>
1.	Barite	.46
2.	Diatomaceous Earth	1.77
3.	Geothermal	.98
4.	Gold	78.36
5.	Gypsum	1.37
6.	Lithium	1.73
7.	Mercury	.39
8.	Oil	2.86
9.	Silicon Sand	.86
10.	Silver	10.24
11.	Miscellaneous: Building Stone, Clay, Dolomite, Fluorspar, Gemstones, Ore, Salt, and other miscellaneous minerals	<u>.98</u>
		<u>100.00</u>

Source: Nevada Department of Taxation, Annual Report, Fiscal 1986-87

FIGURE 1

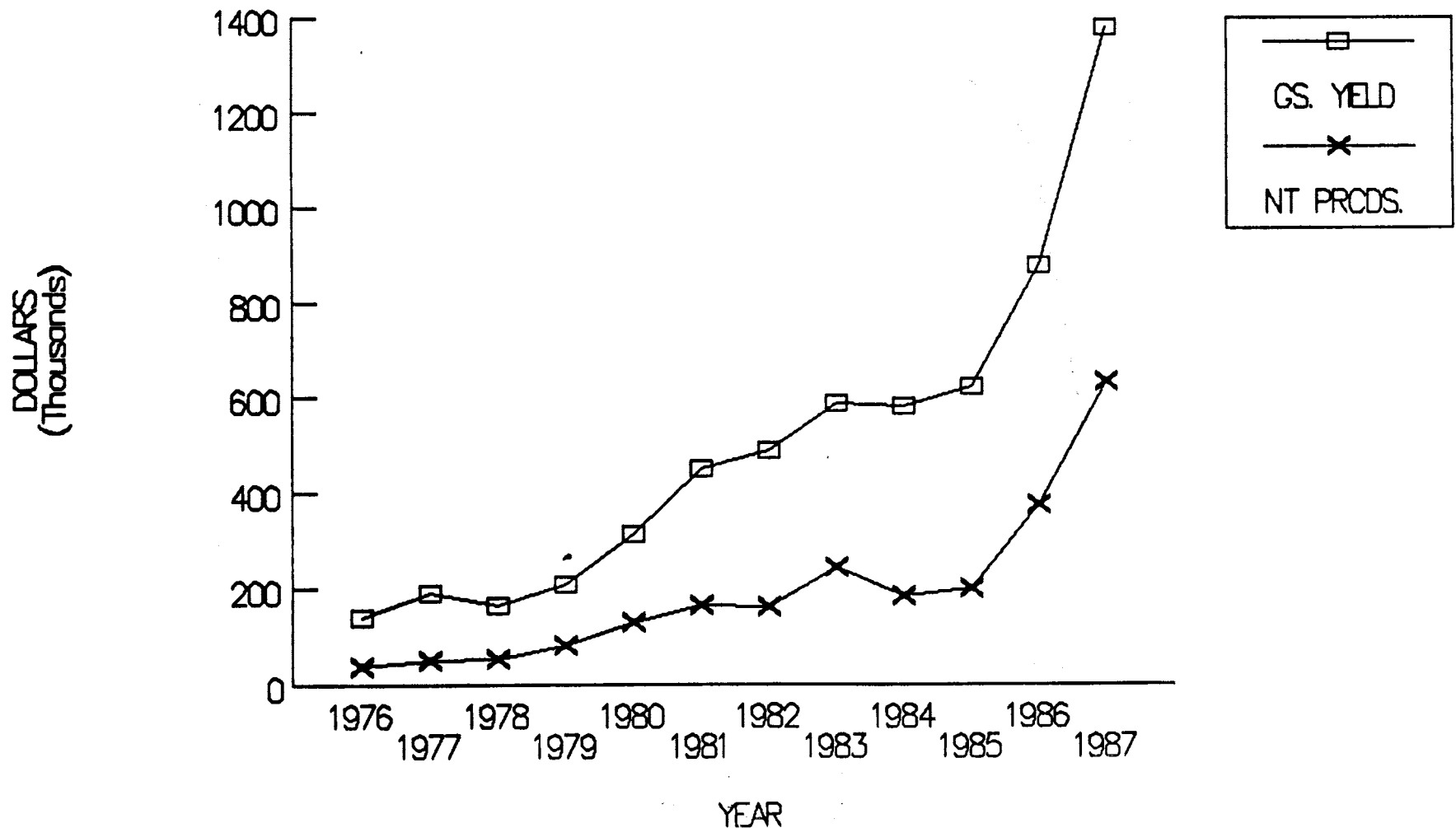
NEVADA GOLD PRODUCTION



Source: U.S. Bureau of Mines, Minerals Yearbook, various annual editions

FIGURE 2

TREND OF GROSS YIELDS & NET PROCEEDS



Source: Nevada Department of Taxation, Net Proceeds of Mines, various annual editions

facilitate the removal of deposits that could not be economically mined before. The availability of a large skilled labor pool, due to declines in basic metal mining, initially contributed to the decrease in unit costs of production.

While average annual gold prices have been above \$350 per ounce since 1981 and are currently near \$400, cash costs of production for Nevada gold mines average approximately \$200 per ounce.

These production costs reflect only cash outlays to operate existing mines. Capital investments related to exploration and discovery of reserves and development and construction of production facilities are not included.

According to a survey conducted by the Nevada Mining Association, cash costs averaged \$200 per ounce in 1987 while total costs averaged \$268 per ounce.² Total costs include amortization of exploration and development costs as well as depreciation of plant and equipment.

The large amount of newly developed mining property in Nevada partly accounts for a production cost advantage versus other sources of supply. Deposits from new mines are initially more economical to remove than ores of more mature mines. To the extent that ore grades decline and gold becomes more difficult to extract as the current phase of production matures, Nevada's cost advantage may be expected to decline. Similarly, the rapid expansion of new mines has largely absorbed the in-state pool of skilled miners and required attraction of higher cost labor from other states. Nevertheless, the prevailing margins between prices and production expenses suggest that a substantial change in cost and/or demand structure would be required to trigger curtailments in production from current mines. Exploration and development activity may be more readily curtailed, however, depending on the expected returns required to recoup such investments.

Economic Impacts

The mining industry brings benefits to the state's economy in the form of increased employment and capital investment.

In 1986, new mines resulted directly in 1,172 new jobs while existing mines increased employment by 447 jobs. With these additions, total mine employment consisted of more than 6,000 jobs in 1986. It has been estimated that for each new job created in the mining industry an additional 1.25 jobs are created via the indirect expansion of non-mine businesses. Rural employment accounts for approximately 0.75 of the 1.25 employment multiplier.³

Because mining is concentrated in certain rural counties, it is of particular importance to those local economies. Table 17.2 indicates that 80 percent of the gross yield of mines was produced in five counties in 1987 - Eureka, Nye, Lander, Elko, and Humboldt.

In the current phase of development, however, significant infrastructure to serve the mining industry has been developed in Nevada such that less supplies and services are procured from out-of-state enterprises. For instance, a 1986 survey found that Nevada companies supplied over 70 percent of purchases made by mine operating and exploration enterprises. The same survey found that planned investments of Nevada companies in mining and exploration exceeded \$900 million for the 1987 to 1990 time period.⁴

ECONOMICS OF GOLD MINING

U.S. and World Mine Production

Figure 17.3 shows the distribution of projected production of gold in 1988. During the period from 1981 to 1988, global production has increased at an average annual rate of 5.7 percent. North American producers have increased production at

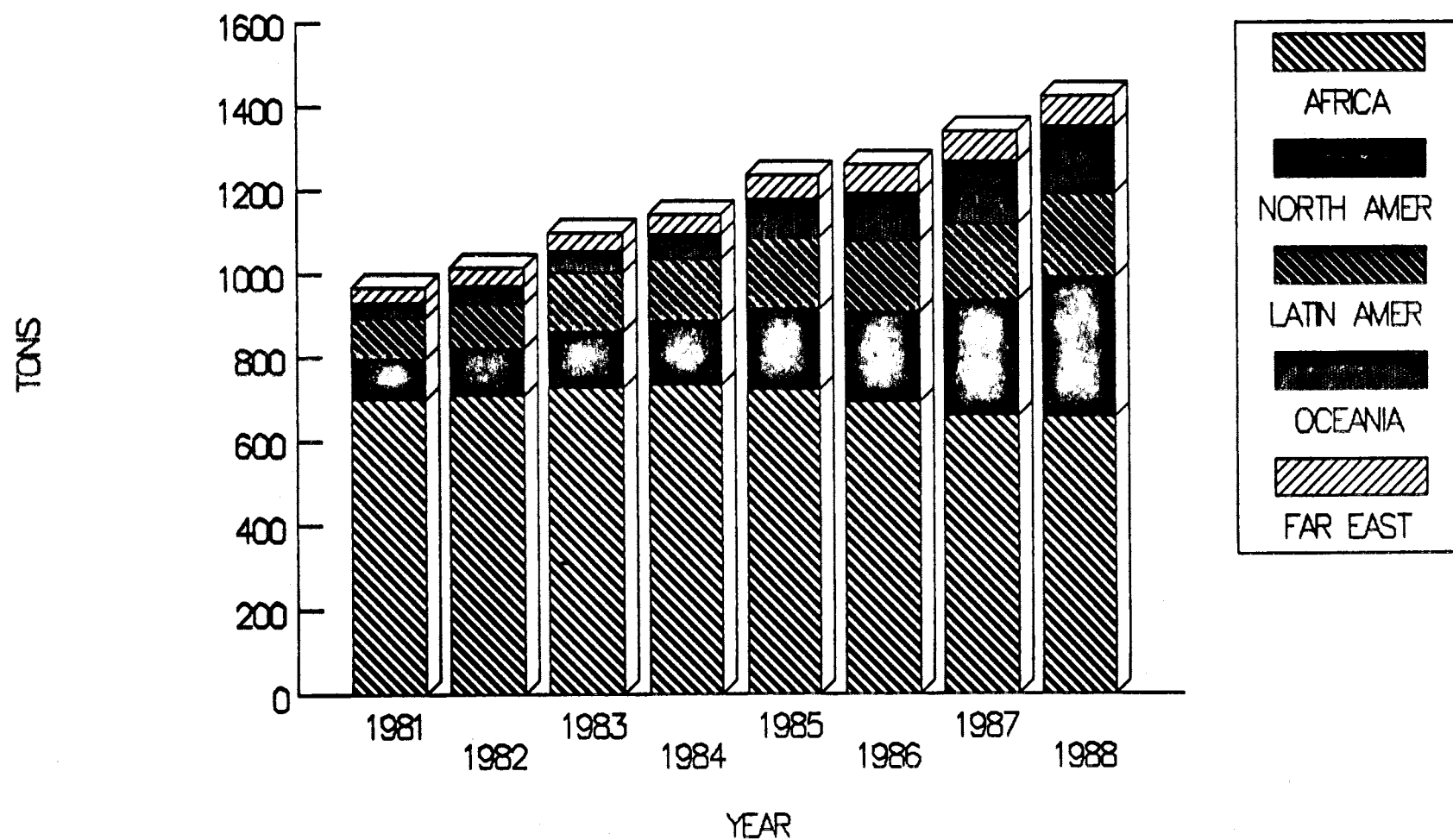
TABLE 17.2
GROSS YIELD FROM MINING BY COUNTY

<u>County</u>	<u>1987</u>	<u>Percent of Total</u>
Carson City	\$ 13,440	---
Churchill	5,431,488	0.4
Clark	17,563,724	1.3
Douglas	17,436	---
Elko	169,367,934	12.3
Esmeralda	25,979,750	1.9
Eureka	350,528,735	25.4
Humboldt	127,726,879	9.2
Lander	206,069,003	14.9
Lincoln	602,801	---
Lyon	2,989,063	0.2
Mineral	45,602,088	3.3
Nye	244,129,455	17.7
Pershing	92,387,488	6.7
Storey	5,425,172	0.4
Washoe	21,796,172	1.6
White Pine	<u>66,202,033</u>	<u>4.8</u>
TOTAL	\$1,381,832,661	100.0

Source: Nevada Department of Taxation, Net Proceeds of Mines 1987-88.

FIGURE 3

WORLDWIDE GOLD PRODUCTION



Source: Consolidated Goldfields, Gold 1988

an average annual rate of over 35 percent during the same time period.

Figure 17.4 shows the distribution, by state, of U.S. gold production expected in 1988. (Production data represent 47 major producers and over 95 percent of total U.S. production). Nevada is expected to increase its margin as the leading domestic gold producer in 1988 and account for over 60 percent of total U.S. production. In addition, more than two thirds of expected production from major new startups before 1990 will be from Nevada mines. In comparison with Nevada's production, California supplies the next largest portion of U.S. supply but has a share of only 11 percent. No other state has a share greater than ten percent.

Major Nevada mines also hold an edge versus mines in other states and countries in terms cost of production. As noted above, average Nevada production cost are less than \$200. Average production costs for major U.S. mines outside of Nevada is \$245 per ounce. Projected 1988 production costs per ounce for mines in South Africa and Australia are \$325 and \$212 per ounce, respectively.⁵

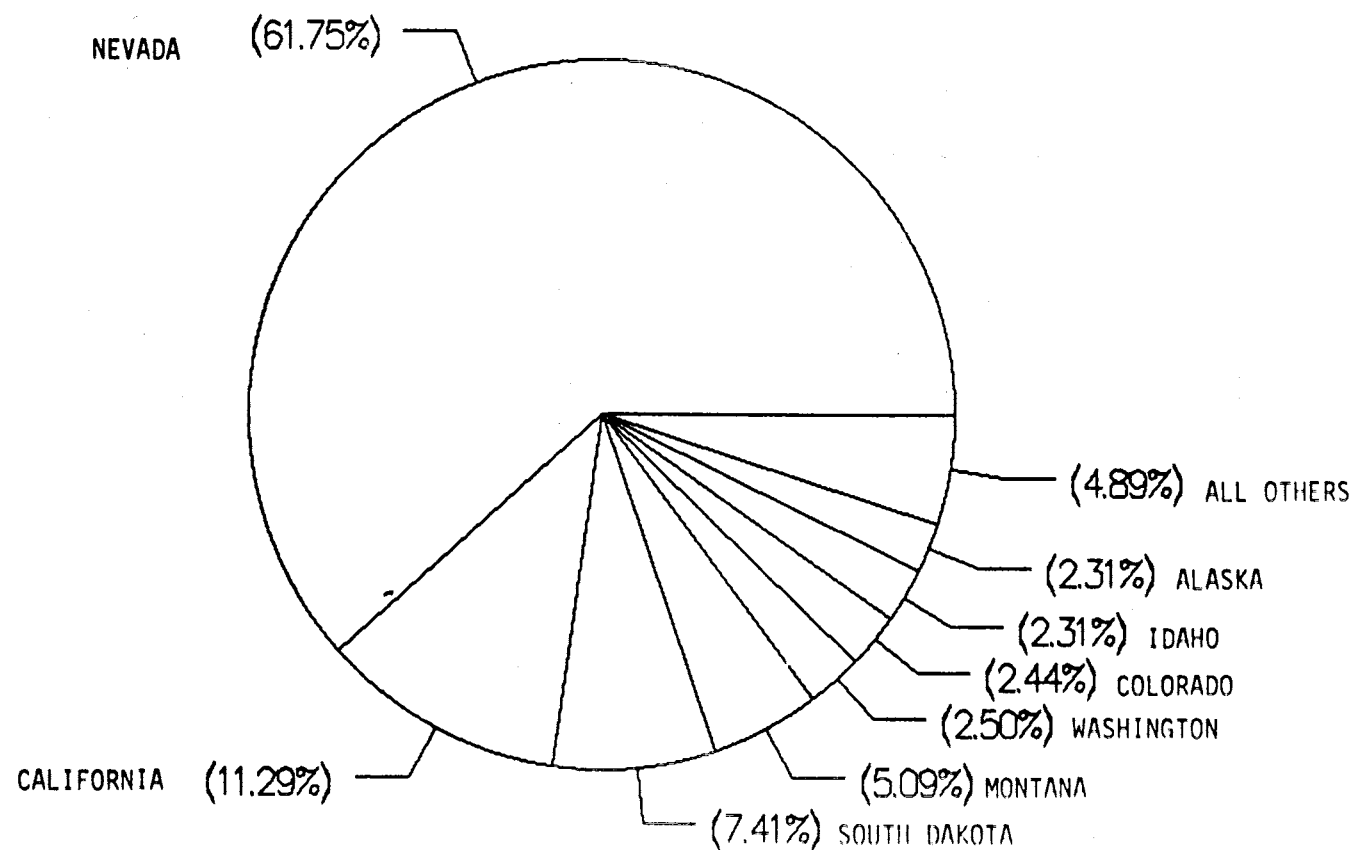
Other Sources of Supply

Net trade with the Eastern bloc now represents about 19 percent of total western world supply. Net supply from the East has increased at an average annual rate of over ten percent in the last five years and consists primarily of sales by the USSR and China. Sales of Soviet gold normally depend on the performance of their economy, especially the extent to which gold must be sold for importing food stuffs to supplement domestic economic production. Chinese sales to the West showed a decline in 1987, mostly due to increased domestic requirements for gold.

Net official sector transactions have resulted in reductions of gold supply in the last three years. Gold functions as a reserve asset not only for central banks but also for

FIGURE 4

U.S. GOLD PRODUCTION BY STATE



Source: Shearson Lehman Brothers, Annual Review of the World Gold Industry 1988

multinational lending institutions. For instance, gold accounts for over 45 percent of the International Monetary Fund's reserves. While the industrialized nations usually maintain a steady reserve of gold, distress sales of gold for the purpose of raising short term foreign reserves occur in other countries. South Africa, for instance, reduced reserves by 3.9 million ounces between 1984 and 1986.

Global Demand and Price

Figure 17.5 shows the disposition of the gold supply since 1988 among various fabrication demand components and investment demand.

Fabrication Demand. Demand for gold used in fabrication, such as jewellery, coins, electronics and dental fillings, has been relatively stagnant in this decade. The average annual growth rate in the use of gold for fabrication since 1981 has been less than three percent.

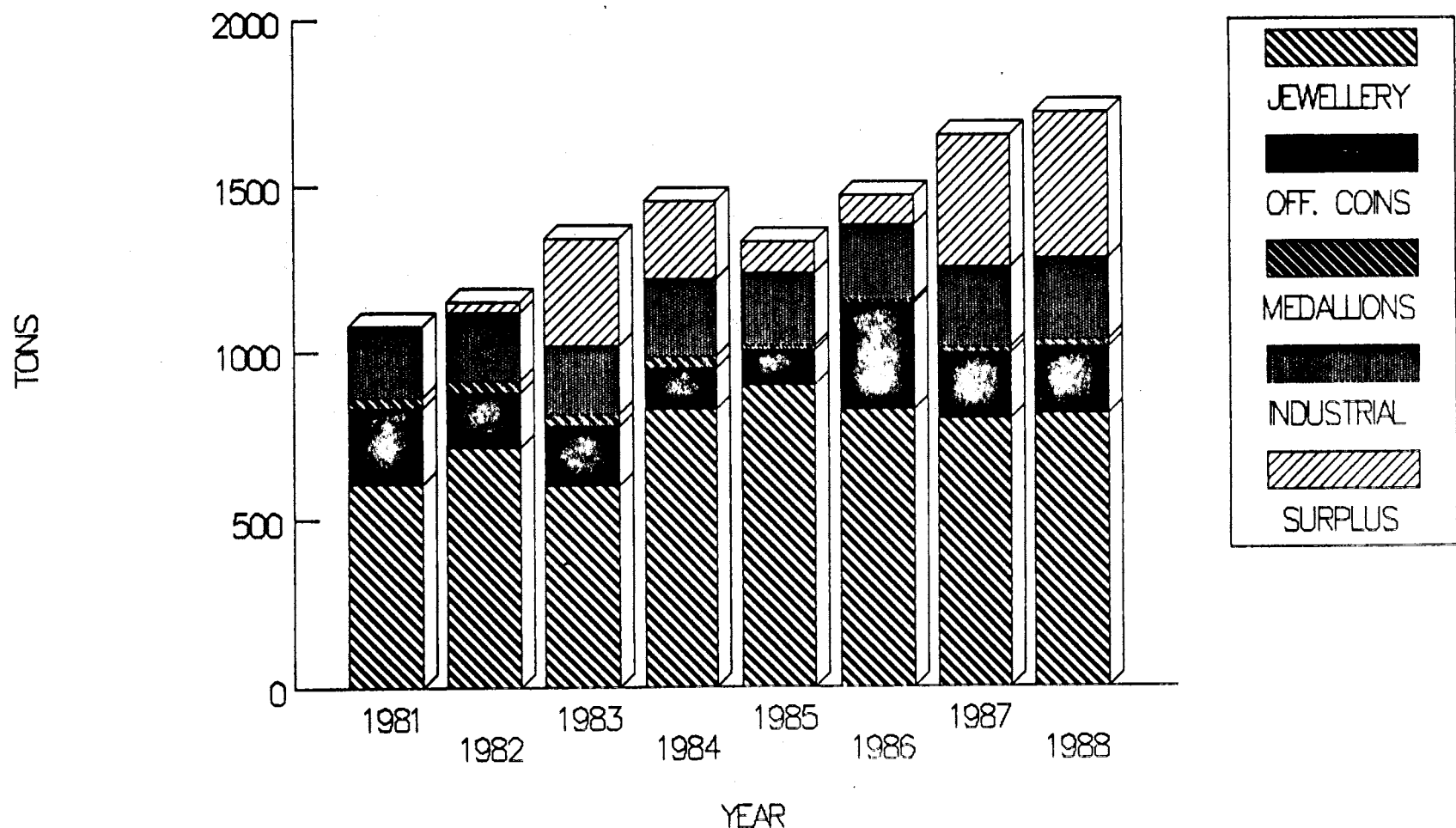
Net demand of gold for jewellery is very price elastic and has been extremely volatile since 1978. Gold jewellery is sold back in times of economic distress, melted down and re-fabricated.

Consequently, large annual swings in net demand figures are not unusual. Additional volatility may be associated with exchange rate changes, movements of jewellery in international trade, fashion trends, and regional economic cycles.

The electronics sector demands gold due to its electrical conductivity, resistance to corrosion, and reliability. Use in this and other industrial sectors has decreased as a share of all fabrication demand due to a tendency to substitute lower cost metal or synthetic materials such as copper, silver, palladium alloys and thick films. In addition, reduced thickness of gold application through selective plating processes has been achieved. Where reliability and high performance are critical,

FIGURE 5

WORLDWIDE DEMAND FOR GOLD



Source: U.S. Bureau of Mines, Minerals Yearbook, various annual editions, and Shearson Lehman Brothers, Annual Review of the World Gold Industry 1988

such as in the defense and aerospace industries, gold use for electronics may be expected to continue.

Dentistry has decreased its use of gold since 1978 due to higher gold prices and health improvements related to advances in prevention.

Demand for gold coins takes two forms: regular issue bullion coins such as the South African Krugerrand, American Eagle or Canadian Maple Leaf and one-time commemorative issues such as the Japanese Hirohito. Gold used for official bullion coins has declined since 1978, principally due to the decline in demand for the Krugerrand, the production of which has now ceased. Demand for commemorative coins can vary widely; the Hirohito coin, issued in large amounts in 1986 and much smaller amounts in 1987, has had a large impact on the recent decline of demand for fabrication gold. (The decline in fabrication demand in 1987 is 9.3 percent with coinage included but less than one percent without coinage).

Investment Demand. As outlined in the previous section, the growth rate of fabrication demand for gold has not kept pace with increasing supplies. Consequently, the surplus available for investors has grown steadily in the 1980s, as shown in Figure 17.5.

Despite its marked increase, the surplus of gold available for physical investors has been absorbed. The sections below discuss the tangible and intangible variables which govern the extent of absorption, and corresponding movements in the price of gold.

Tangible Investment Demand Variables. Variables which can influence the daily price of gold include stock prices, bond prices, interest rates, and dollar exchange rates.

In relation to the stock markets, gold prices should be negatively correlated with stock price indices due to the traditional use of gold as a hedge against risk; that is, expectations of stock price increases should coincide with decreases in investments in gold as a hedge. On the other hand,

gold prices would be positively correlated with stock indices via a wealth effect; that is, increases in the value of a stockholder's portfolio stimulate purchases of gold. Data since the mid-1970s indicates that in short term periods of stock market declines, gold prices are negatively correlated with stock prices due to hedging. In the longer term, however, gold has correlated positively with stock prices, due probably to the wealth effect.

To the extent that bond price movements result from changes in real interest rates, they should be positively correlated with gold prices (investors prefer to collect bond yields in times of high interest rates versus holding non-yield bearing gold investments). If bond price changes relate more to inflation, however, gold prices should be negatively related with bond prices (gold is a hedge against inflation).

Gold prices decrease with increases in the strength of the dollar due simply to the fact that gold's value is normally denominated in dollars.

Intangible Investment Demand Variables. As noted above, gold plays a major role in hedging against political and economic risk. In particular, gold has a centuries old history of maintaining its value in the face of rising prices and is, therefore, used as a hedge in times of inflationary expectations. Gold's retention of value also explains its use as a hedge against political and economic risk.

Summary

This brief analysis suggests both opportunities and risks for the State of Nevada related to the taxation of mining. Recent trends on the supply side have been highly favorable. North American production is increasing much more rapidly than global production and Nevada is the dominant producer in the U.S. The profitability of gold mining in Nevada has attracted massive investment during the 1980s. Nevada has an opportunity to derive

major economic and financial benefits from this expanding industry.

An analysis of the demand side of the gold market, however, underscores the risks. Metal prices are generally highly volatile. The key role of investment demand adds an additional element of unpredictability and instability to the gold market. As noted, growth in supply in the 1980s has outpaced non-investment demand. Consequently, movements in gold prices will continue to be heavily influenced by political events and by the complex of capital market factors that affect the value of gold as an investment hedge. State tax and budget policies should be designed in recognition of the volatility and unpredictability of gold prices and the impact of price volatility on mining tax receipts.

MINING TAXES IN NEVADA AND OTHER STATES

Description of Nevada Mining Taxes

The basis of the Nevada mining tax is net proceeds. Net proceeds are calculated by subtracting certain deductions from the gross yield of mining production. Major deduction categories include the cost of extracting ore, transporting crude ore to the mill, reduction and refining, marketing, and insurance. Deductions are also allowed for depreciation of plant, machinery and equipment and for royalties paid.

The definition of net proceeds is considerably broader than the definition of net income under the federal income tax because certain deductions under the income tax are not allowed under the Nevada net proceeds tax. Major income tax deductions that are not allowed are: expensing or amortization of exploration costs, depletion, interest paid, state and local taxes other than unemployment compensation, and home office expenses. In addition, depreciation deductions are generally slower under the

net proceeds tax compared to the federal income tax and net operating loss carryovers are not allowed.

The choice of a tax base approach is a fundamental mining tax policy issue in Nevada. Disagreement exists as to whether the Nevada Constitution permits the use of alternative tax bases. Article 10, Section 1 of the Constitution in referring to taxation of mines and mining claims uses the phrase "the proceeds alone of which shall be assessed and taxed." Mr. Frank Daykin, the former Nevada Legislative Counsel, has argued that any deviation from the net proceeds base would require a constitutional amendment.⁶ On the other hand, the Legislative Counsel Bureau provided an opinion in May 1987 which indicated that it would be constitutionally permissible to impose other taxes on mining, such as those based upon gross receipts or units of production.⁷ Given the disagreement over the interpretation of Article 10, Section 1, it is likely that statutory imposition of an alternative mining tax, in the absence of a Constitutional amendment, would result in a legal challenge. The proceeds of such a tax could be placed in escrow while the litigation was pending.

Under current law, the net proceeds of mines are taxed at a uniform rate along with other taxable property. The actual rate varies depending upon the location of the mine. The statewide average tax rate on net proceeds was just under 2 percent in 1987. During the 1987 Session, the Legislature passed SJR22 which would amend the Constitution to permit changes in the net proceeds tax on mining. If SJR22 is passed a second time and is approved by the electors at a referendum, the Constitution would be amended to permit enabling legislation to be enacted perhaps as early as the 1989 session. The main provision of SJR22 would permit the imposition of the net proceeds tax at a rate up to 5 percent. In addition, local governments would be guaranteed a revenue share equal to at least the yield produced by the rate applicable to taxable property in the jurisdiction in which the mine is located.

During the 1987 Session, AB872 was also enacted which provided for the payment of increased net proceeds mining tax receipts into the state general fund. Previously, localities received nearly all net proceeds collections. Net proceeds receipts to the state general fund totalled \$11.6 million in fiscal year 1987-88 due to a shift to prepayment of net proceeds liability. In subsequent years, a roughly similar amount will be paid into the general fund as a credit against future liability under the tax imposed through implementation of SJR22.

Figure 17.6 shows the trend of revenues from the net proceeds tax. Revenues increased at a slower rate than net proceeds in the early 1980s because of the impact of the tax shift and controls on local revenue growth on local property tax rates. However, net proceeds liability increased sharply from \$3.5 million in 1985 to \$12.2 million in 1987, reflecting both increases in production and price levels. In FY 1988, total net proceeds receipts (including the prepayment for 1988) amounted to \$23.8 million. The data graphed in figure 17.7 shows the average net proceeds tax rate on a statewide basis.

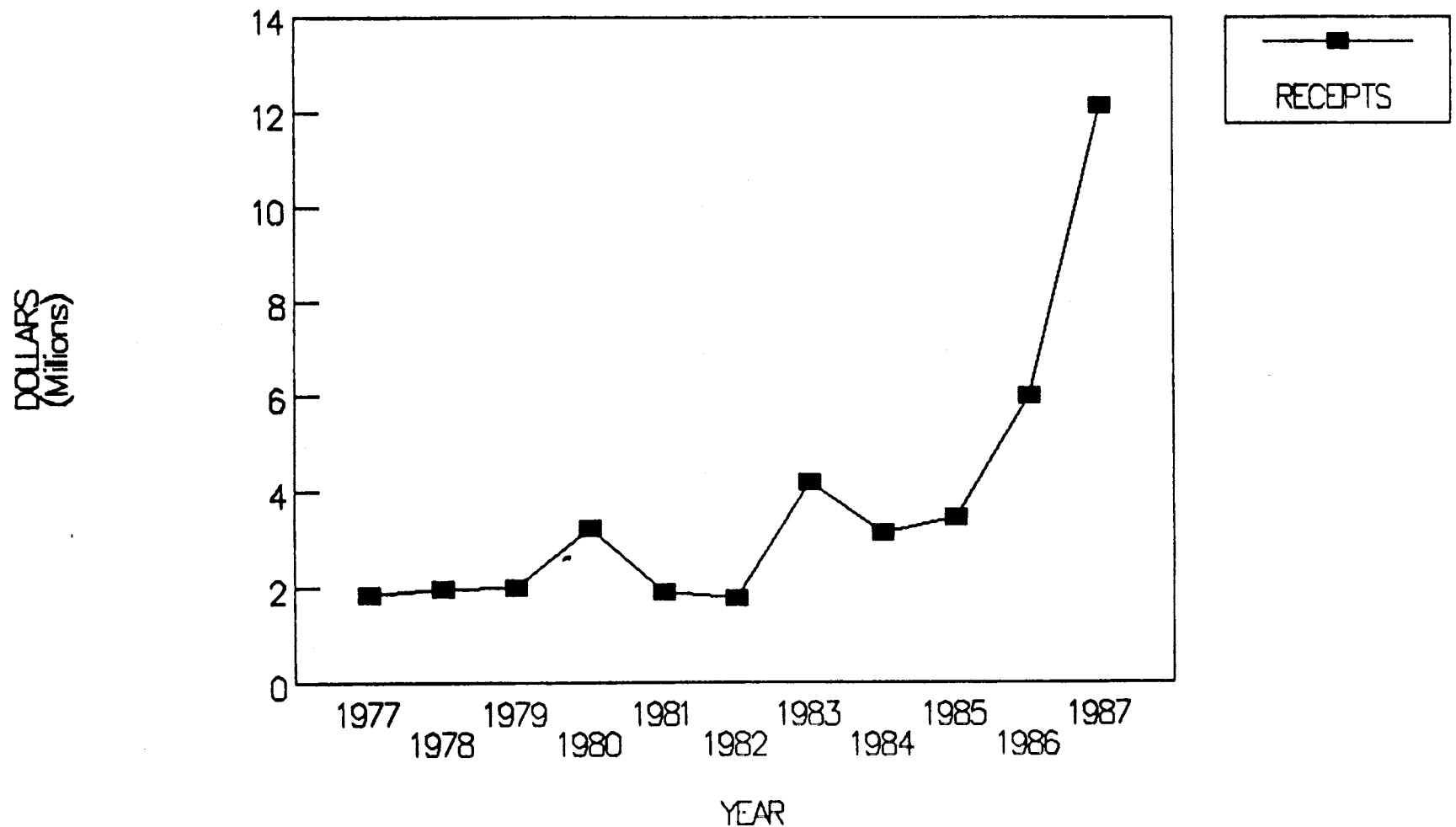
Comparison with Other States

Other states tax metalliferous mineral production either on the basis of gross receipts or net proceeds from mining. Gross receipts tax rates on metallic minerals generally range from 1 to 2.25 percent.⁸ South Dakota imposes both a gross receipts and net profits tax.

Colorado. Colorado applies a 2.25 percent tax on gross income over \$11 million associated with the value of metallic minerals at the time of extraction plus income from extraction and processing of ores or minerals from mine waste or residues. A credit of up to 50 percent of ad valorem taxes on mine production is allowed.

FIGURE 6

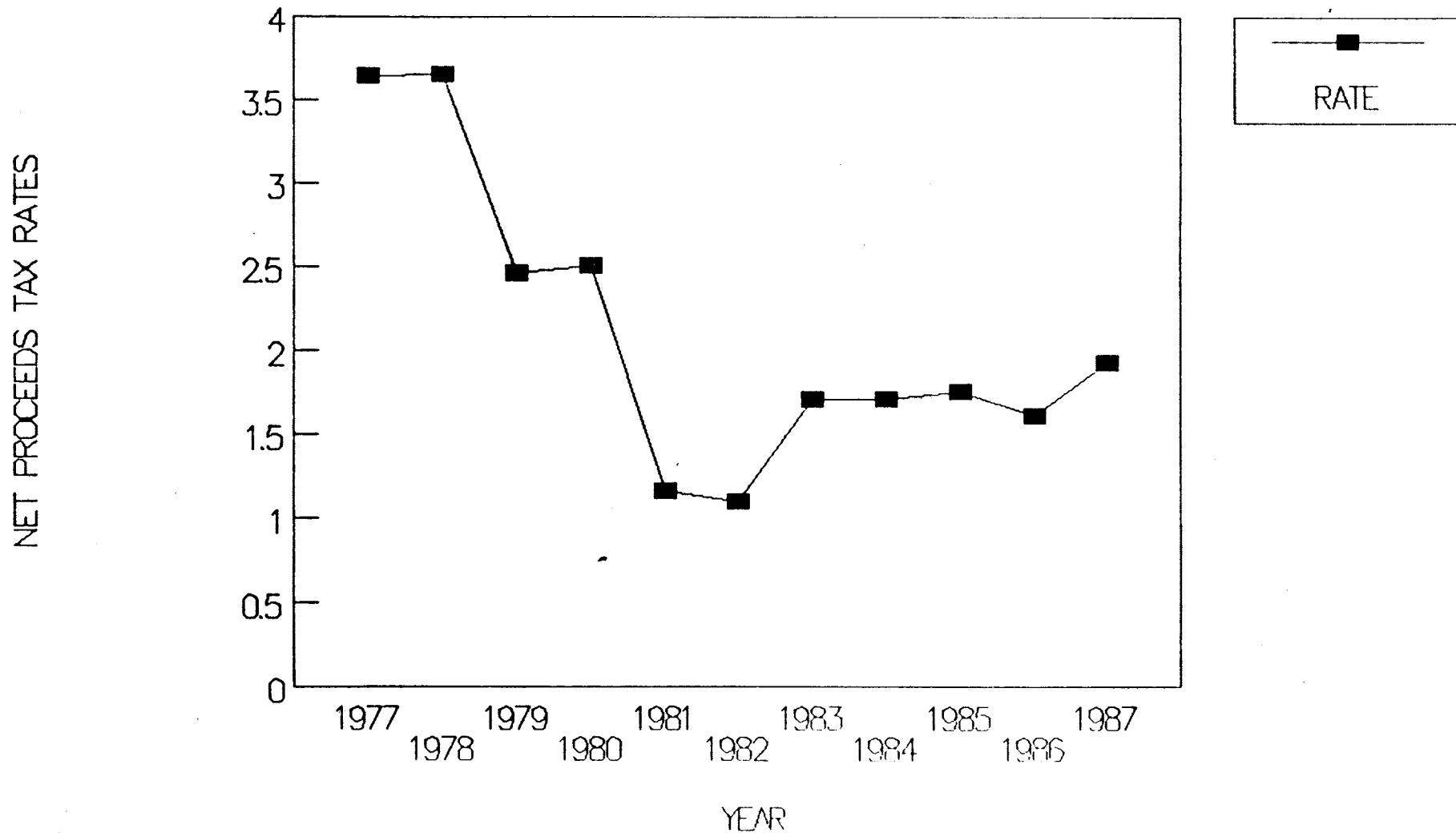
TREND OF NET PROCEEDS TAX RECEIPTS



Source: Nevada Department of Taxation, Net Proceeds of Mines, various annual editions

FIGURE 7

NET PROCEEDS TAX RATES



Source: Nevada Department of Taxation, Net Proceeds of Mines, various annual editions

Idaho. Idaho taxes the net value of metallic ores at a flat rate of 2 percent. The concept of net value is broader than Nevada's net proceeds definition because it allows all costs of mining and processing as deductions, as defined by the Internal Revenue Code (except for the depletion allowance.)

Montana. Montana imposes two taxes on metal mining. The first applies graduated rates of between 0.5 and 1.5 percent on the gross value of metals exceeding \$250,000. The second tax is equivalent to 0.5 percent of gross yield.

New Mexico. New Mexico imposes a two tier tax on the gross value of mine production: 0.75 percent on the whole amount of gross value and 0.2 percent on 50 percent of gross value. Gross value is net of any royalties paid to the United States or New Mexico.

South Dakota. In South Dakota, there are two taxes on mining: a) a 2 percent tax on gross value of production over 20 ounces and b) an 8 percent tax on net profits. South Dakota allows the deduction of most business expenses, including other taxes, for the purpose of calculating net profits.

Utah. Utah taxes the gross value in excess of \$50,000 of metalliferous minerals at a rate of 1 percent. The calculation of gross value allows deductions for certain processing and transportation costs.

Table 17.3 compares mining taxes for Nevada and three of the above states, which have significant gold production, for a hypothetical gold mine. Nevada taxes are shown under current law and at the maximum rate under SJR22. The mine is assumed to have annual production of 100,000 ounces of gold. Assuming a gold price of \$400 per ounce, annual gross receipts equal \$40 million.

This example provides a context for comparing the level of Nevada mining taxes to those of competitor states. However, the limitations of interstate mining tax comparisons should be noted. First, there is no such thing as a "representative" gold mine since the geological features of mining deposits vary greatly in terms of type and grade of ore and production costs.

TABLE 17.3

COMPARISON OF SPECIFIC MINING TAXES FOR A HYPOTHETICAL GOLD MINE

	<u>Nevada</u>		<u>South</u>	<u>Montana</u>	<u>Colorado</u>
	<u>Current Law</u>	<u>SJR22</u>	<u>Dakota</u>		
Gross receipts	\$40,000,000	\$40,000,000	\$40,000,000	\$40,000,000	\$40,000,000
Taxable amount	NA	NA	39,992,000	40,000,000	2,320,000 ²
Gross tax rate	NA	NA	2%	1%-2% ¹	2.25%
Tax on gross	0	0	799,840	791,250	52,200

Net proceeds	\$18,000,000	\$18,000,000	\$18,000,000	\$18,000,000	\$18,000,000
Taxable amount	18,000,000	18,000,000	10,800,000 ³	NA	NA
Net tax rate	1.93	5%	8%	NA	NA
Tax on net	347,400	900,000	864,000	0	0

Total taxes	347,400	900,000	1,663,840	791,250	81,000
As % of gross receipts	0.87%	2.25%	4.16%	1.98%	0.13%
Effective tax on \$400 oz.	\$3.47	\$9.00	\$16.64	\$7.91	\$0.52

¹ Montana taxes are made up of two levies: one equivalent to 0.5 percent of gross value and the second applying rates of 0.5 percent to 1.5 percent to gross value.

² Assumes exclusion of value added because of processing and transportation and marketing of product equals two-thirds of gross value.

³ Assumes narrower net profits base equals 60 percent of Nevada net proceeds.

Second, unlike manufacturing plants, mines cannot be replicated from state to state. In this regard, the hypothetical mine in this example is a realistic example for Nevada but is of a larger scale than actual mines in most other states. Third, any comparison will be sensitive to price assumptions. It should also be noted that this comparison focuses on mining-specific and not other general business taxes. California, as an example, imposes a corporate income tax but not a specific mining tax.

Table 17.3 indicates that specific mining taxes vary substantially. South Dakota clearly has the highest taxes. Nevada would move from third to second highest if the maximum rate were applied under SJR22.

ANALYSIS OF ALTERNATIVES

Special taxes on mining are justified as compensation for (1) external costs imposed upon society and (2) depletion of an irreplaceable natural resource. The "boomtown" character of mining development creates a significant demand for public facilities and services. Mining, by its nature results in substantial environmental impacts and necessitates expenditures for protecting and reclaiming the physical environment. Finally, governmental efforts may be necessary to foster alternative economic developments to sustain communities after mineral resources have been exhausted.

There are three key issues to be addressed in designing a mining tax: (1) the tax base approach; (2) the level of taxation; and (3) the allocation of revenue.

Tax Base Approaches

Three alternative approaches to defining the tax base are analyzed here: net proceeds, gross proceeds, and volume of production. In principle, each of these tax structures can be designed to raise an identical amount of revenue, given a certain

set of production levels, prices and costs. For example, the statewide average ratio of net proceeds to gross yield was 45.7 percent from Nevada mining in 1987. Assuming a 40 percent ratio of net proceeds to gross yield, a 5 percent net proceeds tax would be equivalent to a 2.0 percent gross receipts tax. The calculation of an equal-yield production-based tax is somewhat more difficult because of the variety of minerals. However, a 2.0 percent gross receipts tax on gold converts to \$8.00 at a \$400 price. Of course, the relationship between economic conditions (prices, costs, and production) which determine the underlying tax bases are not constant but are highly variable in the mining business.

Tax Incidence and Exporting. The incidence of mining taxes depends upon the particular mineral. In the case of gold, the price is determined in world markets. Although Nevada is the dominant U.S. supplier, alternative supplies from outside the U.S. are readily accessible since gold has a very high price to weight ratio and transportation costs are not a major factor. Consequently, a unilateral tax increase even in a state as important as Nevada would have little impact on world gold production and price. In the short run, producers in Nevada would absorb the increased taxes. Producers with superior deposits earning above-average returns (economic rent) would absorb the tax increase without reducing current production. However, in the long run, marginal producers would either shift costs backward to employees and suppliers of capital and/or production would be shifted to mines in other jurisdictions. More production decisions become marginal over time as capital equipment depreciates and mineral deposits are depleted. For the most part, the tax would be exported to out-of-state shareholders; however, some impact would be felt by in-state owners, employees, suppliers and royalty holders. (Royalties are of lesser importance in Nevada because over 85 percent of all land is federally-owned and most mining occurs on federal lands).

Evaluation of Alternatives. From the point of view of economic impacts, the optimal tax base would be economic rent, that portion of revenue which represents the difference between market price and the price below which a producer will not remain in business ("reservation price"). Economic rents may be due to scarcity, location, windfalls due to market distortions, or monopoly. In theory, the taxation of part or all of economic rent should not increase price or reduce output since the firm should realize at least an average after-tax rate of return on capital in this situation. Consequently, a tax based on a definition of economic rent would be efficient in minimizing distortion of production decisions.

Despite the appeal of the theoretical argument cited above, practical problems arise in measuring economic rent. In particular, determination of a producer's reservation price must account for equity costs, particularly those of exploration and development. For each producer, it would be necessary to decide what constitutes a normal return to equity investment. For instance, what premium must be paid to investors for the risk of worldwide gold price volatility? Administrative difficulties also arise in allocating the costs of an integrated company between mining and non-mining activities.

Depending upon the spread between production cost and metal prices, severance taxes based upon volume or gross receipts can have adverse economic effects in a number of ways. First, marginal mines may curtail operation because taxes are imposed without recognition of differences in production costs. Low profit mines may become unprofitable. Second, production levels may be reduced at mines that continue to operate because the cut-off grade of ore is increased. Lower-grade ores which are more costly to mine will be cut-off from production. Third, the timing of production may be affected. Volume taxes encourage shifts of production to high price periods when the unit tax is a lower percentage of price. A gross yield tax creates the opposite incentive to increase production in low price periods

when the tax will be reduced. In general, the distorting effect of these taxes will tend to reduce incentives to invest in risky exploration and development activities.⁹

Net proceeds is an imperfect measure of economic rent but comes the closest of the three tax bases to minimizing production decision distortions. The net proceeds base distinguishes between highly profitable and marginal mines.

From an equity perspective, the choice of tax base will depend upon whether an ability-to-pay or benefits received criterion is used. The net proceeds base is consistent with the ability-to-pay concept while the benefits received principle points towards a gross receipts or volume base.

Revenue adequacy involves a number of dimensions - the level of revenue, revenue growth and revenue stability. As noted earlier, an identical level of revenue can be obtained from any of the three tax bases by setting rates in relation to a given set of economic conditions. Revenue growth will depend upon the direction of prices and costs. For example, net proceeds tripled from 1985 to 1987 while gross yields doubled. The more rapid growth in net proceeds was due in large part to the increase in gold prices during that period. Thus the revenue growth potential of alternative bases depends upon the expected direction of profit margins and cannot be determined with certainty over the long run.

The tax base alternatives can, however, be ranked according to revenue stability. The stability of the revenue flow is inversely related to the volatility of the underlying tax base. Net proceeds is the most volatile since it is affected by fluctuations in prices, costs and volume of production. Gross receipts are affected by changes in price and production levels but not costs. Volume-based taxes are the most stable of the three alternatives although they can experience sizable declines if falling prices and/or rising costs lead to curtailment of production.

Net proceeds ranks lowest from the standpoint of ease of administration since interpretations are required regarding allowable deductions as well as accounting for non-arm's length transactions. Volume-based taxes are the simplest to administer for a single type of mineral. However, statutory schedules would have to be established for the nearly two dozen minerals extracted in Nevada and be separately reported for tax purposes. Thus gross yield is the simplest of the three bases to administer.

Table 17.4 provides examples of specific alternatives. Fiscal effects are estimated for 1989. For illustrative purposes only, rates have been set to be approximately equal-revenue at the level projected assuming the maximum 5 percent rate under SJR22. Appendix A sets forth the methods and assumptions that were used to develop the estimates in Table 17.4.

The major advantage of the net proceeds tax is that it has the least disruptive effect on incentives for investment and production. This is of particular importance to the rural counties in which mining is a primary source of economic development.

One concern with profits-type tax bases is that taxpayers may take advantage of opportunities to avoid tax liability. However, the Nevada net proceeds definition provides a relatively broad tax base. The ratio of net proceeds to gross yield exceeded 40 percent in each of the last two years. As noted earlier, the Nevada net proceeds definition does not allow several deductions that are used in computing federal taxable income and is considerably broader than the federal income tax base.

The principal disadvantage of the net proceeds base is its volatility. In an environment of rising gold prices such as the 1985-87 period, the net proceeds base will provide more revenue growth than either gross yield or volume-based taxes. However, the sensitivity of the tax base to price changes also increases the downside risk of revenue shortfalls when prices decline.

TABLE 17.4

FISCAL ESTIMATES OF MINING TAX ALTERNATIVES
 UNDER VARYING GOLD PRICE ASSUMPTIONS (1989)
 (\$ Millions)

	<u>Gold Price/ounce</u>		
	<u>\$350</u>	<u>\$400</u>	<u>\$450</u>
1. Current law (assume 2% average rate)	10.2	14.0	17.8
2. Net proceeds at 5% rate	25.5	35.0	44.5
3. Gross yield at 2% rate	31.2	35.0	38.8
4. Net proceeds at 3% rate			
Gross yield at 0.8% rate	27.8	35.0	42.2
5. Net proceeds at 10% rate	51.0	70.0	89.0
6. Gross yield at 4% rate	62.4	70.0	77.6
7. Net proceeds at 6% rate			
Gross yield at 1.6% rate	55.6	70.0	84.4

Source: Price Waterhouse estimates

NOTE: Estimates are for 1989. Current law estimates reflect annual liability only and do not include prepayments.

Table 17.4 indicates the wider range of revenue yields that occur under varying price assumptions, with a net proceeds base.

From the perspective of economic efficiency and economic development, net proceeds is a satisfactory tax base. The serious concern with revenue instability can be addressed in either of two ways. First, budget policies can be adopted to avoid reliance upon mining tax revenues for financing current expenditures for essential public services. This option is discussed below under the issue of allocation of revenue. A second option would be to supplement the net proceeds tax with a severance tax based upon gross yield. Under this approach, net proceeds would continue to be the primary method of taxation. However, the use of a gross yield base would improve the stability of the overall structure.

Level of Taxation. The issue of level of taxation should be distinguished from the issue of the choice of tax base. Rates can be set for net proceeds or gross yield taxes to raise an equal amount of revenue, under specified economic conditions. Gold mining enterprises in Nevada are generally profitable enterprises under current conditions and Nevada's mineral resources are a nonrenewable resource. Given the large spread between current gold prices and cash production costs (exclusive of past investments in exploration, development and plant construction), most current production is not likely to be significantly affected by somewhat higher taxes. However, there is a risk that future investments in exploration activities and the long-term prospects for the Nevada mining industry could be adversely affected by substantially higher mining taxes.

Ultimately, the choice of level of mining taxation involves a tradeoff between meeting statewide revenue needs and promoting economic development in the rural areas of the state.

Allocation of Revenue

The two major issues relating to the allocation of mining tax revenue are (1) sharing between state and local governments and (2) use for current operations, investment in permanent trust funds, or use for one-time expenditures.

Most states split mining tax receipts between state and local governments. The local share is justified as a form of assistance to cover the costs of expanding public facilities and providing local public services. The state share is justified by a view that the mineral resources are part of a natural heritage and should benefit all of the citizens of the state. Until the 1987 legislative session, all mining tax receipts were allocated to local governments in Nevada. The state received prepaid receipts for the first time in FY 1987-88. If SJR22 were implemented, the maximum state share, given the hold harmless provision for local governments, would be approximately 60 percent.

A number of energy-rich states with relatively large oil and gas or coal reserves have allocated a portion of their severance tax receipts to permanent trust funds. The primary rationale of the trust fund concept is to accumulate mining revenues as principal which can be spent at some time in the future when the economic benefits of mining are no longer available. A second rationale is to avoid excessive dependence on a volatile revenue source for financing the annually recurring costs of public services. Nevada should consider this option if the mining industry continues to grow at a rapid rate in future years.

Even at present revenue levels, care should be taken to avoid excessive reliance on volatile mining tax revenues for financing recurring expenditures. One approach would be to calculate the revenue generated by the mining tax under some worst case, floor price assumption (\$350 for example) below which the price of gold is unlikely to fall during the budget period. All anticipated revenue over the floor price amount would be used

for one-time expenditures, such as capital projects, and not recurring outlays.

TECHNICAL APPENDIX

Methods and Assumptions for Estimating Revenue Effects of Mining Tax Alternatives

The fiscal estimates included in Table 17.4 are designed to show the revenue effects of illustrative mining tax alternatives which have approximately equal-revenue yields, assuming the maximum 5 percent rate which would be permitted under SJR22. The estimates are for 1989.

Key assumptions

1. Gold production is projected to increase from 2.7 million ounces in 1987 to 3.8 million ounces in 1989, consistent with growth patterns from 1985 to 1987.
2. The baseline price assumption is \$400 per ounce.
3. Under the baseline, gross yields from all mining increases from \$1.38 billion to \$1.75 billion (27 percent). This growth rate reflects the offsetting effects of a 41 percent increase in gold production and an 11 percent decrease in the average price of gold (from \$446 in 1987 to \$400 in 1989).
4. The ratio of net proceeds to gross yield is assumed to be 40 percent under the baseline. This ratio was 45.7 percent in 1987 and 42.7 percent in 1986.
5. The average statewide net proceeds tax rate under current law is assumed to be 2 percent. The 1987 average rate was 1.91 percent.

6. The baseline current law estimate was calculated as follows:

gross yield =	\$1,748 million
	<u>x 40%</u>
net proceeds =	\$700 million
statewide average rate	<u>x 2%</u>
net proceeds tax =	\$14.0 million

Method of calculating fiscal estimates of alternatives

1. The equivalent gross yield tax rate was set at 2.0 percent assuming a 40 percent ratio of net proceeds to gross yield.
2. Alternative gold price assumptions were assumed to reduce gross yields and flow through as reductions in net proceeds. In the very short run, production levels and costs are not assumed to be sensitive to price changes. However, in the long run, price changes as well as changes in tax levels can be expected to have some undetermined effect on production levels.

ENDNOTES

1. Shearson Lehman Brothers, Annual Review of the World Gold Industry 1988 (London: Shearson Lehman Brothers, Inc., 1988) pp. 70-80.
2. Memorandum from Nevada Mining Association.
3. Dobra, John L., "The Economic Impacts of Nevada's Mineral Industry," Reno: University of Nevada-Reno, 1988, pp. 4-7.
4. Ibid, p. 4.
5. Shearson Lehman Brothers, op. cit., pp. 52-72.
6. Daykin, Frank W.; "Memorandum of Authorities Concerning Additional Taxes on Mining," May 21, 1987.
7. Letter from Linda S. Jessen to Assemblyman Paul W. May dated May 18, 1987.
8. Severance tax rates applied to gross receipts are generally much higher for oil and gas than for metal minerals. Fourteen states have rates above 5 percent for oil and 13 states for natural gas.
9. For further discussion of the economic effects of resource taxes, see G.M.K. Schenck, Handbook of State and Local Taxation of Solid Minerals, (University Park, PA: Pennsylvania State University, 1984) and Richardson, James A., "Severance Tax Reform," ed. Steven D. Gold, Reforming State Tax Systems (Denver: National Conference of State Legislatures, 1987), pp. 277-290.

CHAPTER 18

THE PERSONAL INCOME TAX

INTRODUCTION

The personal income tax is the second largest tax revenue source used by the states, after the general sales tax. In fiscal year 1987, states collected \$76.0 billion or 30.8 percent of total tax receipts from the personal income tax.

Presently, forty states and the District of Columbia have an individual income tax. In addition, three states only tax unearned income. Connecticut taxes capital gains, interest and dividends, while New Hampshire and Tennessee tax interest and dividends. Nevada is one of seven states that has no personal income tax.¹

The first "modern day" state income tax was adopted by Wisconsin in 1911. By 1930, fifteen states had an income tax. During the depression of the 1930s, sixteen additional states adopted an income tax as a response to severe budgetary problems. From 1940 to 1960, the then territory of Alaska was the only state to enact an income tax; however from 1961 to 1971, ten additional states enacted the tax. The last state to adopt an income tax was New Jersey in 1976.

During the past ten years, the states have increased the degree to which they rely on the individual income tax as a revenue source. In 1976, the income tax accounted for 24 percent of tax collections among all the states, but by 1987 the share had increased to 31 percent. This increase was due to several factors including statutory increases in rates and the interaction of rising nominal incomes and progressive rate schedules.

For Nevada, the first and fundamental issue is whether to enact a personal income tax. Thus, this chapter begins by presenting reasons why states do or do not use the personal income tax. If Nevada were to decide to enact a personal income tax, the next issue would be to decide upon its basic structure. The second section provides a description of the major components of a state income tax, using California as an example. In the third section, four income tax alternatives are presented and their revenue and distributional effects are analyzed in the Nevada context. Key income tax design issues are discussed in the next section. In the final section, the overall policy merits of the four alternatives are evaluated.

WHY STATES USE OR DO NOT USE THE PERSONAL INCOME TAX

Some of the important characteristics of an income tax that are attractive to states are its ability to:

- o produce long-term revenue growth to cover increased public service costs,
- o contribute to the diversity of a state's overall tax system,
- o add progressivity to a state's overall tax system,
- o take advantage of the legal and administrative structure of the federal income tax in order to simplify an otherwise potentially complicated tax, and
- o shift a portion of the tax burden to the federal government by means of the federal deduction for state income taxes.

On the other hand, arguments against a state personal income tax include:

- o the tendency for income tax receipts to grow faster than income which may reduce political accountability regarding the size of state government,
- o the potential for creating disincentives for job creation, immigration, and economic development, and

- o a shift of the overall tax burden to residents if the income tax supplants exported taxes.

Revenue Growth

In order to provide public services, states must have adequate long-term sources of revenue. Consistent with this objective, a state revenue system should keep pace with increases in the costs of services and increases in population which add to the demand for public services.

Revenue growth from the income tax tends to keep up with public service costs for two reasons. First, one of the major components of the tax base - wages and salaries - generally keeps pace with inflation over the long-term. Second, many state personal income taxes are progressive, which means that the tax liability as a percent of income increases as income increases. The element of progressivity can be obtained directly through a progressive rate structure and/or by means of other structural features such as personal exemptions or standard deductions.

The interaction between income growth and growth in the revenue yield of a tax is referred to as "elasticity". Income elasticity reflects the percentage increase in the tax yield for every one percent increase in income. For example, if income increases 10 percent and the yield from a particular tax increases 12 percent, the elasticity is 1.2 percent.

Although income tax elasticity varies from state to state, depending on how a state structures its income tax, elasticity is normally greater than one. The average elasticity for all income tax states was 1.55 in 1983.² Consequently, those who perceive a need for increased public spending are attracted to the personal income tax as a revenue producer because its yield tends to grow somewhat faster than the rate of growth of personal income. However, it should be noted that the elasticity of the income tax is reduced substantially if the tax structure is indexed for inflation.

From the perspective of those who are concerned with restraining growth in public spending, the elasticity of the income tax is a negative, not a positive attribute. In this view, the personal income tax is a "money machine" that enables growth in the role of the public sector in the state's economy. This growth can occur without positive legislative action since growth in income tax revenues typically exceeds growth in personal income. Thus, the growth potential of the tax can be treated as both a positive or negative argument in the debate over enactment of a personal income tax, depending upon one's view of the appropriate level of government spending.

Diversity in the Revenue System

Proponents of a diversified or "balanced" state revenue system commonly support the use of the personal income tax. For example, Kleine and Shannon recommend "fairly equal reliance on the big three (income, property, and sales taxes)." ³ It is argued that a diversified tax system provides more stable revenue yields and that economic disincentives associated with any one tax can be moderated by using a number of taxes at relatively low rates.

The personal income tax is often an important component in a balanced revenue system because its broad base tends to make the system more stable. Economic cycles have significant impacts on the personal income tax; however, a diversified tax mix tends to stabilize the state's total revenue flow.

Equity

A revenue system should distribute the tax burden among its citizens in an equitable fashion. User fees are appropriate for financing such services as public swimming pools and state parks, because they assure that those who benefit pay for the service. Motor fuel excise taxes, while not a true user fee,

are assessed on those who operate motor vehicles on the public roads and highways and therefore are also related to benefits received. However, fees and taxes related to benefits received are not appropriate for financing all government programs and services. For example, it is neither desirable nor feasible for benefit charges to be used to finance most public assistance and public health programs. The ability-to-pay principle is the criterion of fairness for activities financed by general taxes.

The ability-to-pay principle has two dimensions - horizontal equity and vertical equity. Horizontal equity requires that people who are equally well off should pay the same amount of tax. If certain types of income are exempt from tax, then two people with the same income can have vastly different tax bills, resulting in a horizontal inequity. Vertical equity requires that people with unequal incomes should pay unequal taxes, or more precisely, people with higher incomes should pay taxes at a higher rate.

The precise degree of vertical equity or progressivity in a state tax system is a value judgment or social choice. Given a level of progressivity as an objective, the personal income tax is an effective tool for accomplishing that result. The personal income tax can also be used to offset the regressive nature of other taxes such as sales and property taxes.

However, income-adjusted credit programs, such as property tax relief circuitbreakers, may be more efficient means of providing targeted tax relief.

Administrative Linkage With the Federal Income Tax

The federal personal income tax provides states with certain administrative advantages. First, even if a state does not currently have an income tax, most of its citizens are familiar with the tax concept because they are subject to the federal tax. Therefore, if a state introduced an income tax, it would not be a new concept for taxpayers. Second, states can simplify their own

tax by building off of a federal definition of income or tax liability. Most of the states with an income tax conform to the federal tax in many aspects. Conformity makes the tax more attractive from the states' point of view because it simplifies calculations and helps reduce errors on the part of the taxpayer. In addition, by working together with the federal government, states have an effective means to accomplish compliance.

States have the opportunity to make use of the legal structure of the federal code and to exchange information with the Internal Revenue Service in administering a state personal income tax. These are among the factors that may account for relatively low administrative costs relative to yields. For example, the costs of administering the Wisconsin income tax are approximately 1 percent of total income tax receipts.⁴

Federal Deductibility

The federal itemized deduction for state and local income taxes reduces the effective income tax burden on many state taxpayers. When a state has an income tax, a portion of that tax will be paid by the federal government. People who itemize deductions will have a lower federal income tax liability than they would have without the state income tax. Therefore, the state tax is effectively lowered due to this interaction with the federal income tax. The federal Tax Reform Act (TRA) of 1986 reduced the allowable amount of some itemized deductions and increased the standard deduction amounts. These changes have reduced the number of taxpayers who will be eligible to itemize deductions. The reduction in federal tax rates also has reduced the value of the tax benefit from the federal itemized deduction. Nonetheless, it remains a significant factor for those who continue to itemize deductions.

Interstate Tax Competition and Economic Development

State income taxes can be a disincentive to economic development if they are high in relation to competitor states. First, interstate income tax differentials may be incorporated in wage levels over time. Therefore, an above-average income tax will tend to push up the cost of labor. Second, if the income tax is high relative to other states, a company may have difficulty recruiting management and technical employees from other parts of the country to transfer to a facility in that state. A relatively high income tax can also discourage people from moving to a state to look for work or encourage people to leave a particular state when searching for a job.

The state personal income tax can also be a factor affecting entrepreneurial activity and small business development since sole proprietorships, partnerships, and subchapter S corporations are taxed under the individual rather than corporate income tax. Consequently, entrepreneurs tend to focus upon the personal income tax, including the relative tax burden on capital gains, as a key state tax policy issue.

For example, the Final Report of the Minnesota Tax Study Commission cited the personal income tax as a negative economic development factor. The Commission concluded that "Of the taxes examined, the level of the individual income tax appears to present the greatest danger to job growth..."⁵ At the time, the top income tax rate in Minnesota was 14 percent.

After the 1986 Tax Reform Act was enacted by the Federal government, many states lowered their rates. In 1985, twelve states had a top marginal income tax rate of 10 percent or greater, but by 1987 only five states had a top rate at that level. For example, New York lowered its top marginal rate from 13.75 percent to 8.5 percent and Minnesota lowered its top rate from 14 percent to 9 percent. These reductions were motivated in part by interstate competition, as states did not want a high

income tax relative to other states to act as a negative factor affecting economic development.

Tax Exporting

Where feasible, a state would prefer to have residents of other states finance its public services, at least to the extent that out-of-state residents benefit from its services. The political attraction of this approach is obvious. However, tax exporting as a major alternative is usually not feasible for states because they operate in an open economy. Imposing above-average taxes on economic activities that can operate in a variety of locations will place the high tax state at a competitive disadvantage.

Non-income tax states are distinctive in terms of the role of large sectors of the state economy which have tax exporting potential.

In addition to Nevada, there are six other states that have no state income tax: Alaska, Florida, South Dakota, Texas, Washington, and Wyoming. Compared to the income tax states, these states rely more heavily on the sales tax and/or some industry-specific business tax. All but one of these states (Washington) have large sectors of their economy that have the potential for exporting a significant portion of the tax burden to people who live in other states. Energy-related natural resources and tourism are the key export industries which fall into this category.

Table 19.1 shows the percent distribution of total tax collections by major taxes for the non-income tax states in 1987. Alaska and Wyoming, which are both rich in energy-related natural resources, depend heavily on the severance tax for revenue. In 1987, severance taxes accounted for 63 percent of Alaska's tax collections and 41 percent of Wyoming's. Texas also derives a significant share of its revenue from severance taxes. Florida relies heavily on the sales tax due to the major tourist sector

TABLE 18.1

TAX REVENUE FOR STATES WITH NO BROAD-BASED PERSONAL INCOME TAX
PERCENT DISTRIBUTION BY TYPE: 1987

STATE	GENERAL SALES & GROSS RECEIPTS	SELECTIVE SALES & GROSS RECEIPTS	LICENSES	PERSONAL INCOME	CORPORATE NET INCOME	SEVERANCE	PROPERTY	OTHER TAXES	TOTAL
NO INCOME TAX:									
ALASKA	0.0	7.7	6.5	0.0	13.3	62.8	9.6	0.1	100.0
FLORIDA	55.6	21.4	6.7	0.0	6.1	0.8	2.3	7.1	100.0
NEVADA	49.5	36.1	11.0	0.0	0.0	0.0	3.4	0.0	100.0
SOUTH DAKOTA	49.4	29.2	12.0	0.0	5.8	1.2	0.0	2.4	100.0
TEXAS	41.0	31.3	16.2	0.0	0.0	10.5	0.0	1.0	100.0
WASHINGTON	58.2	17.0	5.2	0.0	0.0	0.7	15.8	3.0	100.0
WYOMING	23.9	9.5	9.2	0.0	0.0	41.1	15.8	0.6	100.0
LIMITED INCOME TAX:									
CONNECTICUT	41.8	20.0	5.6	10.7	15.6	0.0	0.0	6.2	100.0
NEW HAMPSHIRE	0.0	43.2	14.9	1.6	27.0	0.0	2.0	11.2	100.0
TENNESSEE	55.3	22.0	9.7	1.9	8.3	0.1	0.0	2.7	100.0
Addendum:									
ALL STATES	32.3	16.2	6.5	30.8	8.4	1.6	1.9	2.3	100.0

SOURCE: U.S. Dept. of Commerce, Bureau of the Census, State Government Tax Collections in 1987.

in its economy. Nevada, given the major role of gaming and tourism in its economy, relies on gaming taxes and the sales tax for the bulk of its tax revenue. Note, however, that all of these states, except Wyoming, Alaska, and New Hampshire, also have above-average reliance on the general sales tax.

The experience of the oil and gas states indicates that the ability to export taxes depends upon economic conditions. Nonetheless, use of exported taxes rather than imposing personal taxes on a state's residents is an attractive financing option if it is technically feasible and if it can be justified as offsetting social costs generated by out-of-state residents. Under such circumstances, a state will be reluctant to forego exported tax revenue and replace it with an increased tax burden on residents.

MAJOR COMPONENTS OF A STATE INCOME TAX

A personal income tax has five major components or design elements. These components are: 1) the definition of income subject to the tax; 2) standard and itemized deductions; 3) personal exemptions; 4) tax rates; and 5) tax credits. The first three items together define the tax base or taxable income. Each of these elements are briefly explained by using California's income tax structure as an example. The linkage of the various components of California's income tax are depicted in Chart 1.

Definition of Income

The first item that must be determined in the tax liability calculation is the amount of income subject to tax. Most states use the federal definition of income as a starting point for determining the state tax base. The different options for linking the state income tax to the federal income tax are discussed more fully below. If a state uses a federal starting

point, then it often makes addition and subtraction modifications to arrive at a state definition of income.

California, for example, uses federal adjusted gross income (FAGI) as its starting point. From federal AGI several additions and subtractions are made to calculate California AGI. The additions to federal AGI include such items as interest earned on state and municipal bonds from a state other than California and certain depreciation and amortization expenses. Items subtracted include unemployment compensation, certain interest income, and California lottery winnings.

Deductions

The next step is to calculate itemized deductions or claim a standard deduction. Itemized deductions are a group of special deductions for various kinds of personal expenditures. These deductions have two major purposes. First, they are intended to make further adjustments to income to better reflect ability-to-pay. An example is the medical expense deduction. For instance, if two families have identical incomes, but one has a major unreimbursed medical expense while the other has no medical expenses, then the family with the major medical expense has less of an ability to pay taxes. The medical expense deduction is an attempt to reflect this difference.

A second purpose of itemized deductions is to encourage people to act in certain ways. An example is the deduction for charitable contributions. By giving gifts of money or tangible property to charitable organizations, a taxpayer can receive a tax benefit.

The standard deduction is essentially a minimum deduction given to all taxpayers. Therefore, taxpayers only itemize when the sum of allowable itemized deductions exceeds the amount of the standard deduction. A standard deduction can be viewed as a way to provide additional tax relief to the poor and to reduce

the compliance and administrative burdens associated with relatively small amounts of itemized deductions.

In California, taxpayers can claim either itemized deductions or a standard deduction. The itemized deductions are identical to the federal income tax itemized deductions except that the federal deduction for state and local income taxes is not allowed. California's standard deduction was \$1,880 for single taxpayers and \$3,760 for married couples filing joint returns in 1987.

Most states with a broad-based income tax provide substantial itemized and standard deductions, similar to California; however, Illinois, Indiana, Michigan, New Jersey, and Pennsylvania do not grant a standard deduction and allow few, if any, itemized deductions.

Personal Exemptions

Personal exemptions are typically set at a flat amount and a personal exemption is granted to a taxpayer, spouse, and each dependent. The personal exemption, together with the standard deduction, helps relieve the tax burden on the poor by providing a tax-free cushion of income. It also recognizes family size as a factor affecting ability to pay.

California is one of only six states that grants personal exemptions in the form of a tax credit. The other states with an income tax grant personal exemptions as a deduction in arriving at taxable income. In most states, taxable income is calculated by subtracting deductions and exemptions from adjusted gross income. This is the amount of income to which tax rates are applied to arrive at tax liability before credits.

Tax Rates

Five states have proportional or flat rate structures while the other thirty-five states with broad-based income taxes have

progressive or graduated nominal rates. However, nominal rates, whether proportional or progressive, are not always an accurate indicator of the distribution of the tax burden across income classes.

California has a progressive tax rate structure and different rate schedules for single and joint returns. It has six tax brackets that ranged from 1.0 percent for income less than \$3,650 to 9.3 percent for income over \$23,950, for single taxpayers, in 1987.

Tax Credits

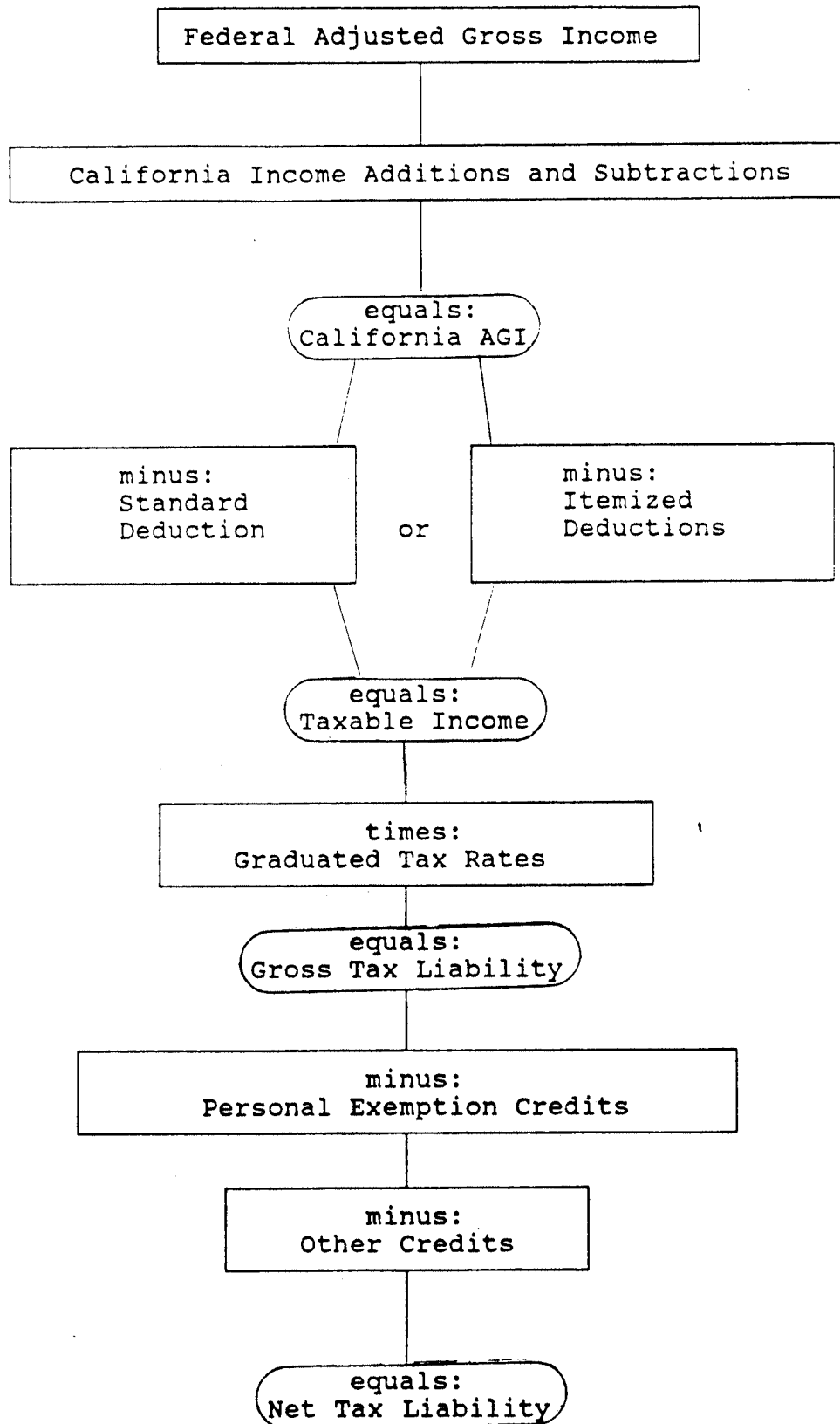
Once the gross tax liability is calculated, many states then offer tax credits that lower the net tax liability of qualified taxpayers. Credits are similar to itemized deductions in the sense that they are intended to better reflect a person's ability to pay the tax or are an incentive to encourage people to behave in a certain manner. Instead of providing a deduction from income for the personal exemption, California grants a personal exemption credit which equaled \$51 for each taxpayer and each dependent in 1987. In addition, California offers over 20 special credits that range from a low-income housing credit to a solar energy credit.

ANALYSIS OF BASIC STRUCTURAL ALTERNATIVES

This section provides an analysis of major alternatives for structuring a personal income tax for the State of Nevada. The alternatives have been designed to show the distributional effects of choices regarding key design issues, specifically the treatment of itemized deductions and the standard deduction. After the tax base was designed for each option, rates were set to raise a roughly equivalent amount of revenue for all options. The revenue target does not reflect a judgment that this is the

CHART 18.1

Major Components of California's Personal Income Tax



"right" amount of revenue to be raised. It is only an assumption for comparing tax structure alternatives.

Nevada Income Distribution

Table 19.2 shows the projected income distribution for tax filers in Nevada in 1990. These data are based on actual data for a sample of Nevada residents reported on 1985 federal income tax returns. The 1985 data were extrapolated to reflect population and income levels for Nevada in 1990.

Almost half of taxfilers are projected to have total positive income of less than \$20,000 in 1990; however, these taxpayers account for only 12.9 percent of total positive income. Total positive income is AGI with business and investment losses and adjustments to income added back. At the other end of the spectrum, taxpayers with total positive income of \$75,000 or greater account for 6.9 percent of tax filers and 36.2 percent of total positive income.

Income Tax Options

Option 1: The starting point for computing the tax base is federal adjusted gross income (FAGI). The federal standard deduction amount is allowed (\$5,000 for married couples and \$3,000 for single filers in 1988 and then indexed for inflation). A personal exemption for each family member is allowed equal to the federal personal exemption (\$2,000 in 1989 and then indexed).

Taxable income equals FAGI with one modification, minus the standard deduction and personal exemptions. The tax rate is a flat 3 percent. The single modification to FAGI is the constitutionally required subtraction for interest on U.S. obligations. This modification is included in all four options.

Option 2: The starting point for computing the tax is FAGI. No standard deduction is allowed, but a personal exemption equal

TABLE 18.2

PROJECTED INCOME DISTRIBUTION OF NEVADA TAXPAYERS: 1990

<u>Income Class*</u> <u>(Thousands)</u>	<u>Number</u> <u>of Returns</u> <u>(thousands)</u>	<u>Percent of</u> <u>Total</u>	<u>Income*</u> <u>(millions)</u>	<u>Percent of</u> <u>Total</u>
\$ 0-10	128.5	26.4%	\$ 490.4	3.0%
10-20	111.9	23.0	1,606.1	9.9
20-30	75.5	15.5	1,831.5	11.3
30-40	44.0	9.1	1,498.6	9.2
40-50	38.0	7.8	1,671.2	10.3
50-75	54.6	11.2	3,277.8	20.1
75-100	16.8	3.5	1,385.4	8.5
100-200	11.9	2.4	1,466.8	9.0
200 and over	<u>5.0</u>	<u>1.0</u>	<u>3,041.5</u>	<u>18.7</u>
Total	486.1	100.0%	\$16,269.3	100.0%

*Total positive income is AGI with business and investment losses and adjustments to income added back.

SOURCE: Price Waterhouse
Nevada Tax Model

to the federal amount is granted to each taxpayer, spouse, and dependents. Taxable income is equal to FAGI minus personal exemption deductions. The tax rate is a flat 2.5 percent.

Option 3: Federal taxable income is used as the starting point for computing the tax. Federal taxable income includes subtractions for itemized deductions as well as the standard deduction, and personal exemptions. A flat tax rate of 3.5 percent is applied to taxable income to calculate tax liability.

Option 4: This option is similar to Option 3 except that graduated rates are applied to federal taxable income. Federal tax brackets are used with tax rates of 3 percent and 4 percent. For joint returns in 1990, taxable income up to \$32,600 would be taxed at 3 percent and income above \$32,600 at 4 percent. For single returns, taxable income up to \$19,550 would be taxed at 3 percent and income above this amount at 4 percent. For 1991, the brackets are adjusted to account for inflation.

These four alternative income tax structures are summarized in Table 18.3.

TABLE 18.3

COMPONENTS OF FOUR ALTERNATIVE INCOME TAX STRUCTURES

<u>Tax Components</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>	<u>Option 4</u>
Starting Point	Federal adjusted gross income	Federal adjusted gross income	Federal taxable income	Federal taxable income
Federal Standard Deduction	Yes	No	Yes	Yes
Federal Itemized Deductions	No	No	Yes	Yes
Federal Personal Exemptions	Yes	Yes	Yes	Yes
Tax Rate	3%	2.5%	3.5%	3%/4% (Federal Brackets)

Revenue Estimates

The projected revenues that each alternative tax structure would generate in fiscal year 1991 are presented in Table 18.4. For the purpose of this analysis, the tax is assumed to be effective for the 1990 tax year. Fiscal year 1991 would be the first full year impact - approximately one-half of annual revenues would be received in fiscal year 1990. Revenue projections range from \$334.6 million for Option 2 to \$363.6 million for Option 3. An attempt was made to structure the options so their revenue yields would be approximately the same. This similarity of yields allows the focus of the analysis to be on the important differences in the distribution of the tax liability among income classes.

TABLE 18.4

INCOME TAX REVENUE ESTIMATES FOR FY 1991
(millions)

	<u>1991</u>
Option 1	\$344.6
Option 2	334.6
Option 3	363.6
Option 4	354.5

To help put the level of these income tax yields into perspective, they approximate one-half of Nevada's total projected General Fund receipts in 1991 from current tax and nontax revenue sources.

Distribution of Income Tax Liability

In Option 1, taxable income is equal to AGI minus the standard deduction and personal exemptions and the tax rate is equal to a flat 3 percent. The standard deduction and personal

exemptions have a significant impact on the amount of the tax paid by low income people. Taxfilers with positive income of less than \$20,000 account for 12.9 percent of total positive income; however, this group pays only 6.8 percent of the tax liability because the standard deduction and personal exemption exempt a significant portion of their income from tax. (See Table 19.5).

At the higher income levels just the opposite occurs. Taxpayers with income greater than \$75,000 account for 36.2 percent of total positive income, but pay 44.4 percent of tax liability. Because personal exemptions and standard deductions are flat amounts, they shield a decreasing percentage of income from tax as income increases. Therefore, a disproportionately large share of the tax liability falls on the upper income groups. Thus, an element of progressivity is accomplished even with a flat tax rate.

Option 2 has an income tax liability distribution that more closely approaches the distribution of total positive income than does Option 1. For example, 10.6 percent of the tax liability in Option 2 is paid by people with positive income less than \$20,000, while they account for 12.9 percent of total positive income. Taxpayers with positive income greater than \$75,000 pay 39.4 percent of the tax liability and account for 36.2 percent of total positive income. The difference in the distribution of burdens in Option 2 compared to Option 1 occurs because Option 2 does not allow a standard deduction and has a lower tax rate. Therefore, Option 2 places a greater tax burden on low-income people and less of a burden on high-income people, compared to Option 1. Option 2 imposes an income tax liability on an estimated 59,000 low-income filers who are exempt under Option 1.

Option 3 has a tax burden distribution similar to Option 1. The only structural difference between these two options is that Option 3 allows eligible taxpayers to itemize deductions whereas Option 1 does not. The benefits of itemizing accrue disproportionately to upper-income people. This lowers the share of

TABLE 18.5
DISTRIBUTION OF THE INCOME TAX LIABILITY UNDER
ALTERNATIVE TAX STRUCTURES: 1990*
(Dollars in Millions)

	<u>Option 1</u>		<u>Option 2</u>		<u>Option 3</u>		<u>Option 4</u>	
Income Class (Thousands)	Tax Liability	% of Total	Tax Liability	% of Total	Tax Liability	% of Total	Tax Liability	% of Total
\$ 0-10	\$ 2.5	0.7%	\$ 7.6	2.3%	\$ 2.9	0.8%	\$ 2.4	0.7%
10-20	20.2	6.1	27.1	8.3	23.0	6.5	19.7	5.8
20-30	29.0	8.7	32.5	10.0	31.7	9.0	27.3	8.0
30-40	26.4	7.9	27.5	8.5	28.8	8.2	25.1	7.3
40-50	34.0	10.2	33.3	10.2	36.2	10.3	31.9	9.3
50-75	73.6	22.0	68.7	21.2	77.3	22.0	71.9	21.0
75-100	32.4	9.7	29.2	9.0	33.3	9.5	33.0	9.6
100-200	34.3	10.3	30.2	9.3	34.5	9.8	35.9	10.5
200 and over	<u>81.5</u>	<u>24.4</u>	<u>68.6</u>	<u>21.1</u>	<u>84.5</u>	<u>24.0</u>	<u>95.2</u>	<u>27.8</u>
Total	\$333.9	100.0%	\$324.5	100.0%	\$352.1	100.0%	\$342.5	100.0%

*Tax liabilities are for calendar year 1990.

SOURCE: Price Waterhouse
Nevada Tax Model

liability paid by upper-income people and increases the share paid by lower-income people.

Option 4, which is federal taxable income with a two-bracket graduated rate schedule, displays the most significant shift in the distribution of tax liability compared to the distribution of positive income. Option 4 has the same tax base as Option 3, but due to the graduated rates in Option 4, less of the liability is paid by the lower-income classes and more of the liability is paid by the upper-income classes in Option 4.

Effective Tax Rates

Effective tax rates measure actual tax liability as a percent of income. The effective tax rate differs from the statutory tax rate because the effective rate is calculated from the base income level before any deductions or exemptions are made.

Effective tax rates for each of the four optional tax structures are presented in Table 19.6. Options 1, 2 and 3 all have a flat nominal tax rate; however, their effective rates are somewhat progressive, due to the personal exemption and standard deduction. These exemptions and deductions are flat amounts regardless of income. Therefore, they account for a larger percentage reduction in income for low-income people than for high-income people. As a result, tax liability in percentage terms is reduced more for low-income taxpayers due to these exemptions and deductions. It also follows that the larger the personal exemption and standard deduction, the more progressive the effective rates will be. This is shown by comparing the effective rates for Option 1, which allows both personal exemptions and standard deductions, and Option 2, which only allows personal exemptions. The effective rates in Option 1 are more progressive than they are in Option 2.

Effective tax rates are a useful indicator of the degree of progressivity of alternative tax structures. Option 2 is the

TABLE 18.6

AVERAGE TAX LIABILITIES AND EFFECTIVE TAX RATES: 1990*

Income Classes (Thousands)	<u>Option 1</u>		<u>Option 2</u>		<u>Option 3</u>		<u>Option 4</u>	
	<u>Average Tax</u>	<u>Effective Tax Rate</u>	<u>Average Tax</u>	<u>Effective Tax Rate</u>	<u>Average Tax</u>	<u>Effective Tax Rate</u>	<u>Average Tax</u>	<u>Effective Tax Rate</u>
\$ 0-10	\$ 19	0.5	\$ 59	1.6	\$ 22	0.6	\$ 19	0.5
10-20	181	1.3	242	1.7	205	1.4	176	1.2
20-30	384	1.6	430	1.8	420	1.7	362	1.5
30-40	599	1.8	624	1.8	654	1.9	571	1.7
40-50	894	2.0	875	2.0	952	2.2	839	1.9
50-75	1,349	2.2	1,258	2.1	1,417	2.4	1,318	2.2
75-100	1,932	2.3	1,742	2.1	1,988	2.4	1,972	2.4
100-200	2,882	2.3	2,533	2.0	2,893	2.3	3,015	2.4
200 and over	<u>16,342</u>	<u>2.7</u>	<u>13,747</u>	<u>2.3</u>	<u>16,941</u>	<u>2.8</u>	<u>19,091</u>	<u>3.1</u>
All Returns	678	2.1	667	2.0	724	2.2	704	2.1

*Tax liabilities are for calendar year 1990.

SOURCE: Price Waterhouse
Nevada Tax Model

least progressive while Option 4 is the most progressive structure.

TAX STRUCTURE DESIGN ISSUES

The elements that define the tax base interact with the rate structure and system of credits to determine the overall distribution of the income tax burden. The choices that are made with respect to key design issues will determine the degree of progressivity of the tax burden, horizontal equity and simplicity of the tax as well as the total amount of revenue raised.

The key issues that are identified and discussed in this section are: 1) the overall approach to defining the tax base; 2) conformity with the federal income tax; 3) the tax filing unit; 4) the treatment of low income people; 5) the rate structure; 6) tax credits; 7) indexing; 8) the treatment of retirement income; and 9) the relationship of personal income and general business taxation.

Tax Base

The federal Tax Reform Act (TRA) of 1986 has significantly changed the way in which states approach the issue of defining the tax base. Prior to enactment of the TRA, some states chose not to use FAGI as a starting point in defining income because of tax base erosion due to such provisions as the capital gains deduction. The definition of FAGI has been substantially broadened by TRA provisions such as repeal of the capital gains deduction, restrictions on passive losses, restrictions on individual retirement account (IRA) eligibility, and treatment of employee business and moving expenses as itemized deductions rather than adjustments to gross income. Consequently, most states now accept the definition of income subject to tax which is embodied in FAGI as an appropriate starting point in defining the tax base.

Two major questions in defining the state tax base are whether to allow itemized deductions and whether to provide a standard deduction. These two design features have very different distributional implications. Itemized deductions disproportionately benefit high-income taxpayers, while the standard deduction is a progressive element which benefits low and middle income people. The alternatives which are simulated in the previous section were differentiated in terms of how the deduction structure is designed.

Conformity with the Federal Tax Code

Of the forty states that have a broad-based income tax, thirty-seven states are in some way tied or linked to the federal tax code in defining their tax bases. The states that are referenced to the federal code are coupled in three ways:

1. Federal Tax Liability - State income tax liability is calculated by taking a certain percentage of federal income tax liability. Adopting this linkage means that a state adopts the federal income definitions, exclusions, exemptions, deductions, credits, and rate structure. Three states are linked to federal liability.
2. Federal Adjusted Gross Income (FAGI) - Twenty-seven states calculate their own taxable income by using FAGI as a starting point. States in this category typically make some adjustments to FAGI, define their own itemized deductions and exemptions and then apply their own tax rates, and credits to calculate tax liability.
3. Federal Taxable Income - Seven states have adopted federal income definitions, exclusions, adjustments, itemized deductions, standard deductions, and personal exemptions.

The state applies its own rates to federal taxable income to calculate tax liability.

States conform to the federal code to help simplify the state tax and to improve tax compliance. Adopting a federal income calculation as the starting point for a state tax makes it much simpler for the taxpayer to fill out the state return. Instead of having to start over when filling out the state form, the taxpayer can simply copy a figure from the federal form onto the state form and reduce calculation errors on the part of the taxpayer. Sharing information and tapes with the federal government strengthens the enforcement capabilities of a state.

South Carolina restructured its personal income tax in 1985 from one with no linkage to the federal code to conformity with federal taxable income. After this change was made, the South Carolina Department of Revenue used tax tapes from the federal government and identified 5,000 taxpayers who filed federal returns, but who had not paid any state tax. In addition, the percentage of returns with inadvertent filing errors, which had to be pulled and corrected by state tax personnel, were reduced from 20 to 4 percent.⁶

Using a federal income measure as a starting point for a state income tax does reduce the autonomy or control the state has over its own tax policy. When the federal government alters components of AGI, revenues of states tied to AGI will be affected. To help mitigate this potential problem, many states that are linked to the federal code are referenced as of a certain date. Thus, any changes that are made in the federal code after that date will not automatically be imposed on the state. The state can decide whether or not it wants to adopt the changes.

Defining the Tax Filing Unit: Joint or Combined Filing

Horizontal equity holds that people with the same income should pay the same tax. However, horizontal equity points towards conflicting goals with respect to the issue of defining the tax filing unit: married couples with equal incomes should pay the same tax, but two working people who marry should not have to pay more taxes just because they become married.

It is possible to impose a tax with progressive rates so that families with equal incomes pay the same tax or so that married individuals and single people with equal incomes pay the same tax, but not both simultaneously. Which horizontal equity goal will be addressed depends on which tax filing unit is used, i.e., joint returns (husband and wife) or combined returns (individuals).

A progressive tax with the individual as the tax filing unit will not create inequities between married couples and single people, but married couples with equal incomes will not necessarily pay equal taxes. A one-earner married couple with income of \$30,000 will pay more tax than a two-earner married couple with income of \$15,000 for each spouse. On the other hand, if the married couple is the filing unit, married couples with equal incomes will pay equal taxes, regardless of how the income is split between spouses. However, two single wage earners will incur higher taxes if they marry, which is referred to as a marriage penalty.

The federal income tax recognizes the family as the tax filing unit and therefore emphasizes the achievement of equity among married couples with equal incomes.

Over the years, the federal government has oscillated between the individual and the family as the taxpaying unit. From 1913 to 1948, the individual was the filing unit and all taxpayers used the same tax rate schedule. This did not create a marriage bonus or penalty, but it did create inequities between

families with equal incomes that had different income splits between the spouses.

In 1948, the family became the taxpaying unit. In addition, a separate rate schedule for families was instituted incorporating the concept of income-splitting. In 1971, the marriage bonus or penalty on single taxpayers was addressed by altering the rate schedule so that single liabilities would be limited to 120 percent of joint liabilities. However, this modification resulted in both marriage bonuses and marriage penalties with the marriage penalty falling primarily on two-earner families with relatively equal distributions of income between spouses. In 1981, a two wage-earner deduction was granted to help eliminate the marriage penalty, but was repealed in 1986.

Just as the federal government has tried varied approaches, the states also appear to be unsure of how to deal with this issue. Thirteen states allow two-earner families to file combined-separate returns. On one tax form, each spouse lists income, deductions, exemptions and tax separately. This approach eliminates the marriage penalty, but it can create inequities between families with equal incomes. Eight states have a special rate schedule for joint returns which reduces the marriage penalty. Five states have a flat rate tax and every taxpayer pays the same tax rate on all income. Therefore, the joint-single filer issue is not a problem for states with flat rate taxes.

There is no correct way to deal with the joint-single filer issue. However, following the current federal approach of emphasizing the joint return or family as the filing unit does offer the states an advantage - tax simplification. When a couple files a joint federal return, it is much simpler to also file a joint return with the state instead of having to recalculate all of their income, exemptions, and deductions as two individual taxpayers.

The Income Tax and the Poor

The ability-to-pay principle suggests that poor people should not be required to pay an income tax. The primary means used to exempt low-income people from the income tax are the personal exemption and the standard deduction. The personal exemption is a fixed amount that is tax free. A personal exemption is usually granted to the taxpayer, spouse and each dependent. Therefore, a personal exemption of \$1,000 will shield \$4,000 from the income tax for a family of four. Some states grant different personal exemption amounts for the taxpayer, spouse and dependents, but most states provide the same amount for the taxpayer and dependents.

Another means used to provide tax relief to the poor is the standard deduction. Under the federal tax and most state tax structures, a taxpayer can either itemize deductions or claim a flat amount as a standard deduction. The standard deduction is typically set at different levels for joint and single returns and is not adjusted for family size.

Both the personal exemption and the standard deduction are granted to all taxpayers but, because they are fixed amounts, the tax savings are much greater for low-income families than for high-income families in percentage terms. For example, if a state has a personal exemption of \$1,000 and a standard deduction of \$3,000, their combined value for a family of four is \$7,000. A family with \$7,000 in income will not have to pay any tax. A family with income of \$14,000 will only have to pay tax on 50 percent of their income, but a family with income of \$100,000 will have to pay taxes on 93 percent of its income.

As part of the federal TRA of 1986, increases in the personal exemption and standard deductions removed an estimated 6 million low-income households from the federal income tax roles. In 1986, a family of four had a combined personal exemption and standard deduction of \$7,990, which was increased to \$11,400 in 1987 and to \$12,800 in 1988. This change meant that in a number

of states, many low-income people would not be liable for federal tax but would be liable for state tax. States are confronted with a fundamental issue in setting standard deduction and personal exemption levels. The objective of providing a tax-free cushion of income for the poor, similar to federal levels, is important on social policy as well as tax administrative grounds.

Rate Structure

The tax rate structure is the most obvious, but not the only structural element, for introducing progressivity into the distribution of the income tax burden. The tax policy choice between a graduated rate structure or a flat rate involves a tradeoff between accomplishing progressivity and avoiding the disincentive effects of relatively high tax rates. The recent trend among states with a high reliance upon the income tax in recent years has been to lower their top tax rates.

It is important to recognize that a progressive burden distribution can be obtained even with a flat rate tax. The provision of flat personal exemption and standard deduction amounts has the effect of reducing effective tax rates more for lower income taxpayers than for high income taxpayers.

Tax Credits

Many states use income tax credits as devices to accomplish nontax policy goals. For example, California offers 20 special income tax credits including a vehicle conversion to alcohol credit, ride sharing credit and a political contributions credit. Tax credits are alternatives to direct expenditures for financing particular activities. However unlike appropriations that are subject to frequent budgetary review, tax credits are usually not scrutinized critically after they are enacted. Consequently, tax credits tend to reduce fiscal accountability.

Extensive use of tax credits also complicates the tax system requiring longer tax forms and/or special schedules. The goal of simplicity argues against the use of tax credits. This critical view of tax credits is stronger at the state level than the federal level because the lower state rates translate into weaker incentive effects in encouraging the desired social or economic behavior. State tax credits are likely to be less effective in accomplishing nontax policy goals.

The justification for a tax credit is somewhat greater if an income test is applied in establishing eligibility or benefit levels. For example, many states provide "circuitbreaker" property tax relief to homeowners and renters. The circuit-breaker concept uses income as a factor in the formulas which determine eligibility and the amount of relief. The income tax system is used as an administrative vehicle to provide income data which is used to calculate benefits.

Indexing

Over time, taxpayers can be taxed at higher rates without any legislatively passed tax increases. This "bracket creep" occurs when a progressive income tax rate structure interacts with incomes pushed up due to inflation. Inflation increases wages in nominal dollars and pushes taxpayers into higher tax rate brackets. Therefore, taxpayers spend a greater share of their income in taxes even though there has been no change in their real purchasing power.

Inflation has three major impacts on a non-indexed individual income tax. First, because it forces taxpayers into higher tax brackets and increases effective tax rates, inflation increases income tax yields as a share of personal income. Second, the structure of the tax is distorted because the value of certain provisions such as the personal exemption and the standard deduction, are eroded by inflation. Third, the distribution of tax liability changes across income groups. For

example, if inflation pushes up earnings proportionately among all taxpayers, then taxpayers above the top bracket will experience smaller percentage increases in taxes than will lower and middle-income taxpayers.

There are two ways to mitigate the impact of inflation on individual income taxes. First, legislative tax reductions can be enacted periodically to undo the effects of inflation. Second, the income tax structure can be indexed. Under indexing, provisions such as the personal exemption and tax bracket boundaries can be adjusted automatically using some measure of inflation.

The major argument in favor of indexing is that it automatically prevents unlegislated tax increases. If a tax increase is warranted, then a deliberate legislative action is required. Indexing therefore helps to restrain growth in government spending. Subtle tax increases caused by inflation can be quickly used to build up spending programs. If a legislated tax increase is needed to expand government programs, decisions affecting the size of government will receive closer scrutiny.

Taxing Pensions

An emerging issue among states relates to the tax treatment of retirement income. Special tax treatment of retirement income is becoming a more costly tax expenditure that will increase in importance with the increasing older-age population. In addition, these special provisions create horizontal inequities between retired and working taxpayers.

At least ten states have special exemptions for at least a minimum amount of pension income. In addition, many states provide a total or partial exemption for government pensions. These benefits create horizontal inequities not only between retirees and workers, but also between people with government and private pensions.

At the federal level, up to one-half of social security benefits may be taxed, depending on the taxpayer's total income. However, only thirteen states have adopted this provision in their own tax structure. The remaining states totally exempt social security benefits.

Relationship to General Business Taxation

Most states that tax income employ both personal and corporate income tax structures. One rationale for this approach is that personal and corporate income taxes are complementary. Without a separate tax on corporate income, shareholders would be able to accumulate income tax-free in corporations because the personal tax does not reach the retained earnings of corporations.

The federal income tax imposes these complementary income taxes but does not do so in an integrated fashion. Consequently, effective tax rates on different types of income vary depending upon the legal form of business organization. For example, dividend income is taxed twice - once when earned by the corporation and a second time when received by the shareholder. Furthermore, differences in marginal tax rate schedules result in differences in effective tax rates on corporate, partnership and proprietorship income. Over the years, proposals to fully or partially integrate the federal income tax structure have been advanced but have met with little success. States have not attempted to pursue this objective independently since integration would necessitate major changes in tax accounting, such as the imputation of undistributed corporate earnings to shareholders.

Perhaps, the most important state tax policy issue in this area concerns the implications of a state enacting a personal income or a corporate income tax but not both. If, for example, a personal income tax were imposed in the absence of a corporate income tax, adverse effects in terms of equity, efficiency and

revenue yield would be severe. Effective tax rates would be higher on industries, such as real estate development and oil and gas exploration, which tend to use the partnership form. Small businesses organized as sole proprietorships would be placed at a disadvantage relative to corporations. Obviously, businesses would be encouraged to shift to the corporate form of organization thereby reducing personal income tax receipts.

Although this situation is a theoretical possibility, no state has opted to tax personal income while exempting corporate income. The more relevant issue concerns the possible imposition of a corporate income tax in the absence of a personal income tax. This issue is analyzed in Chapter 19 which deals with general business taxation.

EVALUATION OF ALTERNATIVES

The issue of whether to enact a personal income tax is a fundamental policy choice that must consider Nevada's traditions as well as revenue needs and policy arguments. If a decision was made to enact a personal income tax, the next step in the policy making process would be to choose a basic tax structure. Four alternatives for structuring a Nevada personal income tax are presented in this chapter.

Each of the four options share certain features which contribute to simplification. The options conform closely to federal definitions at various points in the tax calculation process. Furthermore, the assumption of joint filing, in each option, avoids the compliance burden of splitting income and deductions between spouses. Option 2 scores lowest on the simplification criterion because the absence of a standard deduction would result in the imposition of state tax on an estimated 59,000 taxfilers who would be exempt from federal income tax.

In addition to a serious equity concern, Option 2 would also have higher administrative and compliance costs because of this

feature. Because the other three options incorporate federal standard deduction and personal exemption amounts, this undesirable consequence would be avoided.

Options 1 and 2 score highest in terms of horizontal equity because itemized deductions are not allowed. Although some itemized deductions, such as the medical expense deduction, can be justified as refining the measure of ability to pay, some of the most important deductions, such as mortgage interest and charitable contributions, provide tax benefits for certain personal expenditure choices. These deductions increase variation in effective tax rates within income classes.

As pointed out earlier, the issue of degree of progressivity requires a value judgment or social choice. It is noteworthy that a significant degree of progressivity can be accomplished even with a flat rate structure. Options 1 and 4 have very similar distributional characteristics. Option 1 combines a flat rate with a generous standard deduction and personal exemption. Option 4 incorporates graduated rates; however the allowance of itemized deductions reduces the progressivity of this alternative.

In conclusion, option 1 scores well on simplification, horizontal equity, and progressivity criteria and would be a sound structural framework in designing a personal income tax.

ENDNOTES

1. The other states that do not have a personal income tax are: Alaska, Florida, South Dakota, Texas, Washington, and Wyoming.

2. Daniel R. Feenberg and Harvey S. Rosen, "State Personal Income and Sales Taxes: 1977-1983," National Bureau of Economic Research, Working Paper No. 1631, June 1985.

3. Robert J. Kleine and John Shannon, "Characteristics of a Balanced and Moderate State-Local Revenue System," in Reforming State Tax Systems, ed. Steven D. Gold, (Denver: National Conference of State Legislatures, 1986) p. 33.

4. Unpublished cost data are from the Wisconsin Department of Revenue. It should be noted that administrative costs as a percentage of receipts are likely to vary depending upon the level of income taxation in a particular state. Thus the administrative costs of a low yield income tax would be much higher as a percent of yield.

5. Final Report of the Minnesota Tax Study Commission (St. Paul: Butterworths, 1986) Vol. 1, p. 11.

6. "Issues Raised For States By Federal Tax Reform," National Association of State Budget Officers and National Conference of State Legislatures, December 1986, p. 11.

CHAPTER 19

GENERAL BUSINESS TAXATION

The current state business tax structure in Nevada imposes taxes on specific industries - gaming, mining, and insurance - but does not impose a general tax on business, such as a corporate income tax. Whether a general business tax ought to be applied is a fundamental state tax policy issue.

This chapter (1) discusses the rationale for taxing business and describes the current system of business taxation in Nevada; (2) analyzes major alternative forms of general business taxes; and (3) identifies and analyzes key issues relating to the design of a general business tax.

Rationale for Taxing Business

A primary rationale for taxing business entities relates to the benefits received principle of taxation. Business operations generally require public services such as transportation services, sewer and water facilities, and police and fire protection. Taxes and user charges imposed on business can be justified in order to cover the costs of providing services directly to business operations. Specific activities, such as mining, may also give rise to significant social and environmental costs. In addition to public service costs directly related to businesses, it can be argued that the prospects for business development are also enhanced by the provision of educational services. Thus, an argument can also be advanced for business support of basic public services that are not related directly to business property.

User charges are appropriate mechanisms for matching business payments to benefits for such public services as sewer

and water services. However, there is no clear or precise way of measuring the benefit that accrues to particular businesses from the educational system. Consequently, some general form of business taxation may be justified.

The use of the ability-to-pay criterion as a justification for particular forms of business taxation is complicated by the question of tax incidence. It is not clear who ultimately bears the burden of a state business tax - shareholders, owners of all capital, consumers or employees. Even if it is assumed that shareholders bear the burden, there is no direct correspondence between the relative incomes of corporate firms and their shareholders. Nonetheless, the corporate profits tax is sometimes justified as a complement to the personal income tax in a rough way. Under the personal income tax, only dividends paid by corporations are subject to tax and undistributed earnings are not taxed. By contrast, all partnership and proprietorship income is subject to personal taxation. The imposition of a corporate income tax reaches the undistributed earnings of corporations as well. The relative importance given to the benefits received or ability-to-pay criteria has important implications in evaluating business tax policy options.

Finally, the practical rationale for business taxation is that the alternatives for raising revenue may be perceived to be less desirable. In particular, elected officials may prefer to impose some tax on business in order to reduce direct personal taxes on residents.

Current Business Taxes In Nevada

Most states impose a general tax on corporate businesses. All but five states levy a corporate income tax and one of the five states - Texas - imposes a capital stock franchise tax which is roughly equivalent to an income tax in its magnitude. Washington imposes a substantial business and occupation tax,

which is a form of gross income tax. Only Nevada, Alaska, and Wyoming have avoided the use of a general business tax.

Although no general state business tax is used, Nevada does tax specific industries. The gaming industry is the prime vehicle of business taxation. Other industries that are subject to specific taxes are mining and insurance.

The specific tax on gaming is rationalized as a form of taxation intended to offset the substantial public service costs associated with the tourism industry. The net proceeds mining tax can be justified as a tax on an industry that depletes an irreplaceable resource and may impose significant environmental and social costs on local communities. The existence of the insurance premiums tax does not appear to be related to any public service or social cost rationale. The premiums tax is instead a levy on the consumption of a particular service and is common among the states.

General Business Tax Alternatives

The most common state general business tax is the corporate net income tax. Forty-five states and the District of Columbia have a corporate income tax. In Fiscal Year 1987, states raised \$19 billion from the corporate income tax, accounting for 8 percent of total state tax collections.¹

A second form of general state business tax is the corporate franchise tax. The franchise tax is a tax which is measured by capital as reflected on the firm's balance sheet. The precise measure of capital varies among the states, ranging from partial measures of equity to broad measures of invested capital, including long-term debt as well as equity. Twenty-nine states impose such franchise taxes and collected approximately \$3 billion from this source in fiscal 1987.

The value-added tax is a third form of general business tax. One state - Michigan - imposes a modified value-added tax. The Michigan Single Business Tax yielded \$1.6 billion in fiscal 1987.

The value-added tax can take many different forms both as to the definition of the base and the method of collection. In essence, value-added is the contribution a firm makes to the value of a good or service and is equivalent to the receipts from the sale of the firm's products less the cost of materials and services purchased from other firms.

Corporate Income Tax

The corporate income tax is clearly the most common form of general state business tax. Of the approximately \$23 billion in combined state revenue from the three types of state general business taxes, 80 percent was derived from the corporate income tax in 1987.

Conformity. Over 40 states adopt the Internal Revenue Code definition of taxable income, by statutory reference, as the starting point for computing state income for corporations. State conformity with the definition of federal taxable income has the advantage of reducing administrative costs for the state tax agency and compliance costs for the taxpayer. The degree to which the states maintain conformity appears to depend upon the character of federal legislative changes. For example, a number of states deviated from federal depreciation rules because of sizable potential revenue losses due to adoption of the Accelerated Cost Recovery System (ACRS) in 1981. However, states have generally conformed with the base-broadening corporate provisions of the Tax Reform Act of 1986. States differ as to whether they automatically pick-up federal base changes or whether they are referenced to the Code as of a specific date, thereby requiring positive legislative action to maintain conformity.

Five key issues are presented which bear upon the design of a corporate income tax for Nevada: (1) the definition of the taxpaying unit; (2) the apportionment formula; (3) the relationship of the corporate income tax and taxes on specific in-

dustries; (4) the relationship of the corporate income tax to the personal income tax; and (5) the rate structure.

The Taxpaying Unit. State corporate income taxes vary significantly in defining the taxpaying unit. This subject has recently been a source of great controversy with an international debate swirling around the "worldwide unitary" issue.

The first question is whether to tax each corporation as a separate legal entity or to require combined reporting by a group of related corporations. The second question, which was the focus of the recent controversy, involves whether the combined reporting approach should be applied on a domestic or worldwide basis.

Most states either require or provide an option for combined reporting. The move towards this approach reflects a recognition that the economic substance of modern corporate organization is such that multiple corporate legal entities are often part of a single unitary enterprise. Taxation of corporations as separate legal entities provides opportunities for shifting income and avoiding tax.

In practice, the unitary business concept can be difficult to apply. Unity of ownership (of 50 percent or more of a corporation's stock) is a necessary but not sufficient condition of a unitary relationship. The unitary relationship must also be tested by unity of operations (e.g. centralized accounting, personnel, pension plans) and unity of use (e.g. centralized management and intercompany product flow). Consequently, the definition of the unitary group is subject to interpretation. Firms can attempt to minimize taxes by including loss-producing entities in the unitary group in order to offset income from profitable entities. States can seek to maximize revenue by including profitable entities in their formulation of the unitary group.

Despite the ambiguity of application, combined reporting is a theoretically superior approach because of its emphasis on economic substance over legal form. States that have tradition-

ally taxed separate legal entities have difficulty changing to combination because of substantial tax shifting among firms and uncertainty of revenue effects. However, a state without an existing corporate income tax confronts a clean slate and is not constrained by those considerations.

Recent legislation in a number of states has largely resolved the issue of worldwide combination. As of 1988, every state except Alaska that had used worldwide combination either repealed worldwide combined reporting or, as in the case of California, has allowed a "water's edge" election. The move away from the worldwide unitary approach was a response to intense pressure from foreign countries, the U.S. business community, and the U.S. Treasury Department. Consequently, the practical choice confronting states at this time is between taxation of separate entities or domestic combined reporting.

Apportionment Formulas. Apportionment is the key step in attributing a portion of the income of multistate corporations to a particular state. The alternative of separate accounting is generally not practical since centralized management and functional integration preclude assigning business income to a particular state for a business operating in more than one state. Consequently, formulas are used to apportion income to individual states.²

The most common formula equally weights three factors--sales, property, and payroll. The apportionment formula determines the percentage of total business income-producing activity attributed to a particular state by measuring the extent to which each of these factors is located in the state. For example, sales activity is generally measured on a destination basis, i.e. sales are "in-state" if they are delivered or shipped to a purchaser within the state. The ratio of in-state sales to total U.S. sales establishes the sales factor in the apportionment formula.

Most states equally weight the three factors assuming that business income is a product of the interplay of these factors.

However, there are exceptions that give greater weight to the sales factor in an effort to encourage companies to expand property and payroll in the state. Iowa has a single factor (sales) formula and Nebraska enacted legislation in 1987 to phase-in a similar formula over a five-year period. Several states double weight the sales factor, while Minnesota offers firms the option of using an equal weighted formula or one with a sales weight of 70 percent.

Relationship to Specific Business Taxes. If Nevada imposed a general business tax such as a corporate income tax, a policy decision would be necessary regarding its relationship to the industry-specific taxes on gaming, mining, and insurance. The four options that are available are as follows: (1) allow the specific taxes as a deduction against income tax liability; (2) allow the specific taxes as a credit against income tax liability; (3) provide no deduction or credit; or (4) provide an income tax exemption to firms subject to the specific taxes. Other states either exempt insurance companies from income taxation (in effect, treating the premiums tax as a tax in lieu of income taxes) or provide an income tax credit for premiums taxes paid. Because premiums taxes generally exceed income taxes, the credit mechanism is the equivalent of an exemption for most firms. The exemption option is assumed for the estimates included in this chapter. The rationale for this option is that the premiums tax is preferred as an alternative to income taxation on grounds of simplicity and revenue stability. It is not an additional tax since it is not justified by unusual social costs associated with the insurance industry.

Gaming and mining taxes have been allowed as deductions under the income tax alternative presented in this chapter. The effect of this approach is to treat these industry-specific taxes as additional taxes but recognize that the special taxes reduce the tax capacity of the company. The rationale for this approach is that these two industries generate substantial public service and/or social costs.

Relationship to Personal Income Taxes. The issue of the relationship of the corporate income tax to the personal income tax has two dimensions. The first dimension relates to the integration of the corporate income tax with the personal income tax in a state in which both taxes are imposed. The topic of integration has been given much attention at the federal level although little has been done about it. The issue is often focused upon the double taxation of dividends, which are taxed as profit to the corporation and income to the shareholder. States have generally not pursued the objective of integrating the individual and corporate income tax. Full integration of the corporate and individual income tax would require complex arrangements for imputing corporate income to individual shareholders. Such a complex structure is not feasible at the state level in the absence of federal provisions to that effect. Furthermore, corporate shareholders are often non-residents and the jurisdiction to tax their share of corporate income would be limited to the state of domicile. A partial solution to this issue is Subchapter S of the federal code which allows closely-held corporations to be treated as if they were partnerships. Most states recognize the federal treatment of Sub S corporations by providing a corporate exemption and taxing the business income to the shareholders.

The more relevant state tax policy issue concerns the relative treatment of corporate and noncorporate businesses in states that have one but not both taxes. No state imposes a personal income tax in the absence of a general corporate tax. However, seven states impose a general corporate tax but no broad-based personal income tax. In all but one of these cases, noncorporate businesses (partnerships and proprietorships) are not subject to general business taxes. New Hampshire applies its business income tax to all businesses regardless of form.

The favorable tax treatment of businesses organized in the noncorporate form has become a major issue in Texas. Quite possibly, the reason why this issue has surfaced there may be

due to the importance of the oil and gas industry in Texas. Major segments of the oil and gas industry are organized in the partnership form. Consequently, the uneven treatment of corporate and noncorporate businesses has serious practical implications in the Texas context.

The states that impose an income tax on corporations but not on businesses organized in noncorporate form may be reluctant to extend the tax to large numbers of relatively small businesses for political and administrative reasons. However, this practice is clearly inequitable and has a distorting effect on business decisions. From the perspective of good tax policy, businesses should be treated uniformly regardless of legal form.

Rate Structure. The selection of a tax rate structure for a Nevada corporate income tax can be approached in two ways. First, if a specific revenue target has been decided upon, the rate structure can be set to raise the desired amount of revenue, given a preferred tax base. A second approach is to choose a rate as a starting point for analyzing the effects of general business tax options.

The second approach has been used here to provide an illustrative framework for analysis, but without any intent to prejudge the choices available to Nevada policymakers. The example begins by applying a 5 percent flat rate on federal taxable income, assuming an equally-weighted three factor apportionment formula. A 5 percent rate would be near the bottom of the range of corporate tax rates used by states at present. Table 19.1 indicates corporate income tax rates for all Western states plus Florida and New Jersey. The resulting revenue yield is then used as a target for constructing equal-revenue franchise and value added tax alternatives. Burdens by industry are compared for each of the major business tax options - income, franchise, and value added - assuming equal revenue targets.

Table 19.2 provides estimates of four general business tax options for Nevada, by major industry grouping. The figures in the table reflect estimated liabilities for calendar year 1990

Table 19.1
Corporate Income Tax Rates for Selected States
1988 Tax Year

	<u>Top Rate</u>	<u>Top Bracket</u>
Arizona	10.5%	Over \$6,000
California	9.3%	Flat rate
Colorado	6.0%	Over \$200,000
Florida	5.5%	Flat rate
Hawaii	6.4%	Over \$100,000
Idaho	8.0%	Flat rate
Montana	7.0%	Flat rate
Nevada	No tax	-
New Jersey	9.0% ¹	Flat rate
Oregon	6.6%	Flat rate
Texas	No tax	-
Utah	5.0%	Flat rate
Washington	No tax	-
Wyoming	No tax	-

Source: Commerce Clearing House, State Tax Guide

¹ Excludes temporary surtax.

TABLE 19.2
Alternative Business Taxes
Estimated Calendar Year Tax Liability in 1990,
by Major Industry
(\$ Million)

Major Industry	Alternative (I)	% of Total	Alternative (II)	% of Total	Alternative (III)	% of Total	Alternative (IV)	% of Total
Agriculture, Forestry, and Fishing	\$ 0.3	0.5	\$ 0.4	0.5	\$ 0.4	0.6	\$ 0.3	0.5
Mining	9.0	12.8	12.8	17.2	5.9	8.6	10.3	14.3
Construction	2.9	4.1	2.0	2.8	5.2	7.6	2.6	3.6
Manufacturing	7.1	10.1	5.1	6.9	4.8	7.0	6.3	8.8
Transportation, Communications and Utilities	12.0	17.0	17.0	22.8	7.7	11.3	14.0	19.5
Wholesale Trade	3.5	5.0	2.1	2.9	3.0	4.4	3.0	4.1
Retail Trade	11.4	16.2	5.3	7.1	9.1	13.3	9.0	12.5
Finance, Insurance, and Real Estate	7.4	10.5	14.2	19.1	4.8	7.0	10.1	14.1
Services, other than Gaming	4.5	6.4	2.8	3.7	11.5	16.7	3.8	5.3
Services, Gaming	12.3	17.5	12.6	17.0	16.1	23.5	12.4	17.3
Total	\$ 70.4	100.0	\$ 74.4	100.0	\$ 68.6	100.0	\$ 71.7	100.0

Sources: Price Waterhouse Corporate Tax Model. See technical appendix for a detailed description of the methodology.

Note 1: Alternative (I) — 5 percent income tax
Alternative (II) — 0.3 percent franchise tax
Alternative (III) — 0.5 percent value-added tax
Alternative (IV) — 3 percent income tax combined with 0.12 percent franchise tax

Note 2: In the table, gaming is a composite of the amusement and recreation, and hotel and motel categories.

Note 3: Gaming and mining taxes are assumed to be deductible against income tax liability. Domestic combined reporting is assumed as the filing method. The apportionment method is the equal-weighted three factor formula.

and not fiscal year receipts. Because of data limitations, these estimates are based upon the application of the taxes to corporations only. However, it should be noted that any of these business taxes could be applied to partnerships and proprietorships as well.

The analytical task of estimating the impact of business tax alternatives for a state that has no general business tax in place is a special challenge because of the absence of state-specific tax data. Conservative estimates of any new tax should be used for budgeting purposes until such a tax is fully implemented and actual data becomes available. Nevertheless, the estimates contained in Table 19.2 were produced using systematic procedures to derive Nevada estimates from federal tax data. The methodology for the fiscal estimates is set forth in the Technical Appendix to this chapter.

Option 1 is a 5 percent corporate income tax alternative. This alternative is estimated to yield a liability of approximately \$70 million in calendar year 1990 in Nevada. The largest share of total income tax revenues is projected to be raised from gaming (17.5 percent); transportation, communications and utilities (17.0 percent); and retail trade (16.2 percent). The combined liability of \$35.7 million for these three industries would account for about half of total Nevada corporate income tax revenues. Other major taxpaying industries under a corporate income tax would be mining (12.8 percent); finance, insurance, and real estate (10.5 percent); and manufacturing (10.1 percent).

The advantages and disadvantages of a corporate income tax are compared with alternative business tax structures in the concluding section of this chapter.

Corporate Franchise Tax

Corporate franchise taxes offer an alternative tax base to the more common net income tax. In most states, franchise taxes are a supplement to the income tax. The corporate income tax

yields more than six times the revenue raised by franchise taxes on a national basis. However, Texas levies a substantial franchise tax (measured on net worth) in the absence of an income tax and Louisiana raises more revenue from the franchise tax than from the corporate income tax.

State franchise taxes employ several different measures of capital. The most common tax base definition is net equity, which is computed as follows: par value of common stock; premium from the sale of common stock; proceeds of sale of preferred stock; and retained earnings minus treasury stock. Several states use a partial measure of net equity by excluding retained earnings. Two states - Kentucky and Louisiana - use a broad definition of invested capital by adding long term debt to net equity.

Many of the key issues associated with the corporate income tax are also confronted in designing alternative general business taxes, such as franchise or value added taxes. All four tax structure issues discussed in the corporate income tax section - (1) definition of the taxpaying unit; (2) apportionment formulas; (3) relationship to specific business taxes; and (4) relationship to personal income taxation - are pertinent to each of the general business tax options.

The key issue that is unique to the franchise tax alternative is the definition of the tax base. The two theoretically defensible options are net equity or invested capital (net equity plus long term debt). The broader invested capital option is linked to the benefits received rationale of state business taxes. Total invested capital can be viewed as one measure of the scale of an enterprise. Factors other than size relate to the costs associated with supplying public services to business. Nonetheless, size is one factor that is plausibly related to public service costs and benefits.

The net equity option is somewhat related to the benefits received principle in that solvent firms are required to pay tax each year, whether profitable or not. An ability-to-pay element

also enters in since the tax base is a measure of wealth or perhaps a surrogate of income. However, a net equity approach is most vulnerable from the benefits received perspective. Two companies that are identical in all respects operationally would experience wide differences in liability depending upon the use of debt. Conservatively managed firms would have higher tax liabilities relative to leveraged companies. The broad-based invested capital alternative is presented as the franchise tax alternative in Table 19.2 in order to accomplish neutrality with respect to the use of debt.

Table 19.2 indicates that two industry groups that require large amounts of capital -- transportation, communications and utilities and finance, insurance and real estate -- would incur higher liabilities. Retail trade and manufacturing would experience significantly lower liabilities under a franchise tax compared with a corporate income tax.

Value-added tax

A value-added tax can take different forms with different methods of calculation. In the national context, it is best thought of as a multi-stage sales tax that is collected at each stage of the process of production and distribution of goods and services. The incidence of a consumption-type value-added tax at the national level is straightforward. The burden of the tax falls on consumers rather than owners of capital. However, the question of incidence is more complex when considering a state value-added tax. The incidence of a state value-added tax is significantly affected by design choices related to its form.

The key choice at the state level is whether to base the value-added tax on a destination principle or an origination principle. A state value-added tax based upon the destination principle would have the same functional result as a retail sales tax. In theory, consumption of taxable goods and services within the state would be subject to tax regardless of whether they were

produced in-state or out-of-state. In practice, state sales and use taxes, including Nevada's, are not pure consumption taxes since some producer's purchases are subject to tax (e.g. building materials, office and computing equipment, etc.). Nonetheless, given a tax base restricted to products purchased by retail consumers, the incidence of a retail sales tax and a destination-based value-added tax would be the same - individual consumers of goods and services in Nevada.

Two considerations argue against the use of a destination-based value-added tax at the state level. First, the legal issue of nexus raises a question as to whether a state can collect the tax from producers of intermediate goods and services that eventually enter into a final product sold within the state. Legal jurisdiction to require collection of tax by vendors based out-of-state depends upon the degree and nature of the seller's presence within the state. The characteristics of the seller's activity within the state, together with case law and federal statutes, determine whether the firm is required to collect tax. A credit method of collection, which would account for payment of the tax at earlier stages, might possibly address this issue, but not without a significant cost in terms of administrative complexity.

A second objection to a consumption-type state value-added tax is its redundancy in relation to a retail sales tax. Nevada already relies heavily upon the general sales and use tax in its state-local tax mix. Should the state increase its reliance upon consumption taxes? If the answer is yes, then why not increase the sales tax instead of inventing a new tax, which would require a new administrative mechanism? These policy, administrative and legal considerations argue against a consumption-type value-added tax for Nevada.

An income-type value-added tax, based upon an origination principle, is an approach which can be viewed as a state business tax alternative rather than as a consumption tax. Under this approach, firms doing business in Nevada would be subject to tax

in a manner similar to a corporate income tax, although the bases of the two taxes differ in important respects. The value-added tax base of each multi-state business would be attributed to Nevada using an apportionment formula. Taxpayers would file annual returns and be required to make quarterly estimated payments. The addition method of collection would be used to calculate the tax. Table 19.3 compares the subtraction (or invoice) method with the addition method. As can be seen, the two methods can be designed to result in identical liabilities. However, the addition method lends itself to an income-type value-added tax at the state level.

The Nevada value-added tax option which is included in Table 19.2 is similar to the Michigan Single Business Tax in most respects. The tax is calculated using the addition method and a three factor apportionment formula is used to attribute the taxable base to Nevada. Two important differences relate to the treatment of capital and tax preferences under the Michigan tax. The Michigan tax allows the full expensing of capital outlays, while the Nevada example (option 3) allows a depreciation deduction. The Michigan Single Business Tax also provides a variety of special credits and deductions. These tax preferences are generally political responses to certain groups of taxpayers such as farmers, small businesses, and labor-intensive businesses.

Option 3 reflects a "pure" version of a state value-added tax without these compromises.

TABLE 19.3

COMPARISON OF ALTERNATIVE METHODS OF
CALCULATING VALUE-ADDED TAX LIABILITY
(1 percent value-added tax)

	<u>Stage of Production</u>			
	<u>Firm A</u> <u>Manufacturer</u>	<u>Firm B</u> <u>Wholesaler</u>	<u>Firm C</u> <u>Retailer</u>	<u>Total</u> <u>Economy</u>
<u>Subtraction Method</u>				
Sales	\$3,500	\$8,500	\$11,000	\$23,000
Purchases	<u>1,000</u>	<u>3,500</u>	<u>8,500</u>	<u>13,000</u>
Value-added	2,500	5,000	2,500	10,000
Tax	25	50	25	100
<u>Addition Method</u>				
Profit	250	250	100	600
Wages	1,500	3,000	2,000	6,500
Rent	500	1,000	200	1,700
Interest	<u>250</u>	<u>750</u>	<u>200</u>	<u>1,200</u>
Value-added	2,500	5,000	2,500	10,000
Tax	25	50	25	100

The major difference between the distribution of liability under the value added tax compared with the income tax is the shift from capital-intensive to labor-intensive industries. Manufacturing, transportation, communications and utilities; and finance, insurance and real estate³ would incur substantially lower liabilities as compared with an income tax of equal yield. The overall share of these industries would decline from 37.6 percent under an income tax to 25.3 percent under the value-added tax. The share of the services industry, including gaming, would increase from 23.9 percent to 40.2 percent.

Evaluation of Alternatives

The corporate income tax is the most familiar form of general business tax and is used by the federal government and more than 40 states. The corporate income tax burden is ultimately imposed upon individuals whose relative incomes are not systematically related to the relative profitability of the businesses in which they are employed or in which they invest. Nonetheless, the appeal of an income tax base for a general business tax is that it avoids burdening firms that are in an unprofitable position. Although the corporate income tax is complex, state corporate income taxes have the administrative advantage of working off of the definition of federal taxable income. The corporate income tax is not based on the benefits received principle. Unprofitable firms generate public service and social costs but do not share in the responsibility for financing public services. Finally, the corporate profits base is relatively unstable.

The value-added tax is most convincingly justified by the benefits received principle. Businesses are subject to tax in relation to the scale of the resources that are allocated to the production and distribution process. The value-added tax base is relatively stable in comparison with corporate profits and thus would be a stabilizing element in the overall state tax structure. The value-added tax is, however, an unfamiliar concept in the U.S. and would necessitate a new administrative structure. The significant shift of burden onto labor-intensive service businesses would predictably lead to intense political pressures to provide credits and other preferences to mitigate the application of the concept. The Michigan experience indicates substantial erosion of the value-added tax base due to such pressures.

Option 4 blends the business income tax and franchise tax concepts. Approximately 60 percent of total liability would be determined by profits and 40 percent would be based upon invested capital. The use of the franchise tax base would provide a

stabilizing element in the state tax structure since invested capital does not fluctuate as much as corporate profits. The benefits received principle would be reflected through the payment of some tax by all solvent businesses.

As noted above, any of the general business taxes could be applied to noncorporate as well as corporate businesses. If a general business tax is enacted, it should be applied to all businesses, regardless of the legal form of organization.

Technical Appendix: Methodology for Estimating Effects of Nevada Business Tax Alternatives

Overview

The State of Nevada does not currently impose any form of income tax on corporate or noncorporate business activities; therefore, actual state income tax return data are not available for the analysis of revenue and distributional effects of business tax alternatives. Three major steps were undertaken to build a corporate tax model for Nevada. First, a federal corporate income tax receipts model was constructed using federal income tax return data. Second, Nevada's shares of payroll and sales by industry were applied to the federal income tax receipts model to derive a database for a Nevada corporate income tax model. Finally, variants of the basic income tax model were developed to allow the estimation of the effects of franchise tax and value-added tax options.

Data

Corporation Income Tax Returns. The basic data used in the model are the aggregate information extracted by the Statistics of Income (SOI) division of the Internal Revenue Service from federal returns filed by all active corporations for taxable year 1983. The database includes all major income and expense items on Form 1120, by twelve different asset classes and fifty-eight major industries, for all firms and firms with net income only. Data items for firms without net income are derived by subtracting positive income company data from data on all firms, for each asset and industrial classification.

Wages and Sales by Industry. Total annual wages, by state and by industry, for all workers covered under state unemployment insurance programs are compiled by the Bureau of Labor Statistics (BLS). Nevada's share of wages for each industry were derived

from the BLS data and used as one of the apportionment factors in the state income tax model. The other apportionment factor used in the model is the state's shares of sales from the 1982 Census for selected industries. Sales data for transportation, utilities, and the financial sector are not available from the Census; therefore, only payroll shares are used for apportionment for those industries.

Federal Corporate Income Tax Receipts Model

Base Year. The main program of the model calculates the base year (1983) taxable income for firms with positive or negative net income in each of the twelve asset classes and fifty-eight industries. The amount of taxes before net operating losses and the special dividends received deduction is arrived at through a tax calculator subroutine, which calculates the effective tax rate under 1983 law and then transforms it into that under current law. Calendar year tax liability is the resulting tax liability less net operating losses, dividends received deduction and credits. Finally, calendar liability estimates are translated into fiscal year receipts based on collections data obtained from the U.S. Department of Treasury.

Model Extrapolation. The base year data are extrapolated from 1983 to 1987 using the Corporate Profits Before Tax variable defined for national income account purposes. For the period 1988 to 1991, nominal GNP growth rate forecasts by the Congressional Budget Office (CBO) are used as the extrapolation factor. The extrapolated database represents the tax/economic conditions of all corporations under a constant 1983 law scenario.

Enacted Legislation. To estimate corporate taxable income under current law, the taxable income effect from various changes in tax laws enacted in 1984, 1986, and 1987, are incorporated in the extrapolated taxable income for all model years. The estimated calendar year liability change of each provision in the tax bill is first converted into amounts of deduction equivalent

and then allocated to firms across all assets classes in industries that are likely to be affected by the provision. In most cases the size of business receipts is used as the allocating factor to distribute deduction changes to firms in different asset classes; however, the allocation factor does vary for different provisions.

Comparison with Actual Receipts and CBO Forecast. The model performs reliably over the period from 1984 to 1986; estimated fiscal receipts differ from actual collections by less than one percent in fiscal years 1984 and 1985, and by only 1.1 percent in fiscal year 1986. The model, however, overestimates liability for the next two fiscal years. The same degree of estimating error also persisted in the corporate income tax receipts projection by the Congressional Budget Office for the past two years. Specific knowledge of factors contributing to the error is not likely to be gained until the 1987 SOI data become available for analysis in the next two years. The impact of federal tax reform is a possible factor contributing to this result. In any case, model estimates were adjusted downward to account for the percentage error in 1988.

Nevada Corporate Income Tax Model

Apportionment. Data on business property by state and by industry are not available. Therefore, a two-factor formula consisting of the state's ratio of payroll and ratio of sales was used to allocate federal taxable income to the state level. Both the U.S. and Nevada payroll and sales data are compiled by four-digit Standard Industrial Code and were mapped into the fifty-eight major industries in the SOI corporate income tax database. Nevada's shares of payroll and sales are calculated by dividing the Nevada payroll/sales with the U.S. total for each industry. The apportionment formula for firms in the *i*th industry is:

$$R_i = [\text{sales ratio} + 2 * (\text{payroll ratio})] / 3$$

The payroll ratio was assigned a weight of two-thirds as a proxy for property. Therefore, the apportionment method is an approximation of the standard three-factor formula. The same formula is also used for the franchise tax and VAT model.

Differences from the Federal Receipts Model. It is assumed that the state's definition of taxable income basically conforms with the federal definition. The only exception is the treatment of foreign subsidiaries of domestic corporations that are not subject to taxation at the state level. Furthermore, business credits and the alternative minimum tax (AMT) are assumed not to apply in the state model.

Testing the State Income Tax Model. The methodology of apportioning federal taxable income to the state level was tested on two states with an existing corporate income tax system: Maryland and Illinois. Those two states were chosen because their definition of taxable income conforms closely with the federal definition and The test results suggest that the methodology utilized in the model is capable of producing reasonable estimates of state corporate income tax receipts. The estimated 1986 corporate receipts for those two states came very close to their actual collections. The percentage difference in both cases was less than 1.5 percent of actual collections.

Model Calibrations

Because of the uncertainties over the contributing factors to the overestimation of federal corporate receipts for the past two fiscal years, the estimated Nevada corporate receipts were revised downward by the percentage of estimating error in federal receipts in fiscal year 1988, i.e., eight percent.

Franchise Tax

Tax Base. The tax base is designed to include both the equity and debt component of corporate capital value. The base

includes capital stock, capital surplus, retained earnings and long-term debt.

Value-Added Tax

Tax Base. The model constructed here basically follows the Michigan VAT system with a major difference in the treatment of capital goods: only depreciation is deducted from the base. It therefore belongs to the "income" variant of the VAT. The tax base is built by adding up a firm's costs in transforming the purchased raw materials into finished products or services. The major components of the tax base are total compensation (including wages and salaries, FICA payments, unemployment insurance tax, worker's compensation premium, health insurance premium, pension and profit sharing costs), federal taxable income and additions and subtractions to the federal taxable income. Additions are taxes paid, capital loss deduction, net operating loss deduction and dividends, interest and royalties paid. Subtractions are basically dividends, interest and royalties received.

Imputation for Total Compensation. Because major components of total compensation are not available from the corporate income tax returns file, they are imputed from the BLS data on wages and salaries for the state and then allocated to firms in the model database. Wages and salaries in each industry are adjusted to exclude unincorporated businesses and distributed according to the size of business receipts to all firms. FICA payments and UI tax (both federal and state) are also imputed from the BLS data with adjustments for tax rate changes and growth rates during the projection period. Other employee benefit program and pension costs are directly available from the SOI income tax returns data.

ENDNOTES

1. U.S. Department of Commerce, State Government Tax Collections, Government Printing Office, 1987.
2. Although most corporate income is determined to be of a business character and is subject to apportionment, nonbusiness income is usually allocated to a particular state. Nonbusiness income generally includes income from real property, capital gains, interest, dividends, and patent or copyright royalties. Most states allocate nonbusiness income to the state of commercial domicile, i.e. where it is headquartered, except for the allocation of rent to the state in which the income-generating property is located.
3. It should be noted that the value-added tax option included in Table 1 assumes that financial services would be exempt. All of the European Economic Community (EEC) countries exempt basic lending activities from the value-added tax because of complex, practical problems. See U.S. Department of the Treasury, Tax Reform for Fairness, Simplicity, and Economic Growth: Value-Added Tax, (Washington, D.C.: U.S. Government Printing Office, 1984) vol. 3, pp. 49-53.

CHAPTER 20

TELECOMMUNICATIONS TAXATION IN THE STATE OF NEVADA

The purpose of this chapter is to describe the structure of the telecommunications industry in Nevada, to review the manner in which the industry is currently taxed, and to examine - in light of the rapid and recent change in the industry today - the various tax choices that confront the Nevada State Legislature.

The first section provides a brief overview of the main developments in the telecommunications industry and how they have shaped the industry structure. The next section turns specifically to Nevada and takes stock of who the providers of telecommunications services are and what services they provide. This is followed by a review of taxes which are currently imposed on those firms and a comparison of the taxes in Nevada with other states. Then, a number of issues bearing on the decision to change the current system of taxation are examined. These include the degree of competition, the possible effect of including or excluding certain components in the tax base, and the role of telecommunications in the economic development of a largely rural state. Finally, the revenue impacts of alternative tax scenarios are presented.

From POTS (Plain Old Telephone Service) to Microwaves

The structure and tax treatment of the telecommunications industry in Nevada is very much a product of the history of the telecommunications industry itself. For this reason, it is useful to trace briefly the development and divestiture of what was once one of the largest companies in the country: American Telegraph and Telephone (AT&T).

AT&T was, from the invention of the telephone in the late nineteenth century to the mid-1950's, by far and away the dominant

seller of telephone service.¹ In addition to its exclusive ownership of the only long distance network (Long Lines), AT&T fully or partly owned twenty-two local operating companies that provided local area service and connected to the Long Lines network. Other members of the AT&T corporate structure included Western Electric - a manufacturer and seller of telephone equipment - and Bell Laboratories - the research and education arm of the company.

In economic terms, the emergence of a monopolist company was "natural". After all, like other utilities, the telephone industry required high initial market entry costs to erect poles, hang wires (or bury them) and put the switching system in place. Also like other utilities, once put in operation, the cost of hooking additional customers into the system was small and large numbers of people could readily be served.

While its bigness could be overlooked as a natural occurrence, AT&T's ability to set price and output levels and to earn extraordinary profits was a cause of concern to some. There were other concerns as well. Because the telephone company made liberal use of public right of way laws, and the telephone itself was becoming a necessity rather than a luxury, Congress passed the Communications Act in 1934. This Act placed the telephone industry under the regulatory auspices of the Federal Communications Commission.

Still, for the next twenty years AT&T was able to maintain and consolidate its monopoly position. When, for instance, would-be competitors tried to manufacture their own telephones, AT&T refused to hook up these "foreign attachments" saying they would mar the operation of the network because of their inferiority. Likewise, on the long distance front. Potential competitors were shut down because the company refused to connect them through the local system of monopolies. Meanwhile, the rates of return on AT&T's own long distance grew increasingly high because the more efficient technology it was installing actually reduced the cost

of providing the service, but the FCC was not requiring them to lower customer rates accordingly.

By the late 1950's, all this began to change. While it is not necessary to recount all the regulatory promulgations and court decisions in detail, a few milestones bear marking. First came a court ruling in 1959, known as the "Hush-a-Phone" decision, that allowed customers to hook up a non-AT&T manufactured privacy device to the mouthpieces of their telephone. A decade later, in a significant extension of that decision, the FCC ruled that any type of telephone or device could be connected to the network as long as it met AT&T's technical standards. Then, in 1975, the FCC eliminated the company's control over the standards and permitted hook-up of any device that met reasonable performance criteria. As a result of these decisions, a whole new industry in the manufacture and marketing of customer premises equipment was spawned. A host of technical innovations in such equipment soon followed.

Meanwhile, regulatory battles were waged to permit competition in the long distance market. The FCC's "Above 890" decision in 1959 allowed firms to construct their own private microwave communications systems utilizing that portion of the radio frequency spectrum. Between 1969-1978, a number of firms were allowed to compete, not only in the private line long distance market, but in the ordinary long distance market, as well. The years 1977-1978 saw the landmark "Execunet Decisions" in which a company called Microwave Communications Inc. (MCI) won the right to directly compete with AT&T's Long Lines and to be hooked into the AT&T local operating companies.

Also during this time, the FCC issued its "Resale and Shared Use" decisions permitting firms, such as MCI or US Sprint, to purchase long distance service from AT&T and resell it, often with enhancements like conference calling and facsimile transmission.

Clearly, the advances towards competition in the

telecommunications industry and advances in technology have been inextricably intertwined. Deregulation has spurred developments in technology and technological developments have spurred further moves towards deregulation. Nowhere has this process been more rapid than in the computing industry. By 1980, the FCC was forced to conclude that the state-of-the-art telecommunications equipment was virtually indistinguishable from information processing technology: voice was no longer being transmitted in analog wave form, but by digital circuitry (0's and 1's) just like the transmission of data. It was decided that AT&T should be allowed to enter the data processing industry. However, as a check on the Company's ability to monopolize, AT&T was required to establish a separate subsidiary for its competitive businesses, AT&T Technologies (which by now included both telephone equipment manufacturing and data systems), and to keep it distinct from its still regulated local and long distance telephone services.

The Break-up of AT&T

The culmination of an almost decade long legal battle between AT&T and the U.S. Department of Justice lead in 1983-4 to the divestiture of AT&T. Under the 1983 Consent Decree and the 1984 Modified Final Judgement (MFJ) of U.S. District Court Justice Harold Greene, AT&T was allowed to retain ownership of the Long Lines long distance service, the Western Electric telephone manufacturing and sales division, and the Bell Laboratories research and development group. But, the decisions put AT&T out of the local service telephone business. The twenty-two local operating companies (Bell Operating Companies or BOC's) formerly owned by AT&T were split off and grouped into seven regional holding companies (RHC's), also known as the "Baby Bells". In Nevada, the result was the Nevada Bell BOC which is part of the Pacific Telesis RHC. Pacific Telesis' other telephone company is Pacific Bell which serves the much more populous state of

California.

In addition, the settlement set out of define the respective markets and services of the companies. The nation was partitioned into more than 160 Local and Transport Areas (LATA's) representing geographically distinct local telephone markets (some of which overlap state boundaries). Nevada was bisected into two LATAs, one designating a southern service area and including Las Vegas and the other, a northern service area covering the remainder of the state including Reno, Sparks and Carson City. Except for several small border town areas near Utah and Idaho, the entire state is contained within these two service areas.

The role of the local operating companies or BOC's is to provide intra-LATA service and - when a customer wishes to make a long distance call - access to one of the long distance networks ("interexchange carriers" or IXC's) such as the new AT&T, MCI, or Sprint. Under these arrangements, BOC's do not normally provide inter-LATA service even their market area may consist of more than one LATA within a state; instead, when crossing LATAs, the call is passed to one of the IXC's. Such would be the case, for instance, if a customer in Las Vegas were placing a call to Carson City.

Prior to divestiture, revenues from AT&T's interstate (toll) business were allocated between the parent company and its twenty-two operating companies by a "division of revenues process" to compensate them for their "non-traffic sensitive" or fixed costs in providing access to the Long Lines network. A similar system of "settlements" was used to compensate independent or non-Bell operating companies. As long as AT&T was a monopoly, receipts generated by long distance operations could be used to subsidize local telephone service and the system worked with relative simplicity.

But, with divestiture, the FCC developed a system of "access charges". This meant that local companies would continue to be reimbursed some portion of their fixed costs, but the money would now come from two sources: an end-user fee (also referred to as

the "subscriber line charge") billed directly to telephone customers at a flat-rate per month per telephone line, and variable amount carrier access charges paid by interexchange carriers into a national pool that is then divided among local companies on the basis of a flat-rate per minute of long distance access they provide. Though to a lesser extent than in the pre-divestiture era, local service thus continues to be subsidized.

Other provisions of the divestiture decisions determined that BOC's are allowed to market Yellow Pages and specialty directories and to sell telephone equipment. However, they may not manufacturing the equipment they sell and they are prohibited from providing certain "enhanced" communications services. This last condition means, for instance, that data may be transmitted, but not originated or processed in any form.

Still monopolies in their own right, the BOC's are regulated by the public utility commissions in the states in which they are located. Recognizing that some activities of the BOC's have become increasingly subject to competition, some states have opted to detariff certain activities, and allow the BOC's to set their own prices for these services.

As for the competitive long distance market, AT&T remains the undisputed leader. At present, AT&T captures about 80% of the market nationally (and probably close to 90% in Nevada), with MCI's market share running about 12% to Sprint's 6%. This continued dominance of AT&T has been considerable enough to warrant continued FCC involvement in the regulation of AT&T's interstate long distance service. With the AT&T rates set, the other competitors tend to follow suit.

There is little doubt that the telecommunications industry continues to be an industry in flux. No longer is it the domain of a single purveyor of voice communication; it is now a marketplace crowded with vendors offering an array of equipment and services. It is also, however, an industry that carries with it vestiges of its past as a regulated public utility. Judge Greene

of the U.S. District Court is still rendering decisions related to the 1984 MFJ. Most recently, he has been considering the degree to which the RHC's and their BOC's should be allowed enter the arena of originating and processing data, rather than merely transmitting it. Judge Greene issued opinions in late 1987 and early 1988 that approved plans of the RHC's to provide electronic "gateways" through which consumers can access a broad range of information services, such as electronic mail and voice messaging, but he continued to ban them from providing either electronic yellow pages or the content of any information service they transmit. Most industry observers agree, however, that the verdict is not yet final.

INDUSTRY STRUCTURE AND TAXATION IN NEVADA

Local Exchange Companies

The structure of the telecommunications industry in Nevada is not only the local reflection of the national level decision to divest AT&T - though that certainly has been a powerful determinant. There is, as well, a strong tradition of local, independent companies that have established telephone networks and continue to serve both rural and urban portions of the state. Twelve such independent companies currently operate and one of these, Centel, is larger than the Bell Operating Company, Nevada Bell.

With the divestiture of AT&T, the state was divided into two LATA's. Except for several small border towns near Idaho and Utah, the entire state is contained within these two service areas.

The southern LATA includes the areas in and around the Las Vegas, the region where almost 65% of the state's population resides. Central Telephone Company (Centel) is the primary carrier there. To the east of Las Vegas, Moapa Valley Telephone serves several small communities, and to the northwest of Las Vegas are

some areas served by Nevada Bell.

The northern LATA is very large geographically and includes most of the remainder of the state. Nevada Bell is the primary carrier, serving the state capitol (Carson City) as well as Reno and Sparks. Seven independent local exchange companies also operate in the LATA, serving Churchill and Douglas Counties to the west and some very rural communities in the northeastern part of the state.

The map presented in Figure 1, indicates the variety in size of the areas served. The companies themselves also vary a great deal in size. They range from Centel with almost 340,000 access lines (customers) and a workforce of more than 1,600 employees, to The Rural Telephone Company with 113 access lines and only part-time staff in Nevada. Table 1 gives a breakdown of the local service market shares. Between them, Centel and Nevada Bell account for 93% of the customer access lines. Continental and CP National contribute an additional 4.5%, with the remainder divided among all the other companies and averaging less than 2,000 customers apiece. As the map also shows, large portions of the state are virtually uninhabited and are not provided with telephone service. Still other areas are designated toll regions and are served only by pay phone.

As in the case of Nevada Bell under the divestiture decrees, the independent companies are limited to the provision of intra-LATA service. When a call is made from, say, Las Vegas to Sand Springs, it is routed first through Centel, the local operating company in Las Vegas, then it is passed to an interexchange carrier such as AT&T, MCI, or Sprint, and then on to the Lincoln County Telephone System serving Sand Springs.

If a call is placed between two local service areas served by different companies within the same LATA, Centel or Nevada Bell may act as the "designated carrier" for the call.

TABLE 1
STATE OF NEVADA 1988 TELEPHONE STATISTICS

TOTAL
ACCESS
LINES 565,300

	<u># Access Lines</u>	<u>Percent</u>	<u>Local Exchange Monthly Rate/ Access Lines</u>	<u>Business Exchange Monthly Rate/ Access Lines</u>	<u>PBX Monthly/Rate/ Access Lines</u>	<u>Number Of Public Phone</u>
Beehive	30	0.01	\$13.50	\$13.50		
Centel	339,825	60.1	\$6.00/267000	\$15.85/78600	\$23.43/10334	4,000
Churchill County	7,715	1.4	\$6.80	\$12.30	\$18.50	150
Continental	16,389	2.9	\$11.75/1443	\$30.95/4810	\$39.25/560	300
C.P. National	9,190	1.6	\$13.20	\$29.60	\$51.40	--
Flier Mutual	300	0.1	\$6.00	\$8.00	--	30
GEM State	275	0.1	\$5.75	\$8.75	\$19.15	--
Lincoln County	1,394	0.3	\$11.70	\$16.15	\$23.00	--
Moapa Valley	1,790	0.3	\$12.00	\$16.00	\$24.70	--
Nevada Bell	185,212	32.8	\$11.25/135000	\$33.60/60000	\$41.30/5451	4,000
Nevada Telephone & Telegraph	2,334	0.4	\$8.06	\$14.74	N/A	--
Rio Virgin	760	0.1	\$8.86	\$13.43	\$20.15	--
Rural Telephone	113	0.02	\$16.00	\$16.00	N/A	--

Source: Public Service Commission of Nevada and Nevada Telephone Association.

All the local operating companies are subject to the regulation of the Nevada Public Services Commission, except Filer Mutual, which is a cooperative.

Interexchange Carriers

Much like the national market, Nevada's long distance market is carved up largely by the three major competitors, AT&T, MCI, and Sprint though nine other interexchange carriers operate in the state, as well. As noted earlier, AT&T is estimated to have captured close to 90% of the market in Nevada.

The interexchange companies handle calls originating or terminating in Nevada from other states, as well as calls that are passed between the northern and southern LATA's in the state. The revenues from the in-state portion of their activities are within the jurisdiction of the Nevada Public Service Commission and the real or personal property maintained in Nevada are subject to state tax.

Taxes On Telecommunications

As is the case with other businesses in Nevada, telephone companies pay state sales tax on equipment purchases, repair and maintenance. Ten counties apply a sales tax rate of 5.75%, and seven others add an optional .25% for a rate of 6%. Sales tax actually paid by the companies varies dramatically from year to year depending on the timing and extent of individual company plant investments.

Also like other businesses, the companies pay taxes on both real and personal property. Most of this property is centrally assessed, though property not relating directly to operations may be locally assessed (as is private telecommunications equipment owned by some of the large casinos). Central assessment, which relies on the income approach, is based on single line wire and

radio beam mileage and is applied to bundled cables underground, overhead wires, and microwave equipment. The accepted assessment ratio is 35%. Actual rates depend on the locality but, due to constitutional limitations on property tax rates, cannot exceed \$3.64 per \$100.

Companies also pay the usual state unemployment insurance taxes based on an annual wage rate per employee of \$12,100. The rate is .3%.

In addition to these general business taxes, there are two types of utility taxes applied to telecommunications companies: a county franchise tax and a "mill" tax.

Since 1909, counties have been empowered to grant franchises to public utilities. Accordingly, they are allowed to levy a franchise tax on the net profits of telecommunications firms. Net profits are based on the firms' operations within the unincorporated area of the county. (Incorporated cities may grant their own franchises and levy a separate franchise tax.) The current rate is 2% of net profits and payments are made to the County Treasurers and earmarked for the county school fund. In some of the counties and incorporated cities, the franchise tax is supplemented by an additional franchise tax or business license fee which may be on net profits or gross receipts or some other basis.² There is, however, a statutory limit on the total general license fees that can be assessed on businesses.

The "mill" tax collected by the Public Services Commission is based on gross operating receipts attributable to Nevada operations. The revenues support the operations of the Public Service Commission (PSC) and the Office of the Consumer Advocate (OCA). The FY 1988-1989 tax rate is 3.5 mills to the PSC (which is the statutory limit) and .65 mills to the OCA (as compared to a maximum allowable of .75 mills) for a total of 4.15.

The gross operating receipts base on which the mill tax is levied consists of revenues from three main sources. The first of these is revenue from local service such as monthly rates, non-

recurring charges (hook-up fees, for example) and charges for special features such as touch tone service or three-way calling. The second major source of revenues in the gross receipts base is toll service. For the interexchange companies this is revenue from intra-state inter-LATA calls. For the local companies this includes the access charges paid to them by the interexchange companies associated with those calls. The third component of receipts comes from miscellaneous activities such as billing and collection charges and the Yellow Pages directory service. Revenues collected on non-regulated activities (such as telephone equipment rental) are not included in the tax base. However, revenues collected on de-tariffed services such as Nevada Bell's Centrex system, a central office exchange system for business customers, are subject to the tax.

Tables 2 and 3 identify the local operating companies and interexchange carriers operating in Nevada and summarize the taxes to which they are subject.

How Other States Tax Telecommunications Firms

Increased competition in certain segments of the industry and dated tax codes that were written in an era when telecommunications simply meant telegraphs and telephones, have led some states to re-evaluate the manner in which they tax telecommunications firms. What follows is first, a brief look at the variety of tax approaches taken by the states. An examination of some of the issues influencing these approaches will be the topic of the next section of this report.

As Table 4 indicates, the systems of taxing telecommunications among the states are varied, indeed. There is considerable combination in the use of four primary types of taxes: gross receipts, sales tax, corporate net income tax, and property.

TABLE 2
Telephone Service Companies in Nevada

<u>Local Operating Companies</u>	<u>Interexchange Carriers</u>
o Beehive	o Allnet
o Centel	o American Tel.
o Churchill County	o AT&T
o Continental	o Futurtek Comm.
o CP National	o Starnet
o Filer Mutual	o Superphone
o Gem States	o Tahoe Tel.
o Lincoln County	o TMC of Las Vegas
o Moapa Valley	o US Sprint
o Nevada Bell	o Western Tel. & Tel.
o Nevada Tel & Tel	o Western Union .
o Rio Virgin	
o Rural	

Source: Public Service Commission of Nevada

TABLE 3

Taxes on Telecommunications Firms

I. General Business Taxes

<u>Tax</u>	<u>Base</u>	<u>Rate</u>
Sales	on equipment purchases, repairs and maintenance	5.75-6.0%
Property	real and personal property; central assessment	cannot exceed \$3.64 per \$100
Unemployment Insurance	based on annual wage of \$12,100 per employee	.3%

II. Utility Taxes

<u>Tax</u>	<u>Base</u>	<u>Rate</u>
Franchise supple-	2% of net profits ear- marked for county school funds	2 % p l u s mental fees
"Mill" - Public Services	gross receipts from local service, intra- state toll service, and miscellaneous activities	4.15 mills

Source: See Text

TABLE 4
TAXATION OF TELECOMMUNICATIONS FIRMS AMONG THE STATES
(Rates - %)

	Gross Receipts	Sales	Corporate Income	Property
Alabama	2.5 ^a	4.0 ^a	5.0	Real & Personal ^c
Alaska	1.0-2.0 ^a	-	1.0-9.4	Real & Personal ^d
Arizona	-	5.0 ^a	2.5-10.5	Real & Personal ^c
Arkansas	-	4.0 ^b	1.0-6.0	Real & Personal ^c
California	-	0.5 ^b	9.6	Real & Personal ^c
Colorado	-	3.0 ^a	5.0	Real & Personal ^c
Connecticut	6.5-9.0 ^a	-	11.5	Real & Personal ^c
Delaware	5.0 ^a	-	8.7	Real & Personal ^d
D.C.	6.7 ^b	6.0 ^a	10.25	Real ^d
Florida	1.5 ^b	5.0 ^b	5.5	Real & Personal ^d
Georgia	-	3.0 ^a	6.0	Real & Personal ^c
Hawaii	5.9-8.2 ^b	-	5.85-6.435	Real ^d
Idaho	-	-	7.7	Real & Personal ^c
Illinois	-	5.0 ^b	4.0	Real ^d
Indiana	1.2 ^a	5.0 ^a	3.0	Real & Personal ^c
Iowa	-	4.0 ^a	6.0-12.0	Real & Personal ^c
Kansas	-	3.0 ^a	4.5-6.75	Real & Personal ^c
Kentucky	-	5.0 ^a	3.0-6.0	Real & Personal ^c
Louisiana	2.0 ^a	-	4.0-8.0	Real & Personal ^c
Maine	1.25-3.5 ^b	5.0 ^a	3.5-8.93	Real & Personal ^d
Maryland	2.0 ^b	-	7.0	Real & Personal ^c
Massachusetts	-	-	6.5	Real & Personal ^d
Michigan	-	4.0 ^a	2.35	Real & Personal ^c
Minnesota	4.0-7.0 ^a	6.0 ^b	6.0-12.0	Real ^d
Mississippi	-	6.0 ^a	3.0-5.0	Real & Personal ^d
Missouri	-	4.125 ^a	5.0	Real & Personal ^c
Montana	1.725 ^a	-	6.75	Real & Personal ^c
Nebraska	-	3.5 ^a	4.75-6.65	Real & Personal ^c

a) = Intrastate Service

b) = Intrastate and Interstate Service

(c) = Centrally assessed

(d) = locally assessed

TABLE 4 (continued)

TAXATION OF TELECOMMUNICATIONS FIRMS AMONG THE STATES

	Gross Receipts	Sales	Corporate Income	Property
NEVADA	-	-	-	Real & Personal ^c
New Hampshire	-	-	9.4	Real & Personal ^c
New Jersey	2.75-6.125 ^a	-	-	Real & Personal ^d
New Mexico	-	3.75 ^b	4.8-7.2	Real & Personal ^c
New York	3.3 ^b	4.0 ^a	9.0	Real ^d
North Carolina	3.22 ^a	3.0 ^a	6.0	Real & Personal ^c
North Dakota	-	4.0 ^a	3.0-10.5	Real & Personal ^c
Ohio	4.75 ^a	4.0 ^b	5.1-9.2	Real & Personal ^c
Oklahoma	-	3.25 ^b	4.0	Real & Personal ^c
Oregon	6.0 ^a	-	7.5	Real & Personal ^c
Pennsylvania	4.5 ^a	6.0 ^a	9.5	Real ^c
Rhode Island	6.0 ^b	6.0 ^b	8.0	Real & Personal ^d
South Carolina	0.3 ^a	5.0 ^a	6.0	Real & Personal ^c
South Dakota	2.0-5.0 ^a	4.0 ^a	-	Real & Personal ^c
Tennessee	3.0 ^a	5.5 ^a	6.0	Real & Personal ^c
Texas	1.65-2.5025 ^a	6.0 ^b	-	Real & Personal ^d
Utah	-	4.625 ^a	5.0	Real & Personal ^c
Vermont	2.25-5.25 ^b	-	-	Real ^d
Virginia	1.6 ^b	-	-	Real & Personal ^c
Washington	0.00471 ^b	6.5 ^b	-	Real & Personal ^c
West Virginia	4.0 ^b	-	6.0-7.0	Real & Personal ^c
Wisconsin	6.33-9.0 ^b	5.0 ^b	7.9	--
Wyoming	-	3.0 ^a	-	Real & Personal ^c

(a) = Intrastate Service

(b) = Intrastate and Interstate Service

(c) = Centrally assessed

(d) = locally assessed

Gross Receipts

A tax on gross receipts is imposed by twenty-nine states, including the District of Columbia. Rates range from a low of 0.3% in South Carolina to a high of 9% in Connecticut. Note that Nevada is reported in the table to not levy such a tax. The "mill" tax referred to in the previous section of this report is not a state level gross receipts tax, but rather a fee imposed on behalf of the Public Service Commission.

Of the states that do apply a state level gross receipts tax, sixteen apply it to intrastate service only and thirteen others include interstate service, as well. Five states allow the interexchange companies to deduct access charges from the revenue base, eight allow the local companies to take the deduction, two permit access charges to be deducted by both, six permit the deduction by neither, and four do not consider the deduction issue because the gross receipts tax applies only to intra-state, inter-LATA service.

Some states allow the gross receipts tax to be paid in lieu of other taxes. Three administer it in lieu of personal property taxes, seven levy it in lieu of corporate income taxes, three use it instead of both personal and real property taxes, and one uses it in lieu of all taxes except income. Thirteen states, on the other hand, administer the tax in addition to all other business taxes.

Sales Tax

Thirty-five states levy a retail sales tax on telecommunications services. Five states do not have a state sales tax. Eleven states - including Nevada - levy a state sales tax but exempt telecommunications services. That is to say, Nevada telephone companies pay sales tax on equipment they purchase, repair and maintain. Telecommunications service, itself, however, is not subject to a retail sales tax.

The presence or absence of a gross receipts tax is not a predictor of the existence of a sales tax on telecommunications firms. Twelve states levy a gross receipts tax, but not a sales tax, while eighteen states do it the other way around. Seventeen other states, including DC, levy both while four do not administer either.

As with the gross receipts tax, the tax base varies from state to state though much less widely. Most states apply the tax to intrastate services. In all but one state (Wisconsin) carrier access charges are omitted from the sales tax base.

Corporate Net Income Tax

The corporate income (profits) tax is another tax widely used and widely applied to telecommunications firms in the states. Forty-six states have a corporate income tax and, of these, forty-two apply it to telecommunications firms. The four states that have a corporate income tax but exempt telecommunications companies - New Jersey, New York, Vermont, and Virginia - administer the gross receipts tax in lieu of it. Maryland and Rhode Island allow the gross receipts tax to be deducted from the corporate income tax liability. Nevada is among those states that do not have a corporate income tax.

Corporate income tax rates are generally higher than gross receipts tax rates, but the former are imposed on net income while the latter are applied to a much larger base regardless of profitability.

Property Taxes

All states, except Wisconsin, which administers the gross receipts tax instead, levy a property tax on real and/or personal telecommunications property. In six states the tax base consists of only real property and in two of these is paid in lieu of a tax

on personal property. In the forty-five other states, both personal and real property of telecommunications companies are taxed.

While property taxes are levied on all types of businesses in most states, telecommunications firms in some places receive differential treatment. One reason for this is the complexity of utility property. Because it is difficult to appraise and is unevenly distributed throughout the municipalities, the state often assumes responsibility for its assessment. This currently is the case in Nevada.

CRITERIA AND KEY ISSUES IN THE TAXATION OF TELECOMMUNICATIONS

Any re-examination and change in the system of taxing telecommunications in Nevada is part of the review of the larger picture of all state and local taxes. In a literal sense, as well as part of the process of policy design, the present report is but one chapter of such a review by the State Legislature. Therefore, while the focus of the discussion here will be on the tax policy options relating to the telecommunications sector, ultimately the final choice may represent a trade-off between these and other options in other sectors of the economy.

With respect to the issue of business taxation in general and the telecommunications sector in particular, two criteria are commonly employed in judging policy options. These are the concepts of equity and efficiency. Efficiency requires that taxes accomplish certain intended objectives, but beyond this, they should minimize interference with private economic decisions.

Equity, or neutrality in taxation, implies that the tax policy (e.g., tax burden) is essentially the same for taxpayers both within and across industries. Inequitable treatment occurs, for instance, when exemptions are provided to certain firms or components of the tax base but not to others. Inter-industry inequities arise when different tax bases are applied to firms

operating in the same markets. Such unequal treatment can lead to a misallocation of resources across industries, and if the resulting tax burdens are sufficiently high, even discourage development of a sector Nevada may wish to encourage.

Is Telecommunications a Competitive Industry?

More than ideology, the spirit of free and fair competition is very much a centerpiece of the equal treatment concept of taxation. Similarly, competition was at the heart of the battle to divest the old AT&T. Yet, this is a seemingly paradoxical notion for an industry that began as a public utility and as a textbook case of "natural" monopoly. Still rooted in the industry's beginnings as a public utility, and because vestiges of that history remain in the structure of the industry itself, many states - and Nevada is one of them - still apply utility type taxes to firms in the industry. The appropriateness of this policy depends a great deal upon the degree to which the industry is still, in fact, monopolized. If it is determined that significant competition exists, then the presumption will be in favor of treating telecommunications firms like any other businesses when designing a tax policy.

Unfortunately, monopoly power is not easily defined, in operational terms. However, there is some consensus in the legal and economic communities about some of the characteristics of monopoly sellers. Disproportionate market size is one such characteristic. As a geographic or product market is narrowed, the more likely it is that one vendor enjoys monopoly status. Second, the ability to fix or control prices in a market is evidence of monopoly power. Prior to the technology and economic events of the 1970's and 1980's, this was clearly a power that AT&T enjoyed through rate-of-return regulation arrangements. Finally, a key attribute of a monopoly is the ability to exclude competition from a market. In the early days of the industry, the high initial

cost of establishing a network threw up a natural barrier of entry to potential competitors. This lack of competition enables the monopolist to control, not only the price and quantity of the product, but also the quality of the product and the improvements to it.

There is little doubt that in view of these factors, the old AT&T was a classic monopolist. Its market dominance was formidable, and, as many critics arguing in favor of divestiture noted, it was successful in artificially controlling the pace of technological innovation, product quality, and product substitutes. The question is, does this description characterize the telecommunications industry today? Some would argue that the market dominance of AT&T prevails even five years after divestiture. That the company's share of the long distance market is 80% nationally (higher in Nevada), and that the company is still quasi-regulated by the FCC do point to a considerable dominance in the marketplace. On the other hand, that continued dominance may merely reflect a clear consumer preference for the products and services of AT&T. Other evidence of market control, such as availability of substitutes, ease of market entry by competitors, and control over technology must be taken into account, as well.

As the history of the industry suggests, it was the advent of new technologies that forced open the door to competition in the first place, and has been the driving force behind the growth of the industry ever since. Now there are not only companies competing to provide like services along with the former AT&T, but new processes and products emerging as potential replacements for traditional local and long distance telephone services. Known as "bypass" because they permit the partial or even full bypass of current systems, the array of new technologies is bewildering.

Examples include cross-metro and cross country microwave systems, private lines, direct satellite to rooftop antennas, FM radio stations that use excess signal capacity to provide low cost communications, in-house networks such as PBX's that are capable

of transmitting voice and data simultaneously, and "smart buildings" that can coordinate telecommunications services for all tenants in a building (thus reducing the number of access lines to the local operating company) as well as regulate ventilation, heating and lighting.

Moreover, even newer technologies are emerging, ranging from telephone links to new computer and data processing terminals to local area networks (LAN's), that transmit data between computers. Newly developed sophisticated transmission systems pioneered by Pacific Telesis permit the splitting of an ordinary telephone line into voice and data lines, thereby allowing a family to have two telephone numbers plus access to a variety of information services such as home shopping, home energy monitoring, and video hook-ups to television sets.

While the cost of some of these technologies is still prohibitively high for all but the largest business or wealthiest residential customers, others are within the reach of the ordinary consumer, and those that are not may soon be. These current or potential substitutes represent considerable competitive activity and ample opportunity for companies which develop technological innovations or alternatives to AT&T services to make inroads into AT&T's share of the market. When coupled with data processing applications, the variety and array of telecommunications services is virtually unlimited, and companies can carve out a "niche" for their highly specialized services.

Clearly, then, AT&T can no longer control the pace of technological innovation, the quality standards, nor the availability of substitute products or services, and is, therefore, limited its exercise of monopoly power. Can the same be said of companies that provide local telephone service?

There is some evidence that local telephone service is still very much the domain of a monopolist, or more accurately put, several monopolists". A glance back at the map (Figure 1) reveals why this is the case. Each of the thirteen companies operates

within a clearly designated and demarcated service area. Within these areas, each company's control of the local loop (the hook-up between the customer's premises and the telephone company switch) and access to the dial tone market is considerable.

This is largely due to the institutional nature of present arrangements in which local (and intrastate) services are placed under the authority of the Nevada Public Services Commission and oversight of the access to long distance service is deemed the responsibility of the FCC. Partly because of the system of access charges and partly due to the decision of the Nevada PSC to subsidize basic access for residential and small business customers from revenues generated from larger business and commercial users, the price of basic access for residential and small business customers does not reflect its true cost. Under these arrangements, there is little incentive for competitors to enter the market and to compete for the local dial tone business. Only once the price of providing local dial tone rises to its actual average cost (which would probably require increasing the current basic price of access by as much as 25 to 30 percent) will the monopolies be significantly eroded.

Further evidence of monopoly power can be marshalled from studies of the sensitivity in the demand for residential dial tone service. These studies indicate that even if local telephone rates increase by, say 100 percent, only about 4 to 10 percent of the customers would drop off the local network. Smaller changes in price can be expected to have even less of an effect. The reason for this, of course, is that at present there are few affordable substitutes for local telephone service, particularly for the residential customer.³

It is unlikely, however, that this will remain the situation for very long. In a period of rapid technological change, the time when the local companies are forced into a competitive environment may not be very distant. Indeed, increasing use of PBX's, private lines, and other bypass technologies (sometimes in conjunction with

the interexchange carriers, sometimes not), have provided enough evidence in some states to prompt policymakers to eliminate special taxation and ease pricing restraints for local operating companies.

Though they are now in separate markets, it is possible that local and long distance service providers may spill over into the same services and markets. This would be the case if the IXC assisted bypass of the local loop grows and, in the future, we find firms like AT&T back in the business of providing local telephone service. Such would be the case, as well, if Judge Greene or the FCC lifts the restriction barring the local companies from providing inter-LATA service or from processing or originating the data they transmit. In fact, both interexchange companies and local operating companies may become indistinguishable from other companies that provide voice or data services to consumers.

TAX OPTIONS FOR THE STATE OF NEVADA

Where does this discussion about competition lead in the design of a tax policy for the telecommunications sector in Nevada? Certainly, the options policymakers consider relate to their beliefs about the degree of competition present or imminent in the industry.

A Gross Receipts Tax

Prior to divestiture, it was common for states to tax telephone companies on the basis of their gross receipts. Similar treatment was accorded to other regulated utilities that provided natural gas or electricity to the jurisdictions. At present, more than half of the states continue to levy a gross receipts tax on telecommunications firms. In Nevada, telecommunications firms pay a "mill" tax based on gross receipts to the Public Services Commission, but there is not a tax on gross receipts levied at the state level. Should a gross receipts tax be enacted?

One argument that has been advanced to support the use of a gross receipts tax pertains to regulated monopolies and their ability to pass the tax on to the consumer's monthly telephone bill. The tax would have very little effect on consumer decisions (i.e., the efficiency criteria would be fulfilled) if, as in a true monopoly case, there were no close substitutes for the service being taxed. As discussed earlier, consumer demand for local service is not very responsive to changes in price for this very reason - the lack of readily available substitutes. However, substitutes may soon become available if the cost of alternative technologies falls sufficiently lower. In the long distance market, many commercial users have already availed themselves of some of the alternatives to traditional telephone service. A gross receipts tax might well accelerate the move of customers to systems that bypass the local companies by lowering the relative price of bypass.

An unintended consequence of encouraging "uneconomical" bypass is the erosion of the tax base itself. Because there is continued subsidy of local service for residences and small businesses, the means of providing that subsidy would be undercut, and a portion of the tax burden would shift to these users.

Since Nevada does not have a corporate income tax, a tax on gross receipts might be viewed by some as means of generating revenue from the corporate sector. One drawback here is that if a gross receipts tax were applied to all businesses in the state, considerable "tax pyramiding" would result. This arises because the tax would be levied on each transaction in the market process -- manufacturing, distribution, and retailing stages, alike. However, singling out telecommunications firms - many of which now compete with non-traditional providers of telecommunications services such as computer manufacturers and the like - would violate the equity principle of tax policy.

Furthermore, the difficulties inherent in administering and ensuring compliance with such a tax should not be overlooked.

Merely distinguishing and identifying those firms that ought to be subject to the tax would be a herculean task.

Another thorny implementation issue arises over the inclusion or exclusion of some components of the gross receipts tax base. One of these is the access charges paid by interexchange companies to the local operating companies for the latter's role in providing "access" for customers to the long distance network. (This system was discussed in some detail in Section 1 of this report.) The inclusion of access charges in a gross receipts tax base in some states is a policy that has placed taxing authorities at odds with the industry. According to the efficiency criterion, taxing access charges may be a violation resulting in economic distortion.

Interexchange companies have argued successfully in many states that their inclusion amounts to double taxation: first, the companies pay the tax on their own revenues, and second they pay again when the charges are rolled into the access prices charged by the local operating companies.

Furthermore, serious inter-industry non-neutrality would arise from the inclusion of access charges (amounting to \$9.6 million) in the tax base if, as in the case of Nevada's mill tax, a sale-for-resale exemption is granted to power utilities, but not to telecommunications firms. Is providing access truly a wholesale transaction? Definitionally, there is considerable precedent in many states for treating access charges as part of sale-for-resale revenue. In the District of Columbia, for example, the local operating company C&P went to court and argued successfully that the access and local facilities it furnishes to the interexchange companies did not constitute telephone service per se but, rather, a wholesale service that enabled long distance carriers to serve their customers more efficiently.

On the other hand, from the standpoint of consistency, it should be noted that gross receipts taxes are intended to be levied on the sale of goods and services at each stage of the production process. The usual tax base computation permits no deductions for

expenses that are incurred in the normal course of business operations. For the local operating companies, providing access is, after all, what they, as monopoly franchises, are organized and required to do.

A similar dilemma is posed by the inclusion of Yellow Page directory revenues in the gross receipts base. Consistency in the application of the gross receipts tax would demand that directory revenues be included in the base calculation since they are part of the normal business activity of the telephone companies. Yet, the provision of directory service has become a competitive field with an array of print advertising and emerging electronic media available to the consumer. As was pointed out earlier, the arguments for levying gross receipts based taxes on competitive business are not compelling and a case could be made for dropping directory service revenues when calculating the base.

A problem with simply doing so is that directory revenues are still used in the rate making process in Nevada, and items used to determine rates could arguably remain subject to the tax. Compounding the difficulty from the standpoint of the tax yield is the fact that exempting directory services means excluding a \$40.5 million revenue source from the tax base.

This would bring the total exemptions to over \$50 million if the access charges were excluded from the base, as well, and does not include a number for de-tariffed items (such as PBX and Centrex) which could be addressed using the same logic.

These difficulties have not gone unnoticed in other states. In fact, while a substantial number of states retain the gross receipts tax for telecommunications firms, there has been a perceptible movement away from it over the last few years. As their tax codes come due for re-examination, states are opting out of it, substituting more general sales, net income and/or property taxes instead. In other states with a gross receipts tax, some firms are forcing its re-consideration by filing court suits claiming the tax has been inequitably applied.

In short, Nevada is in the enviable position of formulating from scratch a tax structure that incorporates a modern view of telecommunications industry - as a highly technical sector of the economy that is becoming increasingly, albeit unevenly, competitive.

Changes in the Mill Tax

Certain segments of the telecommunications market are undeniably slow to open up to competition. Because continued regulation is deemed necessary, it is not wholly inappropriate to levy a tax on gross receipts in support of that system of regulation. This is common practice in most of the states. Worth reconsidering, however, are the bases to which the mill tax is applied. The above discussion on the policy issues that arise when access charges, directory revenues and the like are included in a gross receipts tax base is valid, as well, for the much smaller mill tax that is levied on behalf of the Public Service Commission and Consumers' Advocate. In principle, the two taxes are very much the same and similar considerations apply.

A Corporate Income Tax

If it is no longer true that the structure of the telecommunications industry fits the prototype of a public utility, then it is difficult to justify the application of a utility-style gross receipts tax to the industry. Instead, this would argue overwhelmingly for treating telecommunications like any other industry or business.

Adopting the position that any corporate or general business tax that is instituted at the state level should apply to this industry, as well, dispenses at once with most of the inherent difficulties of the gross receipts tax. Identifying and distinguishing telecommunications companies versus computer firms

that transmit voice and communications, for instance, is no longer required since both types of firms would be subject to the tax. By the same token, this meets the criteria of fair and equitable tax treatment since firms providing like services will be taxed similarly.

Another advantage is that the tax would neatly sidestep the issue of separating out competitive aspects of the business (say, Yellow Pages) from other segments of the industry (local service) that are not currently subject to substantial competition (though soon could be). Applying a regular business tax anticipates future developments in the industry and eliminates the need for frequent updating and revision of the tax code as new products and services emerge.

Finally, the imposition of a more general tax relieves both firms and consumers of an unfair tax burden. Because a corporate income tax would be based on profits rather than gross receipts, unprofitable firms would not have to pay the tax, and they would not attempt to pass the tax on to consumers (difficult to do in a truly competitive environment, anyway).

Integration of the telecommunications sector into a general business tax structure completes a process that partially has begun already. The real and personal property taxes and unemployment taxes paid by the industry place it on equal footing with other industries.

One issue that would arise - and would do so with all other businesses subject to the tax, as well - is the apportionment of income attributable to operations in Nevada. As of now, the local operating companies derive virtually all of their income from in-state activities (with the exception of some of the small companies in the border areas). The long distance companies are concerned with the portion of their revenues accruing from in-state inter-LATA service when computing their liability for the mill tax, but under a corporate income tax structure would have to apportion earnings from calls that originate or terminate between Nevada and

other states. This issue could be resolved by relying on the traditional factors - payroll, property, and sales - and formulas that have been widely used in other states.

A Sales Tax

The current policy in Nevada is to exempt telecommunications services from the 5 and 3/4% retail sales tax that is applied to other retail transactions of goods and services in the state. Telecommunications firms, however, do pay sales tax on the purchase, repair and maintenance of equipment related to their operations.

An argument could be made for reversing this policy on both counts. In the first place, requiring companies to pay a sales tax on equipment directly involved in the provision of telecommunications service results in substantial "tax pyramiding" as the cumulative cost of these taxes for each transaction is rolled into the price of services to consumers. Second, if telecommunications service is the ultimate product, it ought to be subject to the same tax as other final goods and services if the industry is to be treated consistently like any other business.

While, in the end, paid by the consumer, the sales tax is collected from the firms providing the service. Thus, the tax would be calculated on the basis of the gross revenue from retail sales transactions. To avoid double taxation, carrier access charges could be excluded from the sales tax base. There is considerable precedent for doing so. This is the position that has been adopted by every state that levies a sales tax on telecommunications services, with the exception of Wisconsin.

Another aspect of a retail sales tax that needs to be addressed is whether to apply it to intrastate services only or to interstate services, as well. Again, if the experience of other states is to serve as a guide, the preponderance of states levying the tax apply it only to intrastate service. This greatly

simplifies the problem of apportioning the gross revenues of the long distance companies serving multi-state markets.

Alternative Taxes

One way to examine the various tax alternatives just discussed is to lay out the rates required under each type of tax to yield equivalent revenues. Once these rates are established, the tax options can be debated in terms of their equity and efficiency implications and their ease or difficulty in implementation. Table 5 represents one way to do this.

Starting with an assumed corporate income tax rate of 5%, estimates of the yield from an income tax are made separately for the local operating companies and the interexchange carriers. Then, the rate required for a tax on gross receipts to yield the same revenue is calculated.

For, the local operating companies, this is done two ways. First, it is assumed that the tax is levied on all in-state revenues, regardless of the source. In the second case, access charges and revenues from directory services are excluded from the base before calculating the rate. The rate required rises from 2.3% in the first instance to 3.04% in the second.

The table also shows the revenues obtained if a 5 and 3/4% retail sales tax is levied on telecommunications services. The base for this tax is the total in-state revenues minus access charge revenues (which could arguably be considered revenues from wholesale transactions). More than \$9.6 million in revenues is estimated to result from the tax. At the same time, if the sales tax paid by telecommunications firms on equipment purchases is revoked, that would yield a net revenue loss of \$1.6 million. A similar procedure was followed for the interexchange carriers. Their corporate income tax liability was estimated to be about \$1 million which translates into a quite low gross receipts tax rate

TABLE 5

ALTERNATIVE TAX YIELDS BY TYPE
OF TAX AND TYPE OF CARRIER
(\$ Millions)

	Gross Receipts (Including Access Charges and Directory Revenues)	Gross Receipts (Excluding Access Charges and Directory Revenues)	Retail Sales Tax (53/4%)	Sales Tax On Equipment	Corporate Income Tax (5%)
Local Operating Companies	\$4.7 - 2.3%	\$4.7 - 3.04%	\$9.60	- \$1.6	\$4.7
Inter- Exchange Carriers	\$1.0 - 0.3%	-	\$2.00	NA ¹	\$1.0

Source: The Urban Institute

¹ NA - Not Available

for an equivalent yield. A retail sales tax on their revenues from all Nevada calls results in about \$2.0 million in revenues.

Economic Development Considerations

As it wrestles with the problem of creating a new tax structure and design for the state, the legislature ought to be aware of the increasing importance telecommunications service has assumed in the overall operations and productivity of many industries. In some lines of business (credit and collection agencies, for instance), telecommunications is a production factor second in importance only to labor. In other cases, telecommunications has transformed the nature of the business activity itself. Warehousing and distribution plants, for example, are using computerized inventory control that has enabled companies to respond more quickly to shifts in market conditions and has eliminated the need for stocking huge quantities of items.

In short, with the advent of telecommunications, distance from the market assumes a less important role in the location decision of firms that previously depended on proximity to final consumers. This has enhanced the competitive position of places that were formerly considered too rural or too remote to be attractive. But it also has had the effect of widening the possibilities and intensifying the competition among places that firms will consider. Thus, in its design of a tax policy, the Legislature must be mindful of the impact that taxes on the telecommunications sector have on the economic competitiveness and growth of Nevada, and on its prospects for the future.

ENDNOTES

1. An early competitor emerged in the 1870's when the Western Union Telegraph Company set up a telephone subsidiary and waged a series of court battles-ultimately unsuccessful-to wrest control of the Bell patents from the precursor of AT&T.
2. For example, the cities of Lovelock and Reno impose a license fee equal to 3% of gross receipts attributable to local exchange telephone service and intra-state long distance service. Sparks and Las Vegas base the fee on 5% of gross revenues from local service, and Clark County charges 1% of net profits generated from local recurring revenues.
3. Lewis Perl, "Telephone Prices, Telephone Demand and Consumer Welfare," Proceedings of The 75th Annual Convention of the Wisconsin State Telephone Association, Madison, 1985; Lester D. Taylor, Telecommunications Demand: A Survey and Critique (Cambridge, Massachusetts: Ballenger, 1980).

CHAPTER 21

FINANCIAL INSTITUTIONS

HISTORICAL OVERVIEW

In 1819, the U.S. Supreme Court in McCulloch v. Maryland¹ first announced its doctrine of federal tax immunity.² The case involved the constitutionality of a Maryland law that imposed a tax on bank notes issued by any bank or branch that was not chartered by Maryland. Maryland state-chartered banks were not subject to the same or similar tax. When branches of the Second Bank of the U.S. refused to comply with Maryland's taxing statute, the state brought suit to recover the tax and penalties. On appeal the Supreme Court held unconstitutional almost all state taxes levied on a governmental instrumentality such as a national bank. Thus began a century and a half of Congressional domination of state taxation of national banks. Because states were loathe to tax their state-chartered banks more strictly than they did national banks, the McCulloch decision affected state taxation of state banks, too.

In 1829, the Court applied its federal tax immunity doctrine to strike down a property tax imposed by the City of Charleston, S.C. on stock issued by the Bank of the U.S. and held by a private individual.³ Like the Maryland law in McCulloch, the Charleston ordinance exempted from the tax all stock issued by the state of South Carolina. According to the Court, the tax violated the Borrowing Clause of the Constitution because it was "a tax on the power to borrow money on the credit of the U.S." ⁴

These two decisions set the stage for complete Congressional domination of state taxation of national banks and federal obligations that continues today: states cannot tax either national banks or federal obligations without the permission of Congress. The effect of Congressional restrictions on state taxation of the income from federal obligations has been much less dramatic,

however, than that of federal restrictions on state taxation of national banks. Federal constraints on state taxation of the income from federal obligations have remained virtually unchanged since the latter half of the 19th century.⁵

In contrast, Congressional restrictions on state taxation of national banks have changed considerably over the century and a half following the McCulloch decision.

The history of Congressional limits on state taxation of national banks is long and tortured. In 1864 Congress passed the National Bank Act,⁶ which permitted state taxation of national banks only on their real estate and on their shares⁷ --- the two methods left open by the McCulloch decision.⁸ That Act specifically granted the state in which a national bank was located the right to tax the shares of stock in such bank. Although the actual tax was levied on the individual or corporate shareholder, most states assessed and collected the tax from the bank. Assessment at the source facilitated collection of the tax. If, for example, the shareholder was a nonresident, the bank could be used as an agent of the stockholder to collect the tax. The bank then reimbursed itself from the dividends or other income distributed to the stockholder. The Law also limited the rate of the state tax imposed on national bank shares to the lower of (1) the rate assessed upon "other moneyed capital" in the hands of individual citizens of such state, or (2) the rate imposed upon the shares in any state-chartered bank.⁹ The purpose of these restrictions was to prevent states from discriminating against national banks by favoring their competitors.

The 1864 law led to decades of litigation over the effect of the many different state methods of calculating the rate of tax on national banks and over the meaning of the phrase "other moneyed capital." In 1923 and 1926, Congress sought to bring some order into the chaos that had been created by the years of litigation and conflicting judicial decisions. Amendments passed in those years permitted states to levy 3 new taxes on national banks. In

addition to a tax on the real estate and shares of a national bank, a state could now levy (1) a tax on the dividends received by the owners or holders of the bank's stock, or (2) a net income tax on national banks,¹⁰ or (3) a franchise or excise tax measured by the entire net income of the national bank.¹¹ The amendments failed in their primary purpose, however. Far from solving the problem of state taxation of national banks, these amendments with their numerous conditions set the stage for still more litigation and conflicting interpretations.

In the mid 1950's, a new issue arose -- state taxation of the interstate activity of state banks. Although banks did not maintain offices outside of their domiciliary state, they frequently did make loans to residents of other states by sending personnel there or by using the services of correspondent banks located in other states. Unlike the situation with state taxation of national banks, which was limited by Congress to taxation of domiciliary banks, states were free to tax the interstate activities of state banks so long as such taxation was consistent with the due process and commerce clauses.

In 1959, after a long history of interpreting the commerce and due process clauses to ban state taxation of the interstate activities of corporations, the Supreme Court changed its interpretation and upheld state taxation of nondomiciliary corporations that did business with their residents. In Northwestern States Portland Cement Co. v. Minn.,¹² the high Court validated a state net income tax on a nondomiciliary (general business) corporation which had an office in the taxing state. In another case -- Brown-Forman Distillers Corp. v. Collector of Revenue¹³ -- the high Court declined to overturn a decision of the Louisiana supreme court upholding the state's tax on a nondomiciliary corporation whose contacts with Louisiana consisted solely of personnel soliciting orders there.

The effect of these decisions was limited, however, by immediate Congressional action. In 1959, Congress passed P.L. 86-272,¹⁴

which prohibited state from taxing foreign corporations whose only activity within the taxing state was solicitation of orders by the seller or its representative. Because P.L. 86-272 covered only the solicitation of tangible personal property, the activities of financial institutions were not subject to its prohibitions.

As a result of the above Supreme Court decisions and the Congressional restrictions against state taxation of nondomiciliary national banks, states were free to tax nondomiciliary state banks but not out-of-state national banks. Some states took advantage of their expanded taxing power to tax nondomiciliary state banks, creating an inequity between state and national banks. Over time, therefore, the Congressional restrictions on state taxation of national banks, originally intended to prevent state discrimination against national banks, had created a tax scheme that favored national banks.

In 1969, Congress passed a new law that repealed prior restrictions on state taxation of national banks, bringing to an end more than a century of Congressional tax preferences granted to national banks.¹⁵ According to the new law, which took effect in 1976, "a national bank shall be treated as a bank organized and existing under the laws of the State or other jurisdiction within which its principal office is located."¹⁶ Thus, the only remaining restriction on state taxation of national banks is that such taxes must not discriminate against national banks.

Nevada Regulation and Taxation of Banks

Regulation of Commercial Banks

Prior to 1983, three different administrators supervised state-chartered banks, S&Ls and credit unions. All state regulated financial institutions within Nevada were supervised by one of the three administrators. The three administrators were, in turn, subject to administrative supervision by the Department of Commerce.¹⁷ A 1983 amendment to the law consolidated the three

divisions into one. Currently, all state regulated financial institutions, are under the supervision of the Commissioner of Financial Institutions. The Division of Financial Institutions remains under the supervision of the Department of Commerce.¹⁸

Nevada law has never prohibited banks or S&Ls from branching intrastate. Interstate branch banking, on the other hand, was prohibited by state law until 1985. In that year, the Nevada legislature passed a regional reciprocal law by which an out-of-state bank holding company could acquire a Nevada bank if (1) the principal place of business of the holding company was in one of eleven western states¹⁹, and (2) the other state would accord equivalent reciprocal privileges to Nevada banks. To date, no Nevada bank has branched into a reciprocal state and no out-of-state bank or S&L has branched into Nevada under this law.²⁰ Two S&Ls have branched into reciprocal states, however.²¹ Beginning on January 1, 1989, Nevada law allows out-of-state banks from across the nation to acquire existing Nevada banks without regard to reciprocity; and one year later, out-of-state banks may branch into Nevada by seeking a de novo charter.²²

Taxation of Commercial Banks

Following the language of the McCulloch holding and the Congressional codification of that judicial decision, the 1864 Nevada Constitution allowed state taxation of the shares of national banks.²³ In 1907, the Nevada legislature implemented the constitutional provision by passing a law that provided for state taxation of banks on their real property and the value of their shares. According to the original Act, county auditors could assess the real property belonging to a bank or its affiliates in the same manner and form as they assessed other real property within the state.

The 1907 statute did not define how the assessors should calculate the taxable value of bank shares, but a 1913 Attorney General's Opinion did provide some guidance:

[I] am of the opinion that in assessing banks where shares of stock have been issued, you will assess the real estate; you will also assess the stock at its full cash value, after taking therefrom the proportionate value of the real estate belonging to the bank [including mortgages] ... for the purposes of arriving at actual value of the shares of stock you are justified in taking into consideration the par value of the stock, the undivided profits, and the surplus, and you may consider the business of the institution and the dividends distributed to stockholders in arriving at the actual full case value of the stock.²⁴

Although the statute deemed banks liable for payment of the bank shares tax in the first instance, it gave banks a right of reimbursement from their shareholders for the taxes that they paid on behalf of the shareholders. Alternatively, a bank could elect not to seek reimbursement from its shareholders.²⁵

In 1967, the state amended the law to define the taxable value of a bank share as follows:

... the taxable value of a share of stock in a bank is its proportionate part of the aggregate taxable capital. Such aggregate taxable capital must be determined in the following manner:

1. The average of each of the following factors must be computed for the fiscal year preceding the valuation ...

- (a) Cash;
- (b) Demand deposits;
- (c) Time deposits; and
- (d) Total deposits;

2. From the average cash must be subtracted an appropriate cash reserve, which must be the sum of

- (a) Average demand deposits multiplied by that percentage established by the Board of Governors of the Federal Reserve System as a required cash

reserve for member banks ...

(b) Average time deposits multiplied by that percentage established by the Board of Governors of the Federal Reserve System as a required cash reserve for member banks ...²⁶

In sum, this method of valuation required the state assessors to compute first the bank's average cash and deposits. In order to compute a bank's average cash, the statute required certain adjustments -- i.e. the subtraction of a cash reserve amount calculated by reference to the reserve requirements established by the Board of Governors of the Federal Reserve System. The resulting sum of the bank's adjusted average cash and deposits constituted the bank's aggregate capital. Next, each share was valued at its proportionate part of the aggregate capital. Nevada retained this method of valuation until the repeal of the bank shares tax in 1986.

A 1983 U.S. Supreme Court decision precipitated the repeal of the Nevada bank shares tax. In American Bank & Trust Company v. Dallas County,²⁷ the high Court considered the validity of a Texas bank shares tax that included the value of federal obligations in the measure of its bank shares tax. The Court struck down the Texas tax, holding that because a bank shares tax is a property tax, a state cannot include the value of federal obligations (directly or indirectly) in the measure of the bank shares tax without violating federal statutory law.²⁸ According to the Court, at least six other states, including Nevada, also imposed a bank shares tax that measured (by practice or statute) a share's value by reference to a bank's total assets.²⁹ The decision put in doubt, therefore, the validity of the Nevada bank shares tax.

The American Bank & Trust decision placed in motion the forces that led to a constitutional amendment and the eventual repeal of the Nevada bank shares tax. The process began with the repeal of the provision in the state constitution that permitted Nevada to tax bank shares. The necessary constitutional amendment required

the passage of a joint resolution in two consecutive legislative sessions followed by a popular vote. In 1983, the Nevada legislature passed Senate Joint Resolution-3 (SJR-3). In 1984, an interim study recommended a second passage of the joint resolution. The interim study found that because commercial banks had become nearly indistinguishable from other financial institutions (such as savings and loans), which were not subject to a similar tax, the bank shares tax had a discriminatory effect against banks. SJR-3 passed again during the 1985 legislative session.³⁰ The constitutional amendment, which removed the language permitting bank shares taxation, was thus placed on the ballot in 1986. The amendment passed in that same year.³¹ Currently, Nevada banks pay a locally-assessed real property and tangible personal property tax.

Federal and State Regulation and Taxation of Savings and Loan Associations

Regulation of Savings and Loan Associations

Before the Great Depression, chartering of savings and loan associations had developed exclusively as a state activity. The first U.S. savings and loan institution, the Oxford Provident Building Association, was founded in Frankford, Pennsylvania, in 1831. The association was organized to enable its member shareholders to pool their savings in order to obtain the necessary financing to build or purchase a home. According to the plan of the Oxford Association, every member could borrow funds for that purpose; then, after the last member had his home, the association would terminate. Membership in the association was restricted geographically. No loans were made for homes located more than five miles from Frankford.

Because the niche filled by the Oxford Association -- gathering savings in order to finance home building and ownership -- was underserved by banks,³² savings and loan institutions spread

rapidly throughout the U.S. By 1893, 5,598 such associations existed.³³ Gradually, the form and activity of the savings and loan association changed. For example, some associations chose a more permanent type of structure over the early self-terminating institution. These longer-term associations accepted shareholders who used the institution solely for savings; and so, the direct link between borrower and saver began to fade. Until very recently, however, federal law prevented S&Ls from offering demand deposit (checking) accounts.³⁴

The lack of demand deposits spared savings and loan institutions from the devastating bank "runs" faced by commercial banks during the Great Depression. Nevertheless, S&Ls did suffer from savings withdrawals, which resulted in some institutional failures and a reduction in the flow of funds to the housing market. Congressional intervention in the form of the Reconstruction Finance Corporation (RFC), Home Owners' Loan Act (HOLA,) and the Federal Home Loan Bank Act provided emergency loans to S&Ls. These Acts, all passed in the period from 1932-34, shored up the housing market and allowed more than 90 percent of all S&Ls to survive the depression.³⁵

These and other Congressional Acts also established a comprehensive scheme of federal regulation. For example, the Federal Home Loan Bank Act³⁶ set up a system consisting of twelve regional Federal Home Loan Banks under the supervision of the FHLBB. That Act required all federal association to be members of the system, and it allowed state-chartered institutions to choose whether to become members. HOLA³⁷ was signed into law in 1933. The primary purpose of that Act was to facilitate the refinancing of existing mortgages in distress cases. HOLA also authorized the FHLBB to charter and supervise federal S&Ls. The National Housing Act³⁸ set up the Federal Savings and Loan Insurance Corporation (FSLIC) to provide deposit insurance for savings deposits at S&Ls. Like membership in the Federal Home Loan Bank system, membership in FSLIC was made compulsory for federal associations and optional

for state S&Ls. Both federal and state-chartered S&Ls are subject to federal regulation by either the FHLBB (all federal and state member S&Ls) and/or the FSLIC (all federal and state insured S&Ls). State-chartered S&Ls are subject to state regulatory authorities.

Originally restricted to providing mortgage loans for the acquisition of homes within the immediate neighborhood of the association, S&Ls have gradually expanded their activities. In 1964, for example, federal associations began making unsecured personal loans for college or educational expenses and to invest in securities issued by federal, state and municipal governments with the blessing of their federal regulators.³⁹ In 1980, Congress extended the lending powers of federal associations to include commercial real estate loans, consumer loans and the issuance of credit cards.⁴⁰ In that same year, Congress authorized S&Ls to offer, for the first time, a form of checking account: the so-called Negotiable Order of Withdrawal or NOW account.⁴¹ In 1983, the FHLBB permitted federal associations to make loans nationwide.⁴² State associations can engage in most of the same activities as federal institutions either through direct regulatory authority or through the use of state "parity clauses" or "wild card" statutes.⁴³

As a result of the continuing expansion of the powers of S&Ls, the differences between S&Ls and commercial banks are fast disappearing.

The federal laws passed during the Great Depression were silent on the subject of branching for S&Ls. The legislation neither authorized federal S&Ls to establish branches nor required them to defer to state law. In the absence of explicit Congressional direction, however, the judicial branch filled the void. Many courts have held that the Home Owner's Loan Act of 1933 implicitly empowered the FHLBB to authorize federal associations to branch.⁴⁴ Pursuant to its judicially-validated power, the FHLBB has issued regulations governing branch applications. Since 1979, the Board has allowed intrastate branching for those federal and state member associations that meet its regulatory criteria. Prior

to 1981, the Board prohibited federal associations from branching interstate.⁴⁵ Thereafter, the Board permitted member associations to establish interstate branches if state law allows or if the branch is a result of the acquisition of a failed or failing association.⁴⁶ In 1987, Congress imposed interstate branching restrictions on multiple S&L holding companies -- i.e. S&L holding companies that control more than one S&L -- identical to those imposed on bank holding companies under the Douglas Amendment.⁴⁷ Unitary S&L holding companies -- i.e. S&L holding companies that control only one S&L -- are not subject to the Congressional Act. Unitary holding companies must obey the dictates of the FHLBB, however. In sum, federal S&Ls are subject to many of the same branching restrictions as commercial banks, although in the case of unitary S&L holding companies the restrictions are imposed by policy of the FHLBB, not by federal statutory law.

Taxation of Savings and Loan Associations

Until 1951, S&Ls were exempt from federal income taxes. The Revenue Act of 1951 removed the exemption by defining "bank" to include S&Ls, thus subjecting them to federal income taxation.⁴⁸

Like national banks, federal S&Ls are governmental instrumentalities immune from state taxation absent specific Congressional authorization. Unlike national banks, however, Congress never restricted the methods by which states could tax S&Ls. Section 5(h) of the Home Owner's Loan Act of 1933 authorized states to tax federal savings and loan associations as follows:

[N]o State ... or local taxing authority shall impose any tax on such association or their franchise, capital, reserves, surplus, loans or income greater than that imposed by such authority on other similar local mutual or cooperative thrift and home financing institutions.⁴⁹

With the passage of the Home Owner's Loan Act, therefore, Congress gave states freedom to chose any method of taxation, requiring only that state taxes not discriminate against federal S&Ls. The 1933

language in HOLA providing for nondiscriminatory state taxation of federal S&Ls is very similar to the present federal statute providing for nondiscriminatory taxation of national banks. In the latter case, however, it took decades of litigation and over a century of Congressional legislative tinkering to reach that reasonable result.

Nevada Regulation and Taxation of Savings and Loan Associations

Nevada law has always treated savings and loan associations identically to banks with regard to branching. Thus, Nevada law has never prohibited savings and loan associations from branching intrastate. The same state law that governs the interstate activities of banks also controls interstate branching by savings and loan associations. After the passage of the regional reciprocal interstate branching law in 1985, two Nevada savings and loan associations opened branches in other states. To date, no out-of-state savings and loan associations have opened branches within Nevada.⁵⁰

Until the repeal of the bank shares tax, however, the two kinds of institutions were taxed differently. Like all other business entities in Nevada, savings and loan associations have never been subject to any tax other than a locally-assessed real and tangible personal property tax.

Summary

Under the U.S. dual banking system, state governments as well as the federal government charter and regulate banks. Although a key tenant of the dual banking system is that the rights of the two governments should be approximately equal in regulating and examining the banks that they charter, over the years, the federal government has increased its control over state bank regulation. In one area, however, state law dominates.

Since the inception of the dual banking system, state laws have governed the branching activities of both national and state banks. Until very recently, most state laws banned interstate branch banking. Today most states permit some form of interstate branch banking. Currently, Nevada law allows regional reciprocal interstate branch banking for both banks and S&Ls, and beginning on January 1, 1989, Nevada will allow nationwide interstate branch banking.

Federal constitutional law has had a profound effect on the structure of state bank taxes. In 1819, the U.S. Supreme Court in McCulloch v. Maryland found that almost all state taxes levied on governmental instrumentalities, such as a national bank, were unconstitutional. Only two state taxes on national banks survived the McCulloch holding -- a real property tax and a bank shares tax. For over a century following the decision, states could tax national banks only on their real property and their shares. Because states were loathe to tax their own state-chartered banks more heavily than they taxed national banks, the federal restrictions on state taxation of national banks influenced state taxation of state-chartered banks, too. Nevada enshrined the McCulloch decision in its 1864 state constitution by providing for state taxation of bank shares and in 1907 legislation implementing the state constitutional provision. In 1986, the Nevada legislature repealed the bank shares tax, having determined that the tax discriminated against commercial banks. Unlike banks, S&Ls were never subjected to an industry-specific tax.

Nevada now imposes a locally-assessed real and tangible personal property tax on banks. The state imposes the same tax on all other financial institutions and general business entities.

NEVADA THE FINANCIAL INSTITUTIONS INDUSTRY

Nevada law deems twelve different entities "financial institutions": commercial banks, savings and loans, thrifts, credit

unions, trust companies, development corporations, corporations for economic revitalization, money order companies, debt adjusters, mortgage companies, collection agencies, and installment loan companies.⁵¹ All twelve are regulated by the Division of Financial Institutions, headed by the Commissioner of Financial Institutions who is, in turn, subject to administrative supervision by the Department of Commerce. Only the first four of these entities are "depositories"; i.e. institutions whose deposits are insured by the federal government. In total asset size, commercial banks and savings and loan institutions dominate among Nevada depositories. Numerically, however, credit unions far outnumber banks and S&Ls.

Commercial Banks

Sixteen banks are domiciled in Nevada. Six of these banks are national banks, and the other ten are state-chartered. The ten state-chartered banks are regulated and supervised by the Nevada Division of Financial Institutions. According to a July 1, 1987 asset valuation, the total asset value of all Nevada banks is \$8,776,991,185.⁵² The three largest banks -- Citibank of Nevada, First Interstate Bank of Nevada, and Valley Bank of Nevada -- control 78.1 percent of all commercial bank assets in the state. Commercial bank assets in turn represent 60.5 percent of all assets of Nevada depositories.⁵³

All institutions regulated by the Division pay an examination fee to offset the cost of supervision. The actual fee paid by each institution depends on the level of expertise necessary to examine the particular category of institution, as determined by the Division. Currently, banks and S&Ls pay \$60 per examiner hour for their examinations.⁵⁴ State-chartered banks and S&Ls also pay a license renewal fee. For banks this fee is \$200 per head office and \$100 for each branch payable semi-annually; for S&Ls the amount of the fee is identical, but it is payable only annually.⁵⁵ Neither the examination fee nor the license fee accrue to the general fund of the state. The fees are set so as to cover the budget of the

Division of Financial Institutions and are earmarked for that purpose.

In 1987 all state-chartered and national banks became subject to a "privilege fee." This privilege fee was levied to cover the \$1,000,000 shortfall in the state's general fund, which was created when the legislature amended the law to provide that the Division of Financial Institutions should henceforth assess its fees in an amount no greater than that needed to cover its budget. Prior to the law change, the Division had collected fees in excess of the amount allocated to it annually by the legislature. The excess fees collected -- approximately \$1,000,000 -- had accrued to the general fund. The privilege fee is subject to a sunset provision in 1989.⁵⁶

As noted, Nevada law allows banks to branch statewide. Interstate branching is permitted on a regional reciprocal basis until January 1, 1989 when nationwide branching goes into effect. The Division of Financial Institutions takes the position that Nevada law forbids out-of-state branchless banks⁵⁷ from soliciting deposits from Nevada residents without a license. Because no such license can be granted until 1989, branchless banks cannot yet solicit deposits in Nevada. Using this law as authority, the Division has prohibited an out-of-state credit union from soliciting deposits by mail from Nevada residents.⁵⁸ Nevada law does not prohibit out-of-state branchless banks from making loans to Nevada residents, however. Although the state does not collect data revealing the lending activities of out-of-state branchless banks, such as solicitation of Nevada credit card customers by mail, it is virtually certain that nondomiciliary banks do seek credit card customers by mail in Nevada as they do in all states.⁵⁹

Currently, state law does not permit state-chartered banks to engage in real estate development other than that necessary to preserve their interest in foreclosed property. Nor does state law allow banks to sell or underwrite insurance. Banks can act as

securities brokers, however, and can invest in private securities up to 5 percent of their capital.

Savings and Loan Associations

Nevada is home to seven savings and loan associations. Three of these are federal, and four are state-chartered. The total asset value of these associations is \$4,731,357,352. The two largest S&Ls -- Nevada Savings & Loan and First Western Savings & Loan -- control 70.9 percent of all association assets in the state. S&L assets in turn represent 32.5 percent of all assets of Nevada depository institutions.

Nevada law gives S&Ls the same branching powers that it confers on Nevada banks. Like banks, S&Ls are not permitted to sell or underwrite insurance, except credit and disability insurance issued in connection with loans, and like banks they are also limited in their securities activities. Unlike banks, however, S&Ls can engage in real estate development.

Other Depositories

Nevada has forty-two credit unions and two thrift institutions. Thirty-one credit unions are federally chartered and eleven are state chartered. Both thrift institutions are state chartered.

ALTERNATIVE METHODS OF TAXATION

Institutional Considerations

Any new state bank tax should be evaluated not only by reference to the tax policy objectives presented in the executive summary, but also within the context of the changes taking place in the business of banking. The most important of those changes involve interstate branch banking, the growth of sophisticated bank technology, the expansion of bank products and services, and the advent of loan securitization.

Interstate Branch Banking

Proof of the proposition that changes in the bank regulatory laws of one state can influence the regulatory policy of all states is found in interstate branch banking laws. In 1982, Massachusetts was the first state to pass a regional reciprocal interstate banking law.⁶⁰ Other states soon followed with their own reciprocity laws.

Today, most state legislatures have relaxed or removed prior restraints on interstate banking. Forty-four states allow some form of interstate banking. Twenty-eight states have passed regional reciprocal interstate banking (thirteen of these state laws contain a nationwide trigger, i.e. a date by which the state will allow nationwide interstate banking), and sixteen states allow nationwide interstate banking.⁶¹ The vast majority of states that allow interstate banking do so through the bank holding company mechanism; i.e. they enact laws permitting out-of-state banks to enter only after their parent bank holding company applies for and receives permission to establish a subsidiary or to merge with a bank in the host state. Entry through a bank holding company gives a state maximum control over the new bank.

The removal of state bans against interstate branch banking promises to have a major effect on state apportionment formulas, which attempt to pinpoint the "source" of interest income from bank loans as well as the loans themselves. The U.S. Congress noted the problem of finding the actual "source" of bank loans during the debates on the 1986 Tax Reform Act. According to Congress, "the lending of money is an activity that can often be located in any convenient jurisdiction, simply by incorporating an entity in that jurisdiction and booking loans through that entity, even if the source of the funds, the use of the funds, and substantial activities connected with the loans are located elsewhere."⁶²

Technological Developments: Branchless Banking

The judicial branch, too, has contributed to the expansion of interstate banking. A recent U.S. Circuit Court of Appeals opinion, which interpreted the federal banking laws, paved the way for banks and bank-like entities to engage in de facto interstate branch banking. By interpreting the terms "branch" and "bank" narrowly, the opinion limited state authority to regulate interstate branch banking. For example, in Independent Bankers Ass'n. v. Marine Midland Bank,⁶³ the Second Circuit Court of Appeals held that a bank that effected loan and deposit transactions with its customers electronically through a shared use automatic teller machine (ATM) did not thereby engage in branch banking. According to the court, federal law does not deem an ATM a "branch" of a bank if the bank is a mere user, as opposed to an owner, of the machine.

This decision allows banks and bank-like entities to circumvent the remaining state regulatory restrictions on interstate branch banking by delivering their services through electronic devices located across the nation in a form of "branchless banking". Today, it is legally and technologically possible for bank customers to make a deposit in an out-of-state bank through an in-state shared-use ATM without thereby engaging in branch banking.

Several banks currently operate nationwide through branchless banks. For example, in January, 1986, the New England Federal Savings Bank of Wellesley, Massachusetts opened for business.⁶⁴ The bank has no walk-in place of business. Customers of the New England Federal Savings Bank make their deposits by mail, by telephone, or via automatic teller machines. Within the first six months of operation, the bank had 422 depositors hailing from most of the fifty states. The bank is a full-service bank that makes home mortgage loans and commercial real estate loans; provides MasterCard, Visa and American Express card services; and offers individual retirement accounts and Keogh accounts. Although the New England Federal Savings Bank appears to be the only bank so far to offer full-service banking without a walk-in place of business,

many banks engage in some form of branchless banking. For example, of the 30,000 depositors of Colonial National Bank of Wilmington, Delaware, only 10,000 come from Wilmington walk-in trade.⁶⁵ The remaining 20,000 depositors live in all fifty states and do business by telephone, mail, and nationwide automatic teller machines, and use debit and credit cards and checks. Other banks offer limited or special branchless banking services across state lines. For example, Chemical Bank of New York offers a branchless banking service called "Premium Banking" to residents of Connecticut.⁶⁶ The service works as follows: (1) Connecticut customers call a New York toll-free number staffed seven days a week by Chemical Bank personnel; (2) customers receive instant access to credit lines; and (3) customers who need cash immediately can make withdrawals at any automated teller machine linked to the New York Cash Exchange.

The effect of this development is also significant. The arrival of electronic banking has rendered obsolete state jurisdiction rules based upon physical presence. These developments have also greatly increased the mobility of bank assets and deposits, making it difficult to locate such assets and deposits in one state.

Expansion of Products and Services

Another important change in the banking environment involves the definition of the business of banking. Today, the prior barriers between banking and commerce are falling. Three new products and services are of particular interest to banks: securities, insurance, and real estate. Both state and national banks have pushed for new powers in these areas, arguing that allowing them to offer these products and services will benefit everyone: consumers, who will enjoy reduced prices as a result of the increased competition; businesses, which will enjoy improved access to capital markets; state and local governments, which will likely pay lower interest rates on issues of municipal revenue.

bonds; banks, which will become more efficient and profitable through diversification and economies of scope; and the FDIC, which will face less exposure as banks become stronger.

are actively seeking power to engage in activities previously forbidden to them, such as securities and insurance brokerage and underwriting, and real estate development.

In many states banks have been successful in convincing legislators of the merit of expanding bank powers. Currently, twenty-three states allow their state-chartered bank to engage in some securities activities,⁶⁷ thirteen states now allow banks to underwrite insurance and/or act as an insurance agent or broker,⁶⁸ and twenty-five states permit state banks to invest in and develop real estate and/or act as a real estate broker.⁶⁹ In addition to their contention that the expanded powers will benefit consumers, businesses and state governments, and shore up bank profits; banks argue that the new powers are necessary to create a level playing field between banks and the growing number of non-bank entities that are free to engage in banking services. As evidence of the lack of a level playing field, banks cite the increasing competition that they face from unregulated entities such as retailers that issue credit cards, securities firms that attract deposits by offering cash management accounts, and automobile manufacturers that provide financing for new cars. At least with regard to securities powers, Congress has responded favorably to the level playing field argument. Pending legislation in Congress would expand bank powers in these areas considerably.⁷⁰

Given this blurring of the lines between bank and nonbank financial institutions, state tax laws that are based upon a narrow regulatory definition of a bank or S&L may no longer be appropriate.

Loan Securitization

A corollary to the expansion of bank securities powers, is the increased securitization of bank assets. This phenomenon is

changing the entire nature of the business of banking. Traditionally, commercial banks and S&Ls solicited deposits in order to make loans that were held in their portfolios until they were paid off. Recently, however, banks have begun making loans that are subsequently pooled and packaged for sale as securities in the financial markets to institutional (bank and nonbank) and individual investors. The packaging and distribution of securitized loans is usually done by investment banks or large money center banks. Loan securitization offers significant benefits to the lending bank; the most important of which is to allow them to remove the loans from their books, thereby reducing capital requirements and improving liquidity.⁷¹

Potentially, banks can securitize and sell all classes of loans.⁷² Typical securitized loans today include mortgage loans, credit card loans, car loans, and boat loans.⁷³ It is easy to see that a securitized loan does not have a traditional "home" for purposes of state taxation; it can be sold to another bank, insurance company, pension fund or individual investor anywhere across the nation.

The advent of securitized loans creates a profound dilemma for those states that apportion the income of their domiciliary banks. When a loan is securitized, the unity between the originator of the loan and the recipient of the interest income from the loan is severed. The dissolution of this relationship creates the conditions for widespread tax avoidance. Assume for example, that Bank N, which is domiciled in State N, has packaged and sold some of its secured loans to an out-of-state investor. After the sale, State N will lose jurisdiction over the interest income from the loans even though they are secured by property located in State N.

Suppose, now, that Bank C, which is domiciled in State C, purchases the securitized loans from Bank N. State C will apply its apportionment formula to determine how much of the interest income from the securitized loans it can tax. Typically, state

apportionment formulas attribute the interest income from secured loans to the state in which the loan originated (i.e. where the loan solicitation, negotiation, and/or administration occurred)⁷⁴ or to the state in which the property securing the loan is located.⁷⁵ If either of these rules is used to apportion the interest income from the securitized loans held by Bank C in State C, none of the interest income from those instruments will be attributed to State C because Bank C was (1) not involved in the solicitation, negotiation or administration of the underlying loans, and (2) none of the property securing the underlying loans is located in State C. Thus, the interest income from the securitized loans will be apportioned out of State C, even though no other state has jurisdiction to tax that income.

Alternatively, State C might apportion the interest income from the securitized loans according to special rules for income from securities.⁷⁶ In this case, some of the income may be attributed to State B. Nevertheless, much of the income would be attributed out-of-state, again escaping taxation by any state.

This dilemma cannot be solved through the use of an apportionment formula. Instead State C must allocate, not apportion, the interest income to itself. State C can accomplish this by adopting a special allocation rule for securitized loans, or it can choose the dual system of taxation described below.

Current Nevada Taxation

Nevada financial institutions pay a locally-assessed tax on their real and tangible personal property; intangible property is not taxed. Even without considering the changes taking place in the financial institutions industry today, this tax may have a discriminatory effect on the state's businesses. Real and tangible personal property (such as machinery and equipment) are likely to comprise a large percentage of the assets of a general business (nonfinancial) corporation, while intangible property will represent only a small fraction of its assets. This situation is

reversed in the case of a financial institution. Typically, financial institutions have very little real and tangible personal property, whereas intangible property, such as loans and securities constitute their entire business. This proposition is proved by a recent survey conducted by the Nevada Bankers Association survey. According to that survey, tangible assets (real, tangible personal and intangible) represent in the aggregate approximately 3 percent of the total assets (tangible and intangible) of the fifteen banks that responded to the survey.⁷⁷ Thus, the current Nevada tax scheme subjects only three percent of all the assets of its commercial banks to taxation.

It is not surprising, then, that the value of bank assets subject to tax in Nevada dropped significantly after the repeal of the bank shares tax. In fiscal year 1986-1987, bank shares in Clark, Douglas, and Washoe counties were valued at \$19,131,524, \$1,095,048, and \$14,521,835 respectively. In fiscal year 1987-1988 bank tangible personal property valuations were \$10,541,670, \$282,911, and \$6,646,073 respectively. Thus, valuation of bank property subject to tax in Nevada dropped \$17,277,753 in the year after the state repealed its bank shares tax and adopted a tangible personal property tax.⁷⁸

When the Nevada interstate branch banking law goes into full effect in 1990, the state's current tax scheme may create a new pattern of discrimination: between in-state and out-of-state banks. In 1990 out-of-state banks will be able to solicit deposits and make loans to Nevada residents with or without locating an office there. Undoubtedly, some out-of-state banks will choose not to open an office in Nevada, opting instead for branchless banking in the state. Branchless banks that choose to conduct their activities in Nevada solely by mail, telephone or other electronic means will pay neither the real property nor the tangible personal property tax. Yet, in-state banks will continue to pay these taxes, placing them at a competitive disadvantage vis a vis out-of-state branchless banks.

For these reasons, the state's current tax structure fails to satisfy several of the criteria of a good tax. Specifically, the tax on real and tangible personal property violates the neutrality and fairness principles because, unlike the case with general businesses, banks are taxed only on a small fraction of bank assets. In addition, the current Nevada tax contravenes the exportability principle. Out-of-state branchless banks, which can lawfully do business in Nevada beginning in 1989, will not be subject to either a real or tangible personal property tax in Nevada, placing in-state banks at a competitive disadvantage.

Bank Shares Tax

According to a 1988 survey conducted by the Advisory Commission on Intergovernmental Relations, only seven states still use a bank shares tax.⁷⁹ Originally, federal law restricted state taxation of national banks to a real property tax and/or a bank shares tax. A 1983 U.S. Supreme Court decision hastened the demise of the bank shares tax. By holding that a state could not include the value of federal obligations in the measure of its bank shares tax, the high Court severely limited the revenue raising capability of that tax. Following this decision, many of the remaining bank shares tax states chose other methods of taxing banks that would allow them to include the value or income from federal obligations in the tax base.

When measured against the criteria of a good tax system, the bank shares tax receives low marks in several areas. For example, the use of a single-industry tax, such as a bank shares tax, will violate the neutrality principle. The rapid changes taking place in the financial institutions marketplace and the growing similarity of services offered by regulated depositories with those offered by nonbank entities increase the need for tax neutrality in order to assure tax parity among competing taxpayers.

A bank shares tax also scores low on the principle of exportability. The typical measures of the value of a bank share

-- bank assets and/or liabilities -- perform poorly in an interstate environment. In an interstate environment, bank liabilities and assets are very mobile: a bank (or other depository) can freely move deposits and/or assets into any state in which the parent bank holding company has a subsidiary, thus evading a bank shares tax.

Finally, Nevada is prohibited by federal law from including the value of federal obligations in the measure of a bank shares tax, causing the tax to rank low on the fairness and neutrality criteria. According to a survey conducted by the Nevada Bankers Association, federal obligations make up approximately 11 percent of the intangible assets and 23 percent of the net income of the three largest banks in Nevada, and 4 percent of the intangible assets and 63 percent of the net income of the remaining twelve banks that responded to the survey.⁸⁰ The exclusion of such a large portion of assets and/or income from the measure of the bank shares tax without granting general businesses a comparable exclusion for a similar percentage of their assets and/or income has the effect of requiring general businesses to pay more than their fair share of the total tax burden.

Net Income Taxes

Tax Base

The starting point for most state corporate net income tax measures is the federal taxable income base.⁸¹ As noted, federal law prohibits states from including the income from federal obligations in the net income tax base unless they comply with the requirements 12 U.S.C. sec. 3124. According to that statute, a state tax on the income from federal obligations must meet two tests: (1) it must be a nondiscriminatory tax, and (2) it must be a franchise or other nonproperty tax. In Memphis Bank & Trust,⁸² the U.S. Supreme Court invalidated as discriminatory a Tennessee franchise tax that included in the state's tax base interest received on federal obligations but excluded interest earned on

the obligations of Tennessee and its political subdivisions.⁸³

According to Memphis Bank & Trust, then, Provided, then, a state can use a franchise tax measured by net income and include in such tax base the income from federal obligations,⁸⁴ if and only if the state taxes its own obligations (and those of its political subdivisions) as well as federal obligations,

Because federal obligations comprise a significant percentage of the income of financial institutions,⁸⁵ the failure to use a franchise tax without providing for a comparable income exemption for nonfinancial entities will have a discriminatory effect.

Alternative Methods

Four models of corporate income taxation exist: (1) pure residence-based taxation, (2) pure source-based taxation with separate accounting, (3) pure source-based taxation with formulary apportionment, and (4) a dual system consisting of residence-based taxation coupled with a credit for domiciliary entities and source-based taxation for nondomiciliaries.

A pure residence-based income tax applies only to domiciliary banks and operates on the entire income of the domiciliary bank without regard to the source of that income. Thus, all banks domiciled in the taxing state -- state banks that received their charter there and national and foreign banks that are incorporated there -- pay tax on their taxable income base regardless of where the income is earned; and all nondomiciliary banks -- state banks chartered out-of-state and national and foreign banks incorporated in another state or country -- pay no tax at all even if they have earned income from activities within the host state. The pure residence-based tax is a product of an era when banks were located in and did business in only one state. In an interstate environment, a pure residence-based tax will likely create multiple taxation in violation of the commerce clause of the U.S. constitution. For this reason, the pure residence-based tax is not discussed further in this study.⁸⁶

A pure source-based tax attempts to measure the amount of income of a multistate entity that is earned within a given taxing state. For this purpose, a state uses either separate accounting or formulary apportionment. This is the method of taxation used by nearly every state for their general business corporations.

A state that uses a dual system levies its tax, in the first instance, on the entire net income of its domestic banks. Then, it allows those banks a tax credit for taxes paid to other states. The amount of the credit is limited to the amount that would have been paid under the domiciliary state's tax. Out-of-state or nondomiciliary banks are taxed according to source principles; that is, the host state uses an apportionment formula to measure what fraction of the income of an out-of-state bank is earned within the host state.

Pure Source-Based Tax: Separate Accounting

In theory a pure source-based tax system permits states to divide the tax base of a multistate corporation among the states in which such corporation conducts its business activities in a manner that approximates the corporation's level of business activity in each state. One way in which a state can accomplish this goal is to use a pure source-based tax.

When used to assign income of a multistate business to a given state for tax purposes, the separate accounting method deems the in-state operations of a corporation, a branch, or subsidiary as a taxable entity unconnected to its out-of-state parent. The income of the branch or subsidiary is isolated as if the entire business operations were conducted in the taxing state.⁸⁷ The U.S. Supreme Court recognized the limitations of the method very early. If, for example, a multistate manufacturing business is a vertically or horizontally integrated group of entities, its operations are not conducted in any single state separately. Instead, the income of the business is earned "by a series of multistate transactions beginning with manufacturing profit in one

State and ending with sales profit in other States."⁸⁸ Such was in fact the finding of the high Court in the case of Underwood Typewriter Co. v. Chamberlain.⁸⁹

Two methods of separate accounting exist to isolate the net income of a multistate business in a given state. A state can either

(1) ascertain the actual cost of manufacturing and add a reasonable profit, determined by reference to such standards as the profit made by other corporations and the opinions of businessmen. The manufactured goods are then deemed to have been sold by the manufacturing department to the selling department at the price indicated. Specific costs of each department are computed, and overhead, administrative, and other general expenses are charged to the various departments.

or

(2) Ascertain the price at which the articles manufactured may be purchased from other manufacturers in the categories and quantities desired. Utilize this figure as the cost of goods, and otherwise proceed as indicated in (1) above.⁹⁰

Commentators have criticized separate accounting as "fearfully expensive", "impracticable"⁹¹, "arbitrary" and "uncertain".⁹² Pure source-based taxation with separate accounting scores low in the criteria of simplicity and reduction of compliance burdens and enforcement. Few states use the method today, and at least one state that purports to do so allows a multistate business to isolate its in-state income by means of applying formulary apportionment.⁹³

Pure Source-Based Tax: Formulary Apportionment

Another way to use pure source-based taxation to accomplish the goal of dividing the tax base of a multistate corporation is through formulary apportionment. This method employs an apportionment formula that is designed to measure the fraction of

a multijurisdictional taxpayer's income that should be attributed to a given state. The formula does this by comparing the taxpayer's in-state income-producing activities with its activities everywhere. Therefore, the particular formula chosen must reflect how and where the taxpayer earns its income: the factors represent how the taxpayer generates its income, and the "situs rules" govern where the income is earned.

Because the purpose of an apportionment formula is to measure what fraction of the income-producing activity of a multijurisdictional taxpayer takes place within a given state, the particular factors chosen should reflect in general how the taxpayer generates its income. The situs rules then spread the income of the corporate taxpayer among the states which have jurisdiction to tax it. Within general fairness guidelines,⁹⁴ states have wide latitude in the selection of apportionment formulas.⁹⁵

Banks earn income by soliciting deposits, which they use to create loans (intangible property) which in turn generate interest and fee income. Banks also earn a significant amount of income from dealings in intangibles other than loans; i.e. securities and money market instruments and by providing a variety of services. Thus, in the case of bank income, payroll, receipts, intangible property, and deposits are all potential factors. No empirical evidence yet exists that suggests that any one of the potential factors is better than any other factor or that any combination will produce a better result when used for both domiciliary and market states.

The situs rules control which elements shall go into the numerator of the factors chosen, thereby increasing or decreasing the amount of income attributed to a given state. The choice carries, therefore, important revenue considerations for states. States that use receipts and/or property factors in their formulas, can choose among three situs rules for those factors, each of which will satisfy the general fairness principles. Unlike real or

tangible personal property, intangible property has no natural physical location. For this reason, the U.S. Supreme Court has interpreted the due process clause to require a situs rule based upon the relationship between the intangible and the taxing state, rather than upon the physical presence of the intangible property within a state. According to the high Court, the required relationship is found at the domiciliary state of the creditor, the domiciliary state of the debtor, or the state in which the intangible debt has a business situs.⁹⁶ Thus, a state can include the interest income from loans and the loan itself in the numerators of its receipts and property factors if the debtor (borrower), or the creditor (bank) is domiciled there. The use of pure source-based taxation with formulary apportionment in an interstate environment causes several problems for states. First, states that use pure source-based taxation have difficulty formulating situs rules that are fair (i.e. neutral between in-state and out-of-state businesses) and uniform because there is an irreconcilable conflict between the taxation of domiciliary and nondomiciliary banks. In an interstate environment, the home state of a domiciliary bank is also the host state of a nondomiciliary bank. States cannot, with one set of situs rules, reconcile the conflict that this dual role creates. The situs rules that will attribute the most income from domiciliary banks to the home state will also attribute the least income from nondomiciliary banks to the host state.⁹⁷ This problem is particularly troublesome when an apportionment formula is used in connection with branchless banks. For example, suppose that a branchless bank operates in a state that uses a formula that includes a payroll, real and tangible personal property factor and receipts factors.⁹⁸ Because a branchless bank has, by definition, no payroll or (real or tangible personal) property in its market states, the numerators of those two factors in the market states will be zero, significantly reducing the amount of income attributed there. The inability of an apportionment formula to balance the share of tax paid by

domiciliary and nondomiciliary banks decreases the fairness of the pure source-based tax. Furthermore, the use of pure source-based taxation in connection with branchless banking causes this method to score low on the exportability criteria.

Second, as described previously,⁹⁹ the use of pure source-based taxation with formulary apportionment in connection with securitized loans creates the potential for widespread tax avoidance, also decreasing the fairness of the tax.

Third, the use of pure source-based taxation with formulary apportionment has a discriminatory effect against community-based banks. With a pure source-based system, multistate banks have a significant state tax advantage over local, community banks. In the present environment, large multistate banks have the option to move their assets and profits to jurisdictions that have a low tax rate or no tax at all, thereby reducing considerably their overall tax burden. Smaller, community-based banks cannot take advantage of such tax breaks.

In general, then, a pure source-based tax with formulary apportionment scores low in the following tax policy goals: neutrality, fairness, exportability and simplicity.

Dual System: Residence-Based and Source-based Tax

The dual system rests on a different theoretical base than does the pure source based tax. On the one hand, pure source-based taxation permits states to adopt and administer their tax laws without regard to the differing and/or conflicting laws of other states. On the other hand, the dual system of residence and source taxation requires states to recognize the interaction of tax systems in the growing interstate and international environment.

The United States international tax system is a dual system that uses both residence and source principles of taxation. The U.S., using residence principles of taxation, taxes the worldwide income of its domestic multinational corporations. The problem of

multiple taxation described earlier is solved by allowing domestic multinational corporations a credit for the net income taxes they have paid to the foreign countries in which they do business. The amount of the credit is limited: foreign income taxes can be credited only to the extent of the U.S. tax allocable to the taxpayer's "foreign source" income. The effect of the foreign tax credit limitation is that U.S. multinational corporations pay foreign taxes at the higher of the foreign tax rate or the U.S. rate. Foreign multinationals that do business in the U.S. are taxed only on the income earned there.

States can use such a dual tax system, too. In fact, at least 42 states do so with their personal income taxes.¹⁰⁰ Alabama does so with its general business corporations,¹⁰¹ and Rhode Island does so with its bank tax.¹⁰² The dual tax system is consistent with the directives of the due process and commerce clauses.¹⁰³

A residence-based tax coupled with a credit meets many of the objectives of a good tax. For example, it is relatively easy to administer. The domiciliary state taxes its domestic banks -- i.e. all state, national and foreign banks that are incorporated under state law -- on their entire income, regardless of where it is earned. Then, the domiciliary state grants such banks a credit for income taxes paid to other states.¹⁰⁴ There are only two circumstances under which a domiciliary state will grant a credit: (1) for activities conducted by a branch located out-of-state and taxed by the market state in which it is situated, and (2) for activities conducted out-of-state through branchless banking and taxed by a market state in which the activities are conducted. An out-of-state bank subsidiary of a bank holding company is by definition a nondomiciliary bank, which is not subject to the residence-based tax under the dual system.

States will not face the administrative and compliance burdens that exist in the U.S. residence-based tax system used in the taxation of international income.¹⁰⁵ Unlike the wide variety of tax bases used by foreign countries, nearly every state that imposes

a corporate income tax uses a net income base that broadly conforms to the measure of the federal income tax.¹⁰⁶ Therefore, a state could define a creditable tax as a net income tax, a franchise tax measured by net income, or a tax in lieu of a net income tax (i.e. an alternative minimum tax).

States can bypass yet another difficulty in the application of the U.S. tax on multinational corporations -- the calculation of the foreign tax credit limitation. As noted, the U.S. limit is expressed by the formula, the numerator of which is the multinational corporations's "foreign source" taxable income and the denominator of which is that entity's worldwide taxable income. The Internal Revenue Code ("Code") requires that foreign source income be defined by U.S. tax law rather than by foreign law. To calculate its foreign tax credit limit therefore, a U.S. multinational must first "re-source" its foreign income according to the extremely complex source rules in sections 861-864 of the Code. These source rules are necessary at the international level because no Constitutional limits exist to prevent foreign countries from overreaching in their definitions of foreign source income. At the national level, however, the due process and commerce clauses limit state definitions of the source of income. Moreover, nearly every state excludes "foreign source" income -- i.e. income deemed by the Internal Revenue Code to be earned in a foreign country -- from their taxes. Thus, states have no need for complex source rules; they can simply limit the amount of their credit by reference to their own rate. The use of effective state tax rates rather than nominal rates will remove any distortions caused by the differences in state net income tax bases.

Unlike the pure residence-based tax, a residence-based tax coupled with a credit does not suffer from the defect of multiple taxation.

The dual system also scores high in creating neutrality and fairness among small, community-based banks and large multistate banks. Under the dual system small community banks and large

multistate banks are taxed under the same rules. As noted, with a pure source-based system, multistate banks have a significant state tax advantage over local, community-based banks. In the present interstate environment, large multistate banks have the option to move their assets and profits to jurisdictions that have a low tax rate or no tax at all, thereby reducing considerably their overall tax burden. Smaller, community-based banks cannot take advantage of such tax breaks. Under the dual system, however, the multistate banks would still pay a state tax up to the rate of its domiciliary state, just as community banks do.

Finally, the use of the dual system will solve two serious problems that cannot be remedied under a pure source-based tax system. First, because the dual system requires the use of an apportionment formula only for nondomiciliary banks, no home state/host state dilemma exists. Instead, a state can adopt a formula that is specifically tailored to apportion the income of nondomiciliary banks. Second, the use of the dual system prevents the tax avoidance (described previously) created by the increasing securitization of bank loans. Under the dual system, a domiciliary state would levy its tax on the entire interest income received by a domestic bank from the securitized loans.

Summary of Alternatives

This section has described three alternative bank tax system: the present Nevada tax on real and tangible personal property; a bank shares tax; and several methods of net income taxation. When graded using the criteria for a good tax and in light of the current banking environment, the franchise tax measured by net income as defined by the dual system of net income taxation scores the highest of the three alternative taxes.

1. Current Nevada property tax.

The present Nevada tax subjects banks and S&Ls to a locally-assessed real and tangible personal property tax. Although all

other businesses in Nevada are subject to the same tax, this method of taxation does not produce tax neutrality. Real and tangible personal property make up only a small fraction of the property of banks and S&Ls (such property represents only 3 percent of the property of banks), while such property constitutes a large portion of the assets of a general business corporation. The current tax thus exempts most of the assets of banks and S&Ls from assessment, but includes most of the assets of general business corporations. In sum, the current Nevada tax discriminates against general business corporations.

Unfortunately, Nevada cannot remedy this situation by including intangible property in the current property tax. Federal statutory law requires Nevada to exempt the value of federal obligations from its property tax. Because federal obligations make up a large fraction of the assets of banks and S&Ls (11 percent of the intangible assets of the 3 largest banks), the use of a property tax (even with the inclusion of intangible property) will continue to have a discriminatory effect in violation of the neutrality and fairness criteria.

The current property tax also scores low on the exportability criteria. Branchless banks that choose to conduct their activities in Nevada solely by mail, telephone or other electronic means will pay neither the real property nor the tangible personal property tax. Yet, in-state banks will continue to pay these taxes, placing them at a competitive disadvantage vis a vis out-of-state branchless banks.

2. The bank shares tax.

This tax also scores low in several areas. For example, like the current property tax, the bank shares tax results in the exclusion of federal obligations from taxation, violating the fairness and neutrality principles. A bank shares tax also scores low on the principle of exportability. The typical measures of the value of a bank share -- bank assets and/or liabilities -- perform poorly in an interstate environment. In an interstate environment,

bank liabilities and assets are very mobile: a bank (or other depository) can freely move deposits and/or assets into any state in which the parent bank holding company has a subsidiary, thus evading a bank shares tax.

3. Net income tax

Four methods exist for the taxation of the income of banks: pure residence-based taxation, pure source-based taxation with separate accounting, pure source-based taxation with formulary apportionment, and a dual system consisting of residence-based (with a credit) and source-based taxation. Only the latter two of these methods are viable.

a. Pure source-based Tax with Formulary Apportionment

The use of pure source-based taxation with formulary apportionment in an interstate environment causes several problems for states. Because of the home state/host state conflict in situs rules, pure source-based taxation with formulary apportionment scores low in exportability and competitive equality between domiciliary and out-of-state banks.

Also, the use of pure source-based taxation with formulary apportionment in connection with securitized loans creates the potential for widespread tax avoidance, also decreasing the fairness of the tax. Finally, the use of pure source-based taxation with formulary apportionment has a discriminatory effect against community-based banks. With a pure source-based system, multistate banks have a significant state tax advantage over local, community banks. In the present environment, large multistate banks have the option to move their assets and profits to jurisdictions that have a low tax rate or no tax at all, thereby reducing considerably their overall tax burden. Smaller, community-based banks cannot take advantage of such tax breaks.

In general, then, a pure source-based tax with formulary apportionment scores low in the following tax policy goals:

neutrality, fairness, exportability and simplicity.

b. A Dual System

A dual system consisting of a residence-based tax with a credit for domiciliary banks and a source-based tax for nondomiciliary banks ranks high in the elements of neutrality, fairness, simplicity and exportability. Under the dual system small community banks and large multistate banks are taxed under the same rules. The use of the dual system will also solve two serious problems that cannot be remedied under a pure source-based tax system. First, because the dual system requires the use of an apportionment formula only for nondomiciliary banks, no home state/host state dilemma exists. Instead, a state can adopt a formula that is specifically tailored to apportion the income of nondomiciliary banks. Second, the use of the dual system prevents the tax avoidance (described previously) created by the increasing securitization of bank loans. Under the dual system, a domiciliary state would levy its tax on the entire interest income received by a domestic bank from the securitized loans.

Of course, the adoption of a franchise tax measured by net income as defined by the dual system of net income taxation will result in different treatment for banks and S&Ls than for general business corporations. Significant differences exist between general business corporations and financial institutions, however. On the one hand, business corporations produce a tangible product that is located in a single state. Financial institutions, on the other hand, deal in intangibles that are neither visible nor situated in one state; and unlike the assets of general business corporations, financial institution assets are very mobile. These differences dictate nonuniform tax treatment for the two kinds of entities.

ALTERNATIVE APPORTIONMENT FORMULAS

Dual System: Residence-Based and Source-Based Tax

In order to treat domiciliary banks and nondomiciliaries equally, states that choose the dual system would want to use a formula specifically tailored for nondomiciliary banks just as the residence-based portion of the tax is specifically tailored for domiciliary banks. States can accomplish this goal by adopting a uniform single-factor receipts formula for nondomiciliary banks. The proof of this proposition requires an understanding of which banks are taxed as out-of-state or nondomiciliary banks under the dual system.

Most interstate banking occurs through mergers between an out-of-state bank and an in-state bank or through de novo entry by a subsidiary of a bank holding company. Interstate banking through either of the above methods will result in an in-state bank; i.e. a bank that is taxed as a domiciliary. A bank that engages in interstate branchless banking (electronically or by mail) in a host or market state is an out-of-state bank; i.e. a bank that will be taxed as a nondomiciliary. A bank that engages in interstate banking through a branch is also an out-of-state bank for purposes of the dual system; i.e. a bank that will be taxed as a nondomiciliary. It is easy to see that it makes sense for the host state to choose a single-factor receipts formula to apportion the income of a branchless bank. By definition, a branchless bank has no place of business and no employees in the taxing state. Even in the case of a branch bank (whether state-chartered, national or foreign), however, a single-factor receipts formula with market state situs rules will generally attribute the most income to the nondomiciliary state.

The reasons for the superiority of the single-factor receipts formula are: (1) attribution rules for a (intangible) property factor typically duplicate those for the receipts factor; and (2) the addition of a payroll factor (i.e. a two factor receipts and payroll formula) would attribute more revenue to the host state than a single factor receipts formula only if the receipts to

payroll ratio of the branch in the host state is less than the average receipts to payroll ratio in the entire corporation.¹⁰⁷ This latter condition would require that the branch earn less revenue per employee than the average of the entire corporation, an unlikely event since the branch would presumably be able to take advantage of many services provided by the home-office employees of its parent corporation rather than hiring separate branch employees to provide such services.

Pure Source-Based Tax

States that adopt a pure source-based tax must select among several possible factors and situs rules. States may also alter the respective weights that they assign to the factors chosen in order to increase their revenue and/or favor their domiciliary corporations. This section describes and evaluates three of the formulas currently used by states to apportion the income of banks.

UDITPA Formula

The UDITPA formula contains a property factor (real and tangible personal property), a sales factor and a payroll factor. Given the importance of intangibles as an income-producing item for banks, the failure of the UDITPA to include intangible property in its property factor makes that formula unsuitable for bank income; and in fact, the Act specifically exempts financial institutions. While the omission of intangible property may not rise to the level of a constitutional flaw, it significantly changes how the income of a bank is spread among the states in which it transacts business. For example, the situs of real and tangible personal property is attributed to the state in which the property is physically located. In most cases, such property will be found in the domiciliary state of a financial institution. Consequently, an apportionment formula that uses only real and tangible property will benefit only the domiciliary state. If, as is true in the case of the UDITPA, the formula also contains a payroll factor the balance will be tipped even further in favor of the domiciliary state since most employees will be located there, too. Moreover, the use of the UDITPA formula may have a discriminatory effect. Real and tangible personal property (such as machinery and equipment) are likely to comprise a large percentage of the assets of a general business (nonfinancial) corporation, while intangible property will represent only a small fraction of its assets. This situation is reversed in the case of a financial institution. Typically, financial institutions have

very little real and tangible personal property, whereas intangible property, such as loans and securities constitute their entire business. Thus use of the UDITPA formula in connection with financial institutions results in the exclusion of most of their property from the formula, whereas the application of the same formula to general business corporations does not result in a similar exclusion.

New State Apportionment Formulas

Recognizing the defects of the UDITPA formula, some states have adopted new formulas specifically tailored to the business of banking. The new laws of New York and Minnesota represent two different approaches to the problem of apportioning the income of multijurisdictional banks.

The New York Law

In 1985, New York completely revised its bank tax to make it similar to the state's tax on general business corporations. Like general business corporations, New York uses a pure source-based tax for banking corporations. The factors chosen by New York to apportion the income of banking corporations are receipts, deposits, and payroll. The numerator of the payroll factor is limited to 80 percent of in-state wages, salaries and other personal service compensation.¹⁰⁸ The receipts and deposits factors are double-weighted.

The receipts factor consists of the ratio of receipts earned within New York to receipts earned everywhere. It includes: all income from loans, financing leases, rents; service charges, fees and income from bank, credit, travel and entertainment cards; net gains from trading and investment activities; fees from the issuance of letters of credit and traveler's checks; and all income from government bonds although a portion of such income is excluded from the tax base.

The regulation contains separate "situs" rules for each receipt. The rules have a strong domiciliary state bias. Consider, for example, the following receipts' situs rules.

(1) The situs of income from loans (other than credit card loans) is in New York if the loan is "located in New York".¹⁰⁹ A loan is deemed located in New York if the greater portion of income-producing activity relating to the loan -- i.e. the solicitation, investigation, negotiation, approval and administration -- takes place in New York. The definitions of these terms make it clear that in most cases all of the income-producing activity will be deemed to take place in the state in which the lending bank is located.¹¹⁰

(2) The situs of income from bank, credit, travel, entertainment and other card operations is the state of domicile of the credit card holder.¹¹¹

(3) The situs of receipts for services performed by the taxpayer's employees regularly connected with or working out of a New York office is New York if such services are performed within New York.

The deposits and payroll factors also exhibit a domiciliary state bias. The deposits factor is the ratio of the average value of deposits maintained at branches within New York to the average value of all deposits maintained at branches within and outside of New York.¹¹² Deposits made by an out-of-state individual or business are deemed to exist in the state in which the deposit is maintained. The payroll factor is the ratio of 80 percent of in-state wages, salaries and other personal service compensation to total wages, salaries and other personal service compensation.

The Minnesota Law

Minnesota revised its bank income tax law in 1987 and 1988. The factors selected by Minnesota -- payroll, property and receipts -- are similar to those in the UDITPA formula. The similarity between the two formulas ends there, however. Two differences are

particularly important. First, the Minnesota formula includes intangible property in the property factor, as well as tangible property and real property.¹¹³ Second, under the Minnesota law the three factors are not evenly weighted. Instead, the formula apportions income to Minnesota by comparing 70 percent of the receipts in state to receipts in all states, 15 percent of the property in state to property in all states, and 15 percent of the payroll in state to payroll in all states.¹¹⁴

The Minnesota situs rules, which have a distinctly market state flavor, differ significantly from the New York rules as the following examples illustrate:

1. Receipts from Loans.

The situs of income and other receipts from loans secured by real estate or tangible property is in Minnesota if such property is located in the state.

The situs of income and other receipts from unsecured commercial loans is in Minnesota if the proceeds of the loan are to be applied in the state.¹¹⁵

The situs of income and other receipts from unsecured consumer loans is in Minnesota if the borrower is a resident of Minnesota.¹¹⁶

2. The situs of income and other receipts from credit card and travel and entertainment cards is in Minnesota if the card charges and fees are regularly billed there.¹¹⁷

3. The situs of receipts from the performance of services is in Minnesota if the services are consumed in the state, regardless of where the services are performed.¹¹⁸

The state's situs rules for the property factor track those of the receipts factor.¹¹⁹ Payroll is attributed to Minnesota if an employee is (a) employed within the state, (b) actually working within the state, or (c) accountable to an office within the state.¹²⁰

Summary

Previously, four alternative bank taxes were described and evaluated. The franchise tax measured by net income as defined by the dual system of net income taxation was found to fulfill most of the criteria of a good tax. In order to implement the previous recommendation, then, Nevada should choose a single-factor receipts formula to apportion the income of nondomiciliary banks conducting activities within the state.

Should Nevada choose to adopt instead a pure source-based net income tax with formulary apportionment, the Minnesota apportionment formula could be used as a model.

OTHER ISSUES

Definition of Taxable Entities: What is a Bank?

Until recently, most states defined a "bank" in harmony with the regulatory definition of a bank. Consequently, a "bank" was defined as an entity regulated by the state's Department of Banking. Many states that used this definition taxed banks differently than they taxed other depositories such as savings and loan institutions. Now, however, states are beginning to enlarge their previous narrow definition of a bank in order to create tax parity among like institutions. The use of a definition of the taxable entity that includes all or most competing institutions will go a long way toward creating a neutral and fair tax system. State experiments in this area range from an expanded regulatory definition of a "banking corporation" to an open-ended definition of a "financial institution." The laws of New York, Michigan, and California illustrate the possibilities.

The New York Definition

The New York law applies to every "banking corporation" that is exercising its franchise or is doing business in New York. In general, a "banking corporation" is defined as:

(a) any corporation that is organized under the laws of New York, any other state, or country (U.S. or foreign) and that is doing a banking business, or

(b) any corporation the stock of which is 65 percent or more owned or controlled by a bank, thrift or bank holding company and that is engaged in a business that can be lawfully conducted by a commercial bank or is engaged in a business that is so closely related to banking or managing or controlling or managing banks as to be a proper incident thereto.

Essentially, then, a banking corporation is one which is either doing a banking business or is a subsidiary of a bank, thrift or bank holding company. The law defines a "banking business" as the business that a traditional bank is authorized to do and the business that any other corporation can do which is substantially similar to the business of a traditional bank.

The law makes the task of revenue authorities and taxpayers easier because it clearly defines which entities are subject to the tax. This is done by regulations which give specific examples of the kinds of entities that are banks, thrifts or bank holding companies and then by referencing the federal regulations that specifically list the subsidiaries of bank holding companies which are banking corporations under (b) above.

The Michigan Definition

Michigan defines a "financial organization" for the purpose of its single business tax as a "bank, industrial bank, trust company, savings and loan association, bank holding company ... credit union ... and any other association, joint stock company, or corporation at least 90% of whose assets consist of intangible personal property and at least 90% of whose gross receipts income consists of dividends or interest or other charges resulting from the use of money or credit."¹²¹ According to Michigan tax officials, many nonbank institutions that compete with banks for automobile,

mortgage and other loans come within this definition.¹²² Other entities that some commentators deem to be competitors of banks, such as securities brokerage and investment firms and insurance companies, are excluded from the Michigan financial organization tax.¹²³

By focusing on the unique aspects of banks and financial institutions -- i.e. institutions whose assets consist primarily of intangible property and whose income is generated through the use of money and credit -- the Michigan statute has succeeded in creating a significant degree of tax parity among competing entities.

The California Definition

California's financial institutions law contains a very broad definition of a taxable entity. The law provides for the apportionment of the income of banks and "financial institutions". Case law defines a financial institution as an entity that deals in "moneyed capital" in substantial competition with national banks. By administrative policy, the California Franchise Tax Board applies a "more than 50% of gross income" test. Thus, a financial institution is an entity that receives more than 50 percent of its gross income from the use of its capital in substantial competition with other moneyed capital. Thus, entities engaged in consumer financing, including automobile financing come within the definition of a financial institution.¹²⁴ Although California has not issued regulations implementing the vague case law, the state has published legal rulings that give examples of the kinds of entities that will be deemed financial institutions.

Summary and Recommendations

The neutrality principle dictates that competing businesses should be taxed similarly. A broad definition of the financial entity subject to the tax, such as the ones in use by California and/or Michigan, will best meet the mandate of the above criteria.

Because banks, S&Ls and competing entities earn income primarily from the employment and sale of intangible property, the Michigan definition of a financial institution -- an entity 90 percent of whose assets consist of intangible property and 90 percent of whose gross receipts income consists of charges resulting from the use of money or credit -- has the greater appeal.

Use of the Unitary Business Principle

States developed the unitary business principle to counter the problem of tax avoidance through interstate profit shifting by general business corporations.¹²⁵ Because they deal in intangibles, banks can shift assets and profits among taxing jurisdictions much more easily than general business corporations. According to the unitary business principle, the apportionable tax base of multistate Corporation A that is doing business within State X includes the combined income of all members of Corporation A's unitary group, which consists of the parent and any of its controlled (i.e. related by more than 50% common ownership) subsidiaries that are engaged with it in a "functionally integrated" enterprise.¹²⁶ The amount of the combined unitary base that is attributable to Corporation A's activities in State X is determined by multiplying the base by the state's apportionment formula. The numerators of the factors will include the property, payroll and receipts of Corporation A, while the denominator of the formula must include the gross receipts, property, payroll, etc. of the entire unitary group,

Corporate taxpayers have criticized the states' use of the unitary business principle, claiming that a clear and economically valid definition of a unitary business is lacking. The U.S. Supreme Court has stated that "the prerequisite to a constitutionally acceptable finding of unitary business is a flow of value, not flow of goods."¹²⁷ Taxpayers assert that because the method is based upon such a nebulous and indefinite concept, states can and do use the method to require the combination of affiliates

that are engaged in entirely unrelated businesses, thereby causing distortions in their tax liability.

Fortunately, the question of unrelated businesses seldom arises with banks and bank-like entities.¹²⁸ Federal law prohibits banks and bank holding companies from controlling any subsidiaries that are not engaged in activities "incidental to the business of banking" in the case of national banks¹²⁹ or "closely related to banking or managing or controlling banks" in the case of bank holding companies.¹³⁰ Hence, no bank or bank holding company subsidiary can engage in a business unrelated to that of banking, removing the major impediment to the use of the unitary business principle.

An important application of the unitary business principle in connection with state taxation of banks is the protection of the integrity of a state's franchise tax. As noted, many states have adopted a franchise tax measured by net income for banks since that tax provides the only method by which states can include the income from federal securities in a bank's tax base. Yet, because not every state has a franchise tax and because bank assets are very mobile, the franchise tax is easily avoided through "tax planning" techniques such as the following:

Assume that Bank X is a domiciliary bank of State A. State A has a franchise tax and taxes federal securities. Bank X can avoid the tax on federal obligations by transferring its federal securities to Subsidiary Y located in State B, a state that does not have a bank franchise tax and cannot, therefore, tax the income from such securities.

The use of the unitary business principle would allow State A to combine the income of Subsidiary Y with that of Bank A for purposes of its state tax.

The unitary business principle is compatible with both the pure source-based and dual tax systems. A residence-based tax is easily translatable into the source-based tax that is necessary for combined reporting. A residence-based tax can be represented

by an apportionment formula that attributes 100 percent of the factors (i.e. gross receipts, intangible property etc.) to the domiciliary state. Once the residence-based tax is transformed into a source-based apportionment formula, the factors of all of the members of the unitary group can be combined to determine what fraction of the combined apportionable income base is attributable to the taxing state. The actual tax is then calculated by applying the rate to the base and subtracting the credit. As described earlier, the use of a single-factor receipts formula will, in most cases, attribute the most income to the taxing state.

Jurisdiction Rules

As noted, banks can and do conduct business in many states without having a physical location there. Many banks regularly conduct their activities of making loans and soliciting deposits by mail, telephone or electronic means. As electronic communications systems become more sophisticated, interstate branchless banking will increase. Such an environment renders jurisdiction rules based upon a physical presence obsolete.

Branchless banking can create tax avoidance and tax discrimination between in-state and out-of-state banks. Consider, for example, the following common situation. Company A is a credit card subsidiary of a full-service bank. Its only brick-and-mortar place of business is in State A. Company A solicits its credit card customers solely by mail in all fifty states. Through these mail-order operations, Company A makes loans to consumers in every state, earning interest and fee income from their residents.

Even if we assume that one of these states, State B, has a source component, it normally will not tax Company A on the interest and fee income it receives from residents of State B because Company A, which is domiciled in State A, does not have a brick-and-mortar presence there. Even with the use of the unitary business principle, State B will not be able to tax its apportioned share of the interest and fee income from Company A's credit card

subsidiary unless Company A has a taxable affiliate located in State B. The domiciliary banks in State B, on the other hand, may also issue credit cards to residents of State B. Unlike Company A, State B's domiciliary banks will pay taxes on the interest and fee income to State B.¹³¹

In spite of the fact that branchless banking may result in tax avoidance and discrimination against domiciliary banks, most states still have tax jurisdiction rules that prevent them from taxing out-of-state banks that regularly solicit business from their residents by mail, telephone or electronic means. It is unlikely that the constitution will be interpreted to prevent states from adopting broader jurisdiction rules.¹³² As the U.S. Supreme Court has noted in upholding a state's exercise of judicial jurisdiction over an out-of-state defendant who had no office or other physical presence in the state asserting jurisdiction "it is an inescapable fact of modern commercial life that a substantial amount of business is transacted solely by mail and wire communications across state lines, thus obviating the need for physical presence within a state in which business is conducted."¹³³ One state, Minnesota, has broadened its tax jurisdiction rules by statute. Similar legislation is pending in Massachusetts. According to the ACIR survey, eleven other states do so by administrative policy.

Final Comment

The use of the unitary business principle in connection with the optimal method of net income taxation described previously is a valuable tool in the present interstate banking environment. Some state laws allow the tax administrator to apply the unitary business principle when necessary to reflect properly the income of a multistate entity. Nevada should consider adopting a similar option.

Today, sophisticated technology and marketing techniques allows financial institutions to conduct their activities across

state lines by mail and electronically. The failure to subject these out-of-state branchless banks to Nevada's tax jurisdiction has a discriminatory effect against in-state entities.

Endnotes

1. 17 U.S.(4 Wheat.) 315 (1819).
2. An excellent and detailed discussion of the federal immunity doctrine can be found in P. Hartman, Federal Limitations on State and Local Taxation, 219-379, 1981.
3. Weston v. Charleston, 27 US 465
4. US Const. Art I, sec.8, cl. 27.
5. 12 USC sec. 3124 (a).
6. 13 Stat. 100 et.seq. Earlier Congress had passed the Currency Act of 1862 which exempted from state taxation "all stocks, bonds, and other securities of the United States held by individuals, corporations or associations within
7. 13 Stat. 112.
8. McCulloch, 17 U.S. at 435.
9. Section 41 also permitted a state to tax the real estate of national banks to the same extent th
10. 42 Stat. 1499.
11. 44 Stat. 223.
12. 358 U.S. 450 (1959).
13. 101 So.2d 70 (1958), appeal dism'd and cert. denied, 359 U.S. 28 (1959).
14. 15 U.S.C. sec. 381 (1959).
15. See P. Hartman, supra n.11 at 37
16. 12 U.S. C. sec. 548 (1982).
17. Phone conversation with Burns Baker, Deputy Commissioner of Banking, July 29, 1988.
18. NRS 658.015.
19. The eleven states are: Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, New Mexico, Oregon, Utah, W

20. Phone conversation with Burns Baker, Deputy Commissioner of Financial Institutions, July 13, 198
21. Id.
22. See, NRS 666.225-666.386.
23. Nevada constitution, Art. 10, sec.
24. Opinion of Nevada Attorney General
25. Stat. 1907, p.202.
26. NRS 367.025.
27. 463 U.S. 855 (1983).
28. Federal law permits states to tax federal obligations only if they adopt a franchise or other nonproperty tax. See text at notes 12-14.
29. 463 U.S. at 864, n.9.
30. Also, during its 1985 session, the legislature passed a bill that provided for taxation of the tangible personal property of banks to be effective upon passage of the
31. The history of the repeal of the Nevada bank shares tax was provided by Lorne J. Malkiewich, Legislative Counsel, Legal Division, State of Nevada.
32. During their early history, national banks were precluded from offering residential real estate loans. In fact banks were permitted to make 25 year mortgage loans only in 1964. (Housing Act of 1964, 78 Stat. 769, 12 U.S.C. sec
33. J. Barth and M. Regalia, "The Evolving Role of Regulation in the Savings and Loan Industry," in The Financial Services Revolution: Policy Directions for the Future, C
34. 12 U.S.C. 1464 (b) (1).
35. W. Lovett, Banking and Financial Institutions Law in a Nutshell, p. 220 (1983).
36. 12 U.S.C. secs. 1437 et.seq.
37. 12 U.S.C. secs. 1461-68.
38. 12 U.S.C. secs. 1701-50.
39. Barth and Regalia, supra, n. 41

40. See, Title IV of the Depository Institutions Deregulation and Monetary Control Act of 1980, 94 Sta
41. NOW accounts originated in Massachusetts and New Hampshire in 1972. The NOW account permitted S&L customers to transfer funds from their savings accounts to third parties by executing a negotiable order of withdrawal direc
42. Barth and Regalia, supra, note 4
43. "'Wild card" or "Parity" clauses are described in the text infra at note ***.
44. For a list of the cases and courts, see, "Recent Developments", 65 CORNELL L. REV. 438, 451.
45. Barth and Regalia, supra, n.41 a
46. 12 CFR 556.5.
47. See, Competitive Equality Banking Act (CEBA) of 1987, 101 Stat. 552.
48. The 1951 Act did not create real tax parity between banks and S&Ls, however. Until 1962, S&Ls remained largely exempt from federal taxation because they were allowed to establish a reserve for bad debts and to fund the reserv
49. 12 U.S.C. sec. 1464(h). Although this section is phrased in the negative, courts have uniformly interpreted it as an affirmative grant of taxing authority to states. See e.g. Sooner Federal S & L Ass'n v. Oklahoma Tax Com'n, 662
50. Phone conversation with Burns Baker, Deputy Commissioner of Financial Institutions, July 13, 198
51. See, NRS Chaps. 657, 669-678.
52. Division of Financial Institutions, Asset Valuation as of July 1, 1987.
53. Nevada depositories include commercial banks, savings & loan associations, thrifts and credit unions. The total figure is from the Division of Financial Institutions, Asset Value as of July, 1987. Assets of securities firms ha
54. Phone conversation with Burns Baker, Deputy Commissioner of Banking, July 13, 1988.
55. Apparently the disparity in the fee structure -- semi-annual payments for banks and annual payments for S&Ls -- was not

intentional. During the 1988-89 legislative session, the error will be corrected. Phone conversati

56. Phone conversation with Burns Baker, Deputy Commissioner of Financial Institutions, July 29, 198

57. "Branchless banks" are discussed in the text at notes 71-74, infra.

58. Phone conversation with Burns Bake

59. Nevada law does not deem an entity that makes loans, but does not solicit deposits, a financial institution. Thus, loan production offices do not need a license, nor do entities that solicit credit card loans. Phone conversation with

60. The Massachusetts law provided that an out-of-state bank holding company with its principal place of business in one of five New England states (Connecticut, Maine, New Hampshire, Rhode Island, and Vermont), which is not directly

61. See, Conference of State Bank Supervisors, State of the State Banking System, (1988). For a complete description of state regulation of interstate banking, se

62. H. Rep't. No. 99-426, 99th Congres

63. 757 F.2d 453 (2nd Cir., 1985); cert. denied, 106 S.Ct. 2926 (1986).

64. "New England Bank Without Walls Depends on US Mail to Bring Deposits Offering Investors Higher Rates". American Banker, p. 24, June 23, 1986.

65. "TSO Welcomes Long-Distance/Nationwide Customers With System That Could Make Walk-in Banking Passe", American Banker, backpage, Aug. 4, 1986.

66. "Chemical Enters Connecticut Consumer Market with Phone and Mail Premium Banking Service", American

67. See, Conference of State Bank Supervisors, State of the State Banking System, 1988.

68. Id.

69. Id.

70. For a description of the pending federal legislation, see ACIR, supra, note 1.

71. According to regulatory accounting practices only loans that are sold without recourse can be removed from the institution's balance sheet.
72. See, e.g. "Securitization: What Will They Package Next" American Banker, January 7, 1987, pg. 1; "Securitization May Soon Extend to Commercial Loans", American Banker, December 16, 1987, pg. 16.
73. Id.
74. See, 1985 N.Y. Tax Law, sec. 1454; and text at notes 119-120 infra.
75. See, Minn. Stat. Ann. sec/ 290.191
76. See, e.g. Minn. Stat. Ann., sec. 2
77. A copy of the survey results is attached to this report as Appendix A.
78. Figures are taken from research conducted by the Nevada Department of Tax. Valuations of the real property of Nevada banks are excluded from the valuations of both the bank shares tax and the personal property tax since the
79. John Kincaid and Sandra B. McCray, "State Bank Taxation and the Rise of Interstate Banking: A Survey of States", ACIR Staff Report, Intergovernmental Perspective, Fall
80. A copy of the survey results can b
81. Jerome R. Hellerstein, State Taxation, 266 et.seq. (Warren, Gorham, & Lamont, Boston & New York,
82. Memphis Bank & Trust Company, 10
83. See, Paul J. Hartman, supra, not
84. For a discussion of state franchise taxes on banks, see Sandra B. McCray, "State Taxation of Interstate Banking", 21 GA. L. REV. 283 (1986). A state that imposes a franchise tax measured by net worth can also include the value of
85. See text at note *** supra, and
86. For a complete description of the problems with a pure residence-based tax, see, ACIR, "State Taxation of Banks: Issues and Options", supra, note 1; and McCray, "Constitutional Issues in the Apportionment of Income: Financial I

87. Paul J. Hartman, supra, note 11
88. Paul J. Hartman, supra, note 2 at 522; see Underwood Typewriter Co. v. Chamberlain, 254 U.S. 120.
89. 254 U.S. 113 (1920).
90. Jerome R. Hellerstein, State Taxation, 323 (Warren, Gorham & Lamont, Boston, New York 1983).
91. Id. at 325
92. Paul J. Hartman, Federal Limitations on State and Local Taxation, 523 (The Lawyers Co-operative Publis
93. In its response to a recent ACIR survey, Alabama reported that it allows banks to use the UDITPA apportionment formula to calculate their separate tax liabili
94. As a general rule an apportionment formula should comply with two principles: (1) the factors should bear a reasonable relationship to the income being apportioned, and (2) the situs rules should represent the location of the activi
95. Moorman Mfg. Co. v. Bair, 437 U.
96. In fact, the Court has recognized three different places at which the situs of a debt might be fixed: the domicile of the owner (creditor) (State Tax on Foreign Held Bonds, 15 Wall. 300 (1872); Kirtland v. Hotchkiss, 100 U.S. 491
97. As noted, both states have a legitimate claim to include the interest and fee income from the loan in the numerator. Both states have the necessary nexus to do so. See, supra, note 108.
98. This is the UDITPA formula, which is used by approximately 11 states to apportion the income of banks; see, Kincaid and McCray, supra, note 87.
99. See text at notes 79-84, supra.
100. Commerce Clearing House, All States State Tax Guide, 1523. Seven states are not represented in the CC
101. Alabama Code, sec. 40-18-21
102. The Rhode Island law allows domestic banks a deduction, but not a credit, for taxes paid to other states. Rhode Island G.L., secs. 44-14-11 and 44-14-13.

103. See, D.H. Holmes Co.Ltd v. McNamara, 56 USLW 4400, 5-17-88; and see, Sandra B. McCray, "Constitutional Issues in State Apportionment of Income", in press A
104. The credit system is more complex for those states that tax the worldwide income of their domiciliary banks. In such a case, a state would allow its domiciliary banks a prorated share of the foreign tax credit calculated under
105. Many commentators have noted the complexity of U.S. system; particularly the calculation of the foreign tax credit and the application of the source rules. For example, the Internal Revenue Code ("Code") gives a tax credit onl
106. Hellerstein, supra, note 93 at 2
107. The following calculation illustrates this proposition.
Define R, P, and B as the total receipts, payroll, and apportionable base, respectively, of the entire corporation, and R_p and P_p as the receipts an
108. The numerator of the payroll factor was limited to 80 percent to encourage banks to maintain a large employee base in New York. See, Kaltenborn, Is New York's Bank Tax Ready for the 1990's? 4 J. STATE TAX. 225 (1985).
109. 1985 N.Y. Tax Law, sec. 1454; 20 N
110. Consider, for example, the following definitions of the terms "solicitation", "investigation", "negotiation" and "administration." According to the regulation "active solicitation" occurs when an employe
111. 1985 N.Y. Tax Law, sec. 1454; 20 N
112. 1985 N.Y. Tax Law, sec. 1454; 20 N
113. Minn. Stat. Ann. sec. 290.191, sub
114. Id.
115. Id., sec. 290.191.
116. Id.
117. Id.
118. Id., sec. 290.191 (6) (1).
119. Id.
120. Id.

121. Michigan Stat. Ann. 7.558 (10).
122. Phone conversation with Fred Lynch, Administrator, Michigan Single Business Tax, August 16, 1988
123. Id.
124. Phone conversation with Benjamin Miller, Counsel for Multistate Tax Affairs, California Franchise Ta
125. Because the law treats parent corporations and their subsidiaries as isolated entities, a group of related corporations doing business across state lines can practice tax avoidance through interstate profit shifting. Conside
126. Corporation A may file a combined report in State X. After eliminating intercorporate transactions (because the transactions between Corporation A and the members of its unitary group cannot produce a real economic profit or lo
127. Container Corp. of America v. Franchise Tax Board, 463 U.S. 159, 178 (1983).
128. California, a pure source-based income tax state, has however recently begun dealing with the application of the unitary business principle to unitary enterprises that are engaged in both general businesses and financial businesses.
129. 12 U.S.C. 24 (1984).
130. 12 U.S.C. 1843(a) (1982).
131. It is true that State A could assess its tax on the income received by it from Company A's credit card activities. It is unlikely to do so, however, since one of the primary reasons for setting up credit card subsidiaries
132. See, McCray, "State Taxation of Interstate Banking", 21 GA. L. REV. 283 (1986).
133. Burger King v. Rudzewicz, 471 U.

CHAPTER 22

OTHER TAXES

The following chapter contains the description of three different taxes: Estate Taxation, Insurance Premiums Taxation and the Taxation of Controlled Substances. All three taxes raise small amounts of revenue for the state, ranging from the controlled substances state that has not yet raised any revenue, to the Insurance Premiums tax, which yielded about 1% of the General Revenue. Because of their relatively small contributions to the state's revenues, these three taxes have all been included in this one chapter.

Death and Estate Taxation in Nevada

Estate Taxation

All fifty states and the District of Columbia impose some form of "death tax," either their own state or inheritance tax plus the a special estate "pick up" tax.

An inheritance tax (19 states) is imposed on the value of an amount of property or other form of wealth that is transferred from a decedent's estate. Thus the tax is levied on the heirs. Although residents and non-residents tend to be taxed at the same rate, all states that employ the inheritance tax provide for a combination exemptions and/or graduated on tax rates that provide for a lower tax the closer is familial relationship between decedent and heir.

An estate tax (7 states) is a single levy based on the market value of the entire estate at the time of death, on all of the decedent real and personal property wealth in excess of certain exemptions and deductions. Once the estate's taxable value is determined, a tax rate is then applied to the tax base prior to the estates's distribution among the decedent's beneficiaries.

The third type of death tax is the "Pick up" tax, which, as will be discussed below, takes advantage of a federal tax code provision that permits the decedent's estate to recapture a dollar-for-dollar tax credit for the state estate taxes paid up to certain amounts based on the size of the estate. Twenty five states, including Nevada, use only this "pick-up" approach.

A fourth tax that is related to this discussion is the gift tax (7 states) which is imposed upon those who receive gifts before time of death. For the states that use them, gift taxes are, in nearly all respects unified with the death taxes. That is, the key death tax determinants of the statutory rate the structure and the tax classification of familial relationships are nearly the same. The rationale for this tax is to discourage persons who, in the contemplation of death, make all or part of a gift of part or of all an estate to avoid a death tax. Gift taxes paid during the donor's lifetime are generally credited (dollar-for-dollar) against any death taxes due.¹

These taxes are wealth transfer taxes; taxes aimed at reducing concentrations of wealth that can be perpetuated through the inheritance of large estates. The philosophical argument for these taxes is bolstered by the ease of administering and collecting such taxes. At the time when most states enacted death taxes-between 1864 when Pennsylvania enacted the first death levy to 1911 when Wisconsin began the movement towards income taxes-it was not difficult for officials to determine who died, the value of the estate, or the heirs.

In addition, prior to the imposition of income taxes, the death taxes were justified because they were important revenue producers. However, the contribution of these taxes to the General Fund has declined dramatically over time. This point is underscored in the case of Nevada where collections from death taxes currently account for 5.5 million (FY 1987) or 1.1 percent about one percent of the total General Fund own-source revenues.

Furthermore, some economists argue that a death tax should be viewed not only as a wealth transfer levy, but also as a means to correct for the fact that under existing state, local and federal

viewed not only as a wealth transfer levy, but also as a means to correct for the fact that under existing state, local and federal income tax laws, "income" for tax purposes is defined much too narrowly. Indeed, in Nevada there is no income tax at all. Thus, taxing one's wealth transfer at death (or the heir that receives the new "income") becomes a means to capture at least some of the unrealized additions to wealth, i.e. income.

Nevada's Pick-Up Tax

At present, Nevada and 24 other states have only a pick-up tax, while the other states use a pick-up tax in conjunction with either an estate, inheritance or gift tax. Although Nevada only adopted the pick-up tax in 1986, making it the last state to adopt a death tax, it was the second time that Nevada had passed a wealth transfer tax.

Nevada imposed an inheritance tax in 1913, but repealed it in 1925, and in 1939 a constitutional amendment was passed making death taxes unconstitutional in the state of Nevada.² In 1925, when the inheritance tax was repealed in Nevada, there were fears that interstate differences in levels of death taxation were influencing people's residency decisions. The federal tax credit legislation, however, passed in 1926, diminished, if not finished, all interstate competition as states could collect death taxes without imposing any cost above the federal estate taxes. In light of the diminution of the interstate competition issue, it is unfortunate that Nevada kept death taxes off the books for so many years because that represents revenue that Nevada could have earned with little administrative cost or risk. Perhaps in recognition of this, Nevada amended its constitution in 1986 to permit an estate tax, but the tax is limited to the "...credit allowed by federal law."³

The long term Nevada reluctance to adopt even the pick-up tax is most puzzling once one considers the mechanics of the tax interplay between federal and state tax law. If there is anything close to intergovernmental free money in our system of federalism,

would flow to the federal treasury rather than to the state treasury.

Here is how it works: at the time of death, the value of the decedent's estate is calculated and a federal tax is imposed. There is, in addition, a maximum federal tax credit established, which also is based on the value of the estate. The tax credit is, at most, equal to the full amount of taxes due. The pick-up tax is meant to capitalize on this tax credit. If the state has a pick-up tax, and all states currently do, then the state will capture part of the levy owed on the federal estate tax. The taxes are paid to the state up to the value of the maximum credit, and the federal government is paid the difference between the credit and the total amount due.

These mechanics are illustrated in Table 1. Assume that a Nevada resident dies, having a gross estate of \$740,000. The executor of the estate files a federal tax return, which permits subtractions of amounts for expenses and debt (\$90,000). The next result is a federal taxable estate of \$650,000. From the federal tax tables (not shown here), the Federal Estate Tax turns out to be \$18,500.

Prior to the enactment of the pick-up tax in March 1987, the full \$18,500 would go to the U.S. Treasury. With the pickup, however, the State now steps into the tax computation, and "picks-up" \$16,000 through the credit. That is, \$16,000 of the \$18,500 is paid not to the U.S. Treasury but to Nevada. However from the point of view of the decedent's estate, the dollars to be paid to some level of government remain the same. The credit to Nevada has resulted in a dollar-for-dollar reduction of the amount to be paid to the U.S.

So, Nevada was wise to undo its restrictive Constitutional restraints and permit the Legislature to make a statutory decision to levy a state death tax at least up to the amount of the federal credit.

A Look Ahead

As presently structured, the estate tax will never become an

TABLE 22.1

ILLUSTRATION OF COMPUTATION OF
FEDERAL CREDIT FOR STATE DEATH TAXES

Gross Estate		\$740,000
Less: Expenses and Debt		<u>\$ 90,000</u>
Taxable Estate		\$650,000
Less: Specific Estate Tax Exemption		<u>\$ 60,000</u>
Adjusted Taxable Estate		\$590,000
Federal Estate Tax on Adjusted Taxable Estate		\$211,300
Less: Unified Credit		<u>\$192,800</u>
Initial Federal Estate Tax Due Before State Death Tax Credit		\$ 18,500
Maximum Credit Available		
Credit on 1st \$440,000	\$10,000	
Credit on next \$150,000	<u>\$ 6,000</u>	
State Death Tax Credit Nevada "Pick Up"	\$16,000	<u>\$ 16,000</u>
Net Federal Estate Tax Payment		\$ 2,500

Source: Commerce Clearing House, "Federal Estate and Gift Taxes Explained," Chicago, IL, 1988 Edition.

A Look Ahead

As presently structured, the estate tax will never become an important contributor to the state treasury. Based on data provided by the Internal Revenue Service, the Nevada Department of Taxation estimates that in a typical tax year the tax will continue to contribute only about one tenth of a percent of general fund revenues (as the general fund is presently defined). As noted, that meant \$5 million in fiscal 1987--not a trivial amount, but then again, not something that an efficient government should ignore. That there is some importance to generating \$ 5 plus million per year (in current terms), two questions arise: should Nevada go the direction of several other states and adopt its own estate or inheritance tax in addition to its pick up? And, should the State undo its present Constitutional restriction limiting the tax to the amount of the pick-up.⁴

There are at least two reasons to answer "yes" to the first question. One is that, assuming Nevada increased its death taxation level to the average of other states, revenues would increase from to about the present about double--from about \$5.5 million to just over \$12.0 million.⁵

Second, as time passes, that may become a somewhat conservative number as the population profile of the Nevada population ages. Thus, keeping the death tax options open may make sense for Nevada in the years ahead.

The words "may" and "somewhat" in the previous paragraph are intended as a caution here since one must not lose sight of the fact that as a practical matter, in most states and at the federal level an estate has to be quite large to become taxable. At present, for example, no federal estate tax is levied on an estate valued as less than \$600,000. If follows, of course, that there is also a zero pick-up tax on these "small" estates.

As for the second question--should Nevada take the estate tax out of the constitution--the answer is certainly "yes." Why? Because here is a small example--but, nonetheless, one that could become a model example--of the folly of writing all specific tax law into a Constitution. Earlier it was mentioned that the pick-up

was about as close as one could get to free intergovernmental revenues. That may sound good at first; but the downside is that it puts the states generally, and Nevada especially, subject to a change in federal law. In short, what if in this foreseeable era of persistent budget deficits the Congress decides to do what is now under some discussion--either eliminate the federal credit altogether or replace the credit with a deduction. Under either case, Nevada will be suddenly dropped out of the death tax arena once again.

And who will make up for that lost fiscal position: the current Nevada residents. Indeed, an appropriate way to view the matter of death taxes is to remember that if the State forgoes death taxes, then one must then raise (or forgo a reduction in) the taxes on the living.

Insurance Taxation

Insurance taxation in Nevada is a relatively stable area of tax policy in spite of a flurry of legislative activity occurring in other states in recent years. Insurance tax statutes in other states have been challenged in the courts over the issue of discriminatory treatment of out-of-state companies. Many states have felt compelled to restructure their insurance tax statutes in the face of legal challenges. However, the Nevada insurance premiums tax structure has not been the subject of complex legislation. The yield from the premiums tax, however, has been increased through rate changes.

Tax Base and Rates

The basis for the insurance tax is the gross amount of premiums received on business transacted in Nevada less certain items such as return premiums and premiums received for reinsurance. A return premium is a dividend applied to payment of premiums and any portion of premiums returned after cancellation or termination of a policy.

Chapter 293, Laws of 1983, increased the premiums tax rate from 2 percent to 3 percent, on a temporary basis, beginning with the 1983-84 fiscal year. The rate was originally scheduled to be reduced to 2 1/2 percent after FY 1984-85. However, subsequent legislative action extended the 3 percent rate and made it permanent. Nevada is one of a handful of states which applies a single rate to all lines of insurance.

Yield

Table 22.2 indicates the yield from the insurance premiums tax since 1980. The large increase in FY 1984 reflects the implementation of the rate change from 2 to 3 percent.

TABLE 22.2

INSURANCE PREMIUMS TAX: 1980-1988

(Millions)

<u>Fiscal Year</u>	<u>Insurance Premium Tax Revenue</u>	<u>Percent Change</u>
1980	\$11.9	--
1981	13.7	15.1%
1982	14.9	8.8
1983	15.4	3.4
1984	30.5	98.0
1985	28.4	-6.9
1986	32.9	15.8
1987	40.7	23.7
1988	43.7	7.4

Source: Nevada Executive Budget for FY 1988 and FY 1989.

Industry Structure

Nevada does not have a large domestic insurance industry. Most of the business of Nevada-based insurance companies involves the sale of health insurance to Nevada consumers. This feature of the insurance industry in Nevada has considerable significance for the formulation of state tax policy. In particular, the absence of a large domestic insurance industry makes the retaliatory feature of insurance premiums taxation less significant in Nevada compared with many other states. Under the system of retaliatory taxation which is used by most states, a domestic firm in state A must pay taxes at the rate imposed by state A on foreign firms from state B, even if state B has a lower statutory rate. For example, if a Nevada firm sold insurance in Iowa where the premiums tax rate is 2 percent, Iowa would impose the higher rate of 3 percent on the Nevada firm, as retaliation for the 3 percent rate imposed by Nevada on the Iowa firm. The system of retaliatory taxation has the effect of discouraging states from increasing their premium tax rates, since the domestic firm may have to pay higher taxes to other states as well as paying higher tax on its in-state business. Domestic insurance companies are able to argue that any increase in the premiums tax rate in their home state will be magnified and that much of the additional tax will benefit other states.

This argument is not as relevant in Nevada because the number of domestic companies who sell business in other states is very limited. The regional home office tax credit is a useful measure of the size of the domestic Nevada insurance industry. (The features of this credit are described below.) In 1987, only five companies qualified for this credit. Total net taxable premiums for these five firms were \$145 million, approximately 10 percent of the \$1.4 billion of total net premiums subject to tax. These companies are health insurance companies doing all or most of their business in Nevada. Because very few Nevada insurers do business

in other states, the retaliatory tax feature did not have a major impact when Nevada increased the premiums tax rate from 2 percent to 3 percent.

Regional Home Office Tax Credit

The regional home office credit is a credit against tax liability for insurers who maintain a "home" or "regional" office in Nevada. An insurer is qualified for the credit if:

1. The insurer owns the building which is the basis for the reduction. Buildings owned by "parent, subsidiaries, or affiliate" corporations do not meet this requirement;

2. The insurer must have owned the property upon which the credit is based for the entire calendar year for which the reduction is requested;

3. The insurer must occupy at least 70 percent of the usable space in the building to transact its insurance business or, if a general or limited partner, the insurer must occupy 100 percent of its ownership interest in the building; and

4. In the case of the regional office credit, an insurer operating a regional home office must have at least 25 employees located there and provide the supervision, underwriting, issuing and servicing of the insurance business of the insurer for at least two states. Offices that mainly provide sales support do not qualify for the credit.

The credit is calculated as 50 percent of taxes due plus a credit of ad valorem taxes actually paid. However, the credit may not reduce the net tax to less than 20 percent of the amount of gross premium taxes payable.

Some insurers, who do not qualify for the credit, have filed their taxes under protest asserting discriminatory treatment as a result of the regional home office credit. However, these protests have not been perfected through legal action and no litigation has resulted. The lack of a legal challenge may be due to the fact that no benefit would accrue to the litigant if the credit were voided. The amount of the credit was \$2.1 million or 5 percent of total liability in calendar year 1987.

Application to Health Insurers

Certain issues that arise in other states have already been addressed in Nevada. For example, nonprofit health service plan corporations, such as Blue Cross/Blue Shield, and health maintenance organizations are exempt in some states. Blue Cross/Blue Shield and HMOs, however, are subject to tax in Nevada so that health insurers are treated in a similar manner regardless of legal form.

Conclusions

The insurance premiums tax is a relatively straightforward revenue source in Nevada. The coverage of the tax is relatively broad and a uniform rate is applied to all lines of insurance. Unlike other states, Nevada has not been confronted with the need to restructure its premium tax.

Taxation of Controlled Substances

The imposition of taxes on controlled substances is a relatively new phenomenon, conceived in part, in response to the growing drug problem and the growing underground economy which the drug trade has created. Nevada is one of a dozen states that has a tax on controlled substances on the books. Nevada and many other states who currently levy taxes on controlled substances, use tax stamps as they are used to tax cigarettes and alcohol; the seller must purchase and affix these tax stamps to his or her products as proof of tax payment. If a dealer is caught with goods that do not have the stamp, then s/he will face a penalty for non-payment, prosecution for tax evasion, and the criminal charges for selling and possessing a controlled substance without legal right.

The goal of this tax is not to make significant contributions to the state treasury, but rather to discourage drug trafficking. Like any businessperson, a dealer must turn a profit. If the dealer does buy the stamps, the cost of procuring and selling drugs rises. If s/he does not raise the price of the drugs to the consumer, the profitability of selling drugs decreases. This helps to discourage drug trafficking. If the dealer does raise the price, then this will help to discourage consumption.

Taxation of controlled substances makes it easier to prosecute drug traffickers. If a dealer is caught and is found to owe outstanding taxes, then law enforcement officials can prosecute, and so can tax officials. The tax penalty is 100 percent of the tax in addition to the taxes owed. Tax officials can bill the dealer for the amount of the tax and the penalty due, and can initiate collection efforts by attaching motor vehicles, bank accounts, real estate and other assets.⁶ This gives the state added resources with which to combat the drug problem. The tax also gives the state a way to tap into the enormous wealth that is

also gives the state a way to tap into the enormous wealth that is generated in this illegal economy.

Administration of the Tax

The Nevada law requires that a dealer in controlled substances pay an annual fee of \$250.00, in addition to taxes as follows: \$100.00 for each gram, or portion thereof, of marihuana; \$1000.00 for each gram of any other controlled substance; or \$2000.00 for each 50 dosage units of a controlled substance that is not sold by weight. Stamps are then affixed to the drugs as proof of tax payment. These stamps are to be purchased from the Department of Taxation. Any information concerning the purchaser of the stamps is confidential, and no criminal charges can be brought on the basis of the information collected by the Department of Taxation.

Assessments and Collections in Nevada

Although no stamps have been sold, and no money has yet been collected, the state has made 34 assessments worth \$26.7 million dollars.

Effectiveness of the Controlled Substances Tax

The success of controlled substances taxes has varied greatly across the states that have adopted them. The law adopted in both South Dakota and Kansas have had legal challenges that have halted implementation of the law. The state that has had the most success is Minnesota, and it can be used as the model for other states. Minnesota, where the Supreme Court upheld the constitutionality of the law, has already collected \$444,361 in real estate and from bank accounts and has assessed \$16.77 million between August 1, 1986, when the law took effect, and August 31, 1988.⁷

Refining the Nevada statute to more precisely follow the Minnesota example, there is one change to the current law that Nevada should consider adopting. The Department of Taxation should not collect any information concerning the purchaser of the stamps. This protects the dealers' Fifth amendment right against self-incrimination, and weakens any challenges to the law's constitutionality. Although the Department of Taxation now assures confidentiality of the information collected, not having that information is the best way of insuring that the promised confidentiality is never breached.

ENDNOTES

1. For a detailed state-by-state description of state death and gift taxation, see, Significant Features of Fiscal Federalism, 1989 Edition, Volume 1, Washington, D.C., 1989.
2. Financing State and Local Government in Nevada, Zubrow, Decker and Plant, State Printing Office, Carson City, NV., 1960.
3. Nevada Tax Reporter, Commerce Clearing House, Washington, D.C. c. 1987.
4. The additional question of its earmarking is discussed in Part I of this full report.
5. U.S. Advisory Commission on Intergovernmental Relations, Measuring State Fiscal Capacity, 1989 Edition (forthcoming).
6. Ebel, Robert and Philip M. Dearborn, "A Tax on Illegal Drugs?," The Washington Post, November 23, 1986.
7. Levine, Richard. "Koch Proposes Tax on Drugs to Aid Police," The New York Times, October 3, 1988.

CHAPTER 23

STATE AND LOCAL DEBT

ROLE OF STATE AND LOCAL DEBT

State and local debt issuance plays two types of roles in state and local government. First, state and local governments can borrow in order to finance capital projects instead of levying taxes and fees on a current basis. The debt has to be repaid, of course, but in this manner governments can spread out their payments for capital expenditures. Because most state and local debt is exempt from federal income taxation, state and local governments can typically borrow at lower interest rates than can private businesses or individuals. This leads to the second major role of state and local debt. State and local governments can effectively lend their borrowing power to individuals or businesses. For example, by issuing industrial development bonds, a state or local government can provide below market interest rate financing for business firms as a means of promoting economic development.

The state's role in debt policy should be to ensure that the state, state authorities, and local governments together make the best use of their ability to borrow. In the case of certain types of tax-exempt bonds, federal law limits the total volume of annual issuance by state. The state legislature has the responsibility for rationing this scarce resource among potential issuers.

The credit rating process also creates an interdependence among the debt policies of state and local governments. If one local government in Nevada defaults on its debt, for example, this can have adverse effects on credit ratings, and thus increase interest costs for other local governments in the state and perhaps for the state government itself. State restrictions on local borrowing power as well as restrictions on state borrowing power can play a role in protecting credit ratings and marketability of

all debt issued by state and local governments.

Finally, the state can play a valuable role in assisting local governments in the implementation of their borrowing policies. The complexity of federal law with respect to tax-exempt debt as well as the complexity of available debt market innovations give larger borrowers an advantage over smaller borrowers, and over governments who borrow infrequently. The state can lend its expertise or, in some cases, its credit rating to local governments in order to facilitate their borrowing.

RECENT CHANGES IN THE MARKET FOR DEBT AND FEDERAL LAW WITH RESPECT TO STATE AND LOCAL DEBT

An evaluation of Nevada's state and local debt policy must be done within the context of the changes in state and local debt that are taking place nationwide. Perhaps no area of state and local finance has changed so much over the past twenty-five years as has the issuance of state and local debt. This section will summarize some of the major changes.

The volume of debt issued annually by state and local governments has increased enormously. The volume of long-term debt issued by state and local governments increased from \$18 billion in 1970 to \$94 billion in 1987, with a record year for tax-exempt issuance in 1985 of \$204 billion in anticipation of the passage of the Tax Reform Act of 1986.¹

Major developments related to the growing volume of tax-exempt debt issued are the increase in bonds issued for nontraditional purposes, the increase in non-general obligation debt, and the growing importance of borrowing by statutory authorities and special districts. The changing purposes for which debt is issued is illustrated by the fact that in 1970, education, transportation, water and sewage, public power and certain other general government purposes accounted for 95 percent of total long-term tax-exempt bonds issued, while by 1983 these same bonds accounted for only 34 percent of all long-term tax-exempt bonds. The purposes for which

an increasing amount of tax-exempt debt is issued include private purposes such as housing, industrial development, student loans, and nonprofit hospitals and educational institutions.² A large proportion of such private purpose debt is issued by special districts and statutory authorities.³ Because this debt is generally issued as revenue bonds, this accounts for the declining proportion of total debt issued in general obligation form.

In reaction to the growing volume of tax-exempt debt and the growing proportion of total debt issued for nontraditional, ostensibly private purposes, the Congress has enacted a number of laws restricting the use of tax-exempt debt. During this decade alone, Congress has modified tax-exempt bond law five times--in 1980, 1982, 1984, 1986 and 1987, with the Tax Reform Act of 1986 imposing the most sweeping restrictions on tax-exempt bonds. Two of the most basic ways that the 1986 Tax Act restricted issuance of tax-exempt bonds was to disallow issuance of tax-exempt debt for certain purposes, such as pollution control, and to impose a single state-by-state volume cap on most categories of private purpose debt. Including tax-exempt interest on many newly-issued private purpose bonds as preference items under the individual and corporate minimum taxes effectively imposes a small tax on otherwise tax-exempt interest.

This year's U.S. Supreme Court decision in South Carolina v. Baker appears to legitimize such federal restrictions on the use of tax-exempt debt, and may even induce Congress to make further important changes in the future. According to Justice Brennan, who delivered the majority opinion for the court, "...the owners of state bonds have no constitutional entitlement not to pay taxes on income they earn from state bonds, and states have no constitutional entitlement to issue bonds paying lower interest rates than other issuers."⁴

DEBT ISSUANCE AND DEBT LEVELS IN NEVADA RELATIVE TO OTHER STATES

The population of Nevada is 0.4 percent of the population of the U.S. whereas the amount of long-term debt the state issued over the last decade was 0.5 percent of the U.S. total.⁵ This statistic indicates that the state has been issuing debt at a higher level, in relation to its population level than the U.S. on average.

The year-to-year changes in aggregate debt issuance for the state follow a different pattern than for the U.S. as a whole. (Table 23.1) Debt volume fell by approximately 15 percent per year in Nevada during the 1980-1981 recession, then rebounded by over 250 percent in 1982. Afterwards, debt issuance alternately rose and fell. Long-term debt issuance for the U.S. as a whole followed a more stable pattern of increases. The U.S. as a whole experienced a bigger boom in the rush to market before passage of the Tax Reform Act of 1986 (debt issuance doubled in 1985), and fell more sharply in the two years since passage of the Act.

At the end of FY 1986, Nevada's level of outstanding long-term debt per capita was at the median of its group of comparison states. (Table 23.2) Nevada had a higher than average level of long-term guaranteed debt and a lower than average level of long-term non-guaranteed debt. Among its comparison states, Nevada had a relatively low level of short term debt per capita.

NEVADA'S DEBT RATING

Nevada has a good, but not the best, bond rating. Standard & Poors has given Nevada a AA rating and Moody's has rated Nevada state debt Aa. As of October 1987, Standard & Poors rated debt issued by 14 states more highly than it rated Nevada debt.

A negative factor cited in Nevada's debt rating is "the very limited nature of the state's economy."⁶ Positive factors cited

TABLE 23.1

The Volume of Long-Term Debt Issues

Nevada vs. the U.S., 1978-1987

	<u>Nevada</u>		<u>U.S.</u>		Nevada As a Percent of U.S. Total
	(\$ Millions)	% Change from Previous Year	(\$Millions)	% Change From Previous Year	
1978	\$ 246.5	-	46,214.8	-	0.5%
1979	252.4	2.4	42,260.8	-8.6%	0.6
1980	214.5	-15.0	47,133.4	11.5	0.5
1981	181.0	-15.6	46,134.2	2.1	0.4
1982	647.6	257.8	77,179.0	67.3	0.8
1983	669.8	3.4	83,347.9	8.0	0.8
1984	478.1	-28.6	101,881.6	22.2	0.5
1985	615.5	28.7	203,954.3	100.2	0.3
1986	396.0	-35.7	142,544.1	-30.1	0.3
1987	667.8	68.6	98,673.5	-30.8	0.7
Total 1978-87	4369.2		889,323.6		0.5

Source: The Bond Buyer 1988 Yearbook, pp. 18-19.

TABLE 23.2

State-Local Debt Outstanding at End of FY 86,
Per Capita

<u>State</u>	<u>Total Long-Term Debt</u>	<u>Long-Term Guaranteed Debt</u>	<u>Long-Term Nonguaranteed Debt</u>	<u>Short-Term Debt</u>
Nevada	\$3,138	\$1,072	\$2,066	\$ 18
Arizona	4,048	919	3,129	113
California	2,366	481	1,885	47
Colorado	2,934	741	2,193	16
Idaho	1,206	276	930	35
Montana	2,840	468	2,372	87
New Mexico	3,323	440	2,883	25
Oregon	3,825	2,905	940	24
Utah	5,263	703	4,560	5
Washington	4,191	1,261	2,930	63
Wyoming	4,572	840	3,732	1
Hawaii	3,116	2,139	977	86
Florida	2,670	431	2,239	42
Texas	2,836	988	1,848	23

Source: U.S. Census data as compiled in U.S. Advisory Commission on Intergovernmental Relations' Significant Features of Fiscal Federalism, 1988 Edition, Volume II, p. 127.

by Standard & Poors include Nevada's moderate debt level, growth in assessed value and population, higher than average per capita income, strong state financial performance, rising labor force, declining unemployment and move toward economic diversification.⁷

STATE LIMITATIONS ON STATE AND LOCAL DEBT

State limitations on state and local debt are long-standing provisions of most state constitutions and statutes. Most of these limitations were enacted in reaction to periods of widespread default that took place in the depressions of the 1830s, 1870s, and the 1930s and after the Civil War.⁸ Virtually all of these limitations apply to general obligation (GO) debt only. Because general obligation debt has accounted for less than 40 percent of new long-term tax-exempt bonds issued in the U.S. in each year of the last decade, a large part of state and local debt is not subject to these general state restrictions.⁹

Nevada's Limitations on the Level of State Debt

Article IX of the state constitution limits the level of state general obligation debt, except debt issued for the purpose of protecting or preserving the state's property or natural resources, to one percent of the state's assessed value.

State debt limitations of the other Western states and, in effect in Hawaii, Florida and Texas are of four types: absolute dollar limits on the level of permissible debt, debt limits tied to some measure of the state's tax base, referendum requirements and requirements for a supermajority legislative vote. For example, state general obligation debt in Arizona is limited to a total of \$350,000. Absolute dollar limits of this type seem to be the least sensible, especially if no provision is made for exceeding the limit. This type of limit will either prevent the state from issuing any debt, or more likely, will induce it to issue revenue

bonds instead of general obligation debt, and thereby incur higher than necessary interest costs.

Six states in our comparison group, in addition to Nevada, place a limit on the level of state debt that is tied to some measure of the tax base. Although limiting debt to some percentage of total state assessed value is common, other measures of the available state tax base may be more appropriate. Washington bases its state debt limit on total state revenues: it limits debt service to 7 percent of average state revenues for the three preceding fiscal years.

Five states in our group impose a referendum requirement in lieu of or in addition to other limits. Three states impose the requirement of approval by a legislative supermajority.¹⁰

The Effectiveness of Nevada's Constitutional Limit on the Level of State Debt

There are two indications that the constitutional prohibition against issuing state general obligation debt in excess of one percent of the state's assessed value has had a limited effect on the level of state debt issuance. First, a great deal of state debt is issued that is exempt from the constitutional limit. As Table 23.3 shows, as of May 1988 the state had almost four times as much general obligation debt outstanding that was not subject to the constitutional limit as was under the limit. All of the \$376.2 million in debt exempt from the limit qualified for the exemption because of the issue's natural resource purpose. The issues included Colorado River bonds, park and recreation bonds, sewer improvement bonds and reservoir bonds.

It is important to note that the state of Nevada or state authorities issue forms of debt other than general obligation debt that is also exempt from the constitutional limit on state debt. Nevada has issued special tax bonds for highway purposes, and revenue bonds for housing purposes are issued by the Nevada Housing Division.

Table 23.3

General Obligation Indebtedness, State of Nevada
May 1, 1988

Type of Debt	Outstanding (\$ Million)	
Subject to constitutional Limit		\$99.6
University System Projects	\$ 38.3	
Library Bonds	9.7	
Prison Bonds	35.9	
Other	15.7	
Exempt from Constitutional Limit		376.2
Municipal Bond Bank Bonds	\$168.7	
Colorado River Bonds	155.1	
Park and Recreation Bonds	5.6	
Clark Co. Sewer Improvement Bonds	10.8	
Reservoir Bonds	30.5	
Other	5.5	
TOTAL		\$475.8

Note: These do not include revenue bonds, lease purchase agreements or contingent liabilities (the State has \$59.5 million in highway improvement revenue bonds outstanding payable from Motor Vehicle Fuel Taxes.) Also excluded are bonds of the self-supporting Nevada Housing Division.

Source: Compiled by Nevada Municipal Consultants, Inc. Reported in Official Statement, State of Nevada Highway Improvement Revenue Bonds, Series June 1, 1988, p. 27.

The second indication that Nevada's constitutional limit on state debt has been of limited effectiveness is that within the last decade the state has used as much as fifty percent of its allowable limit in only one year, 1987. (Table 23.4) During the late 70s and early 80s, the percentage of allowable debt limit used ranged from 3 to 11 percent. From 1982 through 1986, the state used from 33 to 41 percent of its allowable limit.

Evaluating Nevada's Constitutional State Debt Limit

Available information points to the conclusion that the level and coverage of Nevada's constitutional limit on state debt has not been harmful to the state, but could be detrimental in the future. At a recent presentation on the "State Bond Rating Process," Claire Cohen, a Vice President with Moody's Investor Service, Inc., noted that the rating agencies were not fooled by debt issuance in other than GO form.¹¹ Her preferred measures of debt burden were net tax-supported debt relative to population, property values or personal income. This includes special tax bonds in addition to general obligation bonds, but excludes debt that is self-supporting from enterprise revenues. According to Moody's statistics for 1987, the state of Nevada is in the middle range of states with respect to the various measures of state debt burden. Table 23.5 compares Nevada with its comparison group of states with respect to net tax-supported debt as a percent of estimated full valuation. Again, Nevada comes out at the median level.

These measures indicate that the state of Nevada does not have an excessive debt burden, despite the narrow base of its debt limit. Perhaps the traditional fiscal conservatism of the state has limited debt issuance as much as has the constitutional debt limit.

TABLE 23.4

Application of Constitutional State Debt Limit
1978 - 1987

<u>Fiscal Year</u>	<u>Bonds Subject To Limit</u> (\$ Million)	<u>Bonds Subject to Limit as % of State Assessed Valuation</u>	<u>Percent of Debt Limit Used</u>
1978	\$5.2	.11%	11%
1979	4.1	.07	7
1980	3.1	.04	4
1981	2.8	.03	3
1982	42.4	.41	41
1983	42.1	.38	38
1984	45.9	.37	37
1985	48.9	.35	35
1986	47.2	.33	33
1987	100.3	.65	65

Note: The constitutional state debt limit is set at 1% of assessed valuation. The State Constitution exempts debt incurred for the protection and preservation of property and natural resources or for obtaining the benefits of any property or natural resources within the state.

Source: State of Nevada Comprehensive Annual Financial Report for the fiscal year ended June 30, 1987.

TABLE 23.5

Net Tax - Supported Debt as a Percent of
Estimated Full Valuation, 1987

<u>State Valuation</u>	<u>Percent of Estimated Full Valuation</u>
Nevada	0.6
Arizona	0.4
California	0.5
Colorado	0.3
Idaho	0.1
Montana	0.8
New Mexico	1.2
Oregon	0.7
Utah	0.7
Washington	1.9
Wyoming	0.02
Hawaii	4.2
Florida	1.6
Texas	0.3

Note: The concept of tax-supported debt taken into account all debt services by tax revenues of the state, whether or not the state itself was the issuer. Debt that is deducted to arrive at the net figure includes self-supporting debt from enterprise revenues, debt serviced by another unit of government appropriate sinking funds and short-term operating debt.

Source: Moody's Public Finance Department, 1988 medians, Selected Indicators of Municipal Performance.

On the other side, if the political climate of the state were to change, and pressures to issue debt were to increase, Nevada's debt limit could have detrimental effects. Since it covers such a small proportion of total state debt it would either offer no moderating influence on debt issuance, or it would distort debt issuance so that more expensive types of debt, such as lease purchase agreements, were issued in lieu of general obligation debt.

The operation of Maryland's Capital Debt Affordability Committee could be instructive for Nevada. The Committee was formed in a time of concern about the level of Maryland's general obligation debt.¹² Over the last decade, the Committee has taken an increasingly comprehensive look at Maryland's debt issuance. The Committee began with a focus on general obligation debt, then realized that other tax-supported debt and revenue debt imposed a burden on state fiscal capacity and could impact the state's credit rating, so the Committee has gradually expanded its focus.

The last session of the Nevada legislature passed a resolution which will be before the voters in November, which would increase the state's debt limit from one to two percent of assessed valuation. Although such an increase is unlikely to harm the state's debt policy, perhaps some alternative changes should be considered. Because of the potential problems of its narrow base, the base of the state debt limit could be broadened to all GO debt or to all tax supported debt at the same time the limit is raised. Alternatively, instead of relying on a rigid constitutional debt limit, Nevada could follow the lead of Maryland and other states and establish a state debt advisory board. Such a board could play an information gathering and monitoring role on a flexible basis, which is particularly important given the complexity of today's bond market and laws regarding issuance of tax-exempt debt.

Nevada's Limitations on Local Borrowing

Nevada limits local issuance of general obligation debt in two major ways: through an array of limitations on the permissible level of debt and through a general requirement for referendum approval. Table 23.6 summarizes the various limits on the permissible level of debt.

Most of Nevada's limitations on the permissible level of local government debt are tied to total assessed property value. For example, counties can issue GO debt only up to 10 percent of the county's assessed value. General improvement districts are allowed the most lenient limit of this type--set at 50 percent of assessed value--and fire and recreation boards are subject to the strictest limit--set at 3 percent of assessed value for fire and recreation boards in counties with less than 250,000 in population.

A few special districts have no limitations on the level of GO debt: multicounty water conservancy districts, special legislative districts, and redevelopment agencies. Three other types of local governments are subject to an absolute dollar limit on the amount of outstanding GO debt. These include hospital districts, a convention center, and a multicounty fire district.

One potential flaw in this system of debt limits is their link to property values. This arises because a substantial proportion of the tax base of certain governments comes from sources other than the property tax, such as from sales tax revenues. Another potential difficulty is that there are no limitations on the total amount of debt issued by overlapping governments. If a city that reached its debt limit were located in a county and school district that also reached their debt limits, the total level of debt could reach 55 percent of assessed value. If special district debt were added, the permissible level of debt for a particular part of the state could exceed 100 percent of the assessed value of the property!

TABLE 23.6

Nevada State Limits on Local Government General
Obligation Long-Term Debt, by Type of Government, 1987

Local Government			Rate Limit		Absolute Dollar Limit
Type	Number	1977-78 Assessed Value (\$Millions)	Rate	Base	Selected Excep- tions
Counties	17	\$15,552.0	10%	assessed value	
School Districts	17	\$15,552.0	15%	assessed value	
Cities (a)	17	\$ 6,220.1	30%	assessed value	
Towns	44	\$ 4,901.2	25%	assessed value	
Library Districts	4	\$ 8,170.0	10%	assessed value	
General Improve- ment Districts	78	\$2,661.1	50%	assessed value	
Hospital Districts	9	\$ 959.7			\$500,000
Port Authorities (b)	9	\$13,495.0	5% if county pop. >250,000 3% if county pop. <250,000	assessed value	

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Convention Center	1	\$ 168.3			\$2,500,000
Fire Protection Districts	10	\$ 5,616.7	5%	assessed value	
MultiCounty water Conservancy Districts	2	n/a		None	
MultiCounty Fire District	1	\$ 208.2			\$50,000
Redevelopment Agencies	3	\$ 310.5		None	
Special Legislative Districts	3	n/a		None	

TABLE 23.6 (continued)

Source: State of Nevada Department of Taxation, State of Nevada Annual Local Government Indebtedness as of June 30, 1987.

a. Although the general stte limit on outstanding general obligation debt of cities is 30%, city charters set limits of from 10% to 40% of assessed value. Cities are subject to an additional limit of 20% of assessed value on the value of outstanding warrants, certificates or other non-bond general obligation debt.

Washoe County Airport Authority does not have a debt limit.

Among Nevada's comparison group of states; three states, California, Colorado and Florida, have no state limitations on the level of local GO debt. The rest of the states have limits linked to either assessed value of property or to market value. Of the group of states that link their limits to assessed value, as does Nevada, maximum allowable rates range from 0.8 percent to 45 percent. Nevada's rate limitations are higher than average for the comparison group.¹³

Perhaps more important than the rate limitations are the requirements for referendum approval of GO debt generally imposed on local governments in 42 states, including Nevada.¹⁴ Most of the states require majority approval in a referendum, but a few including California, require approval by a supermajority.¹⁵

Evaluating Nevada's Limitations on Local Borrowing

Nevada's limitations on local borrowing that are tied to assessed property values probably do not have a constraining effect in most instances. Table 23.7 presents the percentage of the county debt limit that was used for selected fiscal years from 1978 to 1987. For all counties in aggregate, the percentage of the limitation used increased from 3 percent in FY 1978 to 19 percent in FY 1987. In no case did any county use more than fifty percent of its debt limit. Carson City (which is a combination city and county) used up a higher proportion of its debt limit than any other county. Since counties did not come close to their allowable limits, it appears unlikely that these property tax limits were constraining. The State of Nevada Annual Reports of Local Government Indebtedness tell much the same story for the other types of local government.

One concern noted earlier is that in the absence of any limits on the amount of debt levied by all units of local government in a particular area, a dangerously high level of debt might be issued even when local governments in the area fall far short of their

TABLE 23.7

Percent of Count GO Debt Limit Used,
FY 78-87, Selected Years

County	1978	1981	1984	1987
Carson City	22%	10	37	49
Churchill	0	0	*	0
Clark	2	8	19	21
Douglas	0	12	10	7
Elko	11	6	1	10
Esmeralda	0	0	0	0
Eureka	0	0	0	*
Humboldt	5	2	1	2
Lander	0	0	0	21
Lincoln	2	7	1	1
Lyon	*	*	0	*
Mineral	n.a.	*	0	0
Nye	5	2	1	1
Pershing	1	0	0	5
Storey	1	0	0	2
Washoe	3	4	5	18
White Pine	6	4	2	10
Total	3	7	13	19

Notes: * Indicates less than 1 percent. The debt limit for county governments restricts GO debt to 10 percent of the county's assessed valuation, except in the case of Carson City whose debt limit was raised from 10-15 percent in FY 1984.

Source: State of Nevada, Department of Taxation Annual Report of Local Government Indebtedness, various years.
It does not appear necessary to have overlapping debt limits by county.

applicable debt limits. Table 23.8 is an attempt to test this hypothesis for Nevada. Overlapping debt of all types, including revenue and other bonds as well as general obligation bonds, issued by all units of local government have been summed and taken as a percentage of county assessed property values. In aggregate, local government debt as a percentage of assessed property values was 9 percent in 1987. Since the county debt limits are 10 percent of property values, this indicates that all types of debt issued by all units of local government, could on average be issued under the county debt limit alone.

Furthermore, it does not appear at present that any county is particularly out of line in terms of its aggregate debt burden. Although Carson City uses up a higher proportion of its county debt limit than any other county, when all types of debt and all units of local government are taken into account, Carson City's aggregate debt burden is not appreciably higher than several other counties. The time trend in debt burdens is also encouraging. In aggregate, local governments had about the same total debt burden as a percentage of property values in 1987 as in 1978.

It is true that local governments are issuing an increasing proportion of their debt in forms other than general obligation debt. In 1978, 50 percent of total local debt was issued in GO form, but that by 1987 only 32 percent of total local debt was issued as GO debt.¹⁶ There are two reasons to be concerned about this trend. First, issuing debt with credit backing that is more limited than the full faith and credit of GO bonds often carries with it higher interest costs. Second, to the extent that local governments issue non-GO debt because voters are not likely to vote the necessary referendum approval, this trend indicates a lessening of accountability to voters in the matter of local debt policy.

In one important respect, Nevada's policy toward local debt is more advanced than its policy with respect toward state debt. There is no single source of information for all forms of debt

TABLE 23.8

Overlapping Debt of All Types as a
Percent of County Assessed Value,
FY 78-87, Selected Years

County	<u>Fiscal Years</u>			
	1978	1981	1984	1987
Carson City	16%	11	11	12
Churchill	7	3	3	4
Clark	11	8	11	11
Douglas	6	6	5	5
Elko	5	3	5	1
Esmerelda	27	2	2	1
Eureka	1	*	*	*
Humboldt	3	1	4	4
Lander	3	7	9	11
Lincoln	8	10	9	8
Lyon	4	9	6	5
Mineral	3	2	1	1
Nye	4	5	4	2
Pershing	1	7	5	4
Storey	7	2	2	8
Washoe	10	8	8	9
White Pine	1	1	2	4
Total	10	7	9	9

Note: This includes general obligation, revenue, short-term, interim warrants and debentures and other debt issued by all local governments.

Source: State of Nevada, Department of Taxation, Annual Report of Local Government Indebtedness, various years.

issued by the state or by state authorities. For local governments, however, the Department of Taxation has been reporting local debt levels in relation to debt limits, and total overlapping local debt by county for the last decade. By providing this information, any alarming trends can be noticed and addressed in a timely manner.

State limitations on local borrowing can help maintain the fiscal integrity of the local governments as well as maintain a good credit rating, and thus hold down interest costs, for all governments in the state. Equally important in state policy are the ways in which the state can facilitate local borrowing by providing technical assistance or through such mechanisms as a bond bank.

STATE ASSISTANCE TO LOCAL BORROWING

In 1981, the Nevada legislature enacted a state bond bank. Its stated purpose was to aid municipalities in undertaking natural resource projects, by either providing them with credit they would otherwise be unable to obtain, or by reducing their interest costs. Nevada's bond bank was presumably limited to natural resource projects because issuing state GO bonds for this purpose is exempt from the constitutional limit on state debt. Nevada law limits total outstanding state bond bank securities to \$200 million. As of July 1, 1988, there were \$168 million in such state bonds outstanding.

Today nine states (Alaska, Illinois, Indiana, Maine, New Hampshire, Nevada, North Dakota, Tennessee, Vermont, and West Virginia) and Puerto Rico operate bond banks. Although the detailed operation of bond banks varies, a typical scenario is for a state to collect applications from localities until a sufficient volume of credit demand is accumulated to warrant a state bond bank issue. Then the state issues bonds and loans the proceeds to local governments by purchasing bonds issued by the localities. Local

governments themselves provide the major security behind the bonds, but the state often provides a secondary layer of security. In Nevada's case, because it issues state GO bonds for its bond bank, the state backs its bond bank bonds with the state's full faith and credit.

Operation of a bond bank is often most advantageous for small local governments in a state. This fact arises from the two ways in which bond banks lower borrowing costs for local governments. First, risk for investors is reduced by pooling a number of small issues to create a single bond issue. For example, whereas a bond issue by Eureka might have limited marketability, an issue for the state of Nevada, for which Eureka's bond issue forms one part, is more generally marketable. Second, a state bond bank can achieve economies of scale in underwriting and marketing costs unavailable to small issuers.

Because of the small size of many of Nevada's localities, the state bond bank is likely to be an especially helpful means of state assistance. Without a state bond bank many localities might be unable to issue debt and be forced to finance all capital projects on a pay as you go basis. The potential usefulness of the state bond bank raises the question of why it is limited to natural resource purposes. In some cases, a school district bond issue might be more meritorious than an issue for parks and recreation or for sewer improvement, uses that are currently authorized. Especially if the constitutional limit on state debt is raised, the state should consider broadening the applicability of the bond bank. At the same time, though, it is probably advisable to limit outstanding bond bank bonds as is currently required.

Nevada assists local debt borrowing in a second way. As described below, the Department of Commerce is responsible for Nevada's system for allocating allowable private activity bond volume under the federally imposed volume cap. In combination with its monitoring function, the Department can augment allowable bond

volume for a particular local government for a particular project. In addition, the state has traditionally achieved economies of scale in marketing and underwriting by having the Department of Commerce issue small issue IDBs on behalf of localities.

THE IMPACT OF THE TAX REFORM ACT OF 1986

The Tax Reform Act of 1986 (TRA 86) made more extensive changes in federal tax-exempt bond law than any piece of federal tax legislation previously enacted. This section will describe the most basic and important of those changes. Since passage of TRA86, the U.S. Supreme Court has ruled in South Carolina v. Baker that state and local governments have no constitutional right to issue tax-exempt bonds. Some have argued that this ruling has paved the way for even more fundamental changes in federal law on tax-exempt bonds in the future.

General Dividing Line Between Governmental and Private Activity

Under federal tax law, interest on state and local debt is exempt from income taxation if the bonds in question can be classified as either governmental bonds or as allowable private activity bonds. In brief, a bond is classified as a governmental bond, and thus qualifies for tax-exemption, if it passes certain Internal Revenue Code tests. These tests are designed to weed out those bonds for which a substantial fraction of proceeds are used by private businesses or individuals.

Allowable private activity bonds are those bonds which fail the Internal Revenue Code tests for private use of bond proceeds, but which Congress has specifically allowed state and local governments to issue on a tax-exempt basis (e.g., small issue industrial development bonds, which provide below-market financing for small businesses; mortgage subsidy bonds, which provide below-market financing for first-time homeowners). Other private

activity bonds can only be issued as taxable bonds.

One major change in the federal law was a tightening in the general rules that divide governmental bonds from private activity bonds. Certain bonds that could be issued as tax-exempt governmental bonds under prior law became private activity bonds.

Changes in Allowable Purposes

The Tax Reform Act also made changes in the allowable purposes for which private activity tax-exempt bonds can be issued. Under the new law, tax-exempt bonds can no longer be issued for pollution control or sports facilities, among other purposes. On the other hand, a new category of allowable private activity debt was created for the cleanup of hazardous waste. The prior law sunsets for two major types of bonds--small issue industrial development bonds for manufacturing uses and mortgage subsidy bonds--were each delayed one year by the Tax Act.

Tightened State-by-State Volume Caps

The third key change made by the Tax Act is a tightening of the limits on certain types of private activity tax-exempt bonds. Under prior law, there were two separate state-by-state volume caps: one for mortgage subsidy bonds, and another for industrial development bonds and student loan bonds. The 1986 Act combines these prior law volume caps. For 1988 and later, these limits are set at the greater of \$50 per capita, or \$150 million. In addition, by placing multifamily housing IDBs under this unified cap, a limitation was placed on the volume of this type of tax-exempt bond for the first time.

Congress gave state legislatures the power to set allocation systems for allowable private activity debt under the unified volume cap. In the absence of state legislative action, however, the allowable volume is divided equally between state and local

issuers and then allocated to local issuers on the basis of relative population levels.

Effects of the Tax Act on Tax-Exempt Bond Issuance in Nevada

Table 23.9 presents the categories of private activity bonds most important for Nevada over the 1983 to 1986 period and indicates the key changes made in their treatment under federal law in the 1986 Act. The sunset dates for mortgage subsidy and small issue IDB bonds, two categories accounting for a large proportion of Nevada bond issuances, were postponed by the Act. On the other hand, issuance of tax-exempt bonds in Nevada was hurt by the fact that multifamily housing IDBs were placed under a volume cap for the first time and pollution control bonds can no longer be issued on a tax-exempt basis.

Because Nevada is one of the less populated states, the unified volume cap allows Nevada more leeway than for most states. Recall that the unified volume cap is set at the greater of \$50 per capita or \$150 million for 1988 and later years. Nevada is allowed higher tax-exempt bond volume with the \$150 million cap, which in 1988 is approximately equal to \$140 per capita for Nevada.

A whole host of changes in federal tax-exempt bond law, not described here, increased the complexity of issuing tax-exempt bonds. Many of the small local governments in Nevada will be disproportionately affected by the compliance burden imposed by the new law. (For example, the Tax Act requires issuers to report the annual volume of all types of tax-exempt debt, whereas prior law limited this requirement to private activity bonds.)

Projection of Future Nevada Tax-Exempt Bond Volume

The 1986 Tax Act depressed tax-exempt bond volume in the short term because state and local governments had rushed to market prior to enactment and had less need to issue bonds immediately after

TABLE 23.9

Highlights of Changes in Tax Reform Act
of 1986 Affecting Private Activity Debt
Issued by Nevada

<u>Bond Type</u>	<u>Average Nevada Volume 1983-86 (\$ Millions)</u>	<u>Most Important Change Enacted in TRA86</u>
Nonprofit College and Hospital	\$12	_____
Mortgage Subsidy	76	Sunset postponed until 12/88
Small Issue IDB	25	Sunset postponed until 12/87 for manufacturing IDBs.
Multi-Family Housing IDB	36	Placed under unified volume cap.
Airports/Docks facility	7	Privately-owned bonds now taxable, government-owned under cap.
Pollution Control	18	No longer tax-exempt.

Source: Compilation of author based on data included on IRS Forms 8038.

the 1986 Act was passed. The Act also had a short term depressing effect as issuers attempted to understand the new, more complex law. In the longer term, the major constraint on the bond volume will be the application of the unified volume cap. As noted above, this volume cap affords more leeway for the relatively less populated states.

A simple projection model was constructed, using IRS data on private activity bond volume from 1983 to 1986 (the only years available). Two scenarios were run--one assuming that the intended sunsets for mortgage subsidy and small issue industrial development bonds take place, and one assuming that they do not. The possibility that one or both of these sunsets will be extended is a very real one given that they have been extended before, and that at this date the House of Representatives has passed an extension of the mortgage subsidy bond sunset.

The model construction assumed that in the absence of the unified volume cap and the changes in allowable purposes for which tax-exempt bonds can be issued, Nevada would continue to issue the same level of tax-exempt private activity bonds per capita as over the 1983-86 period. To the extent possible, all changes in allowable categories of tax-exempt bonds were accounted for. Bonds were divided between those subject to the volume cap and those exempt from the volume cap.

Table 23.10 presents the model results. The first column presents the predicted volume of private activity tax-exempt bonds issued in 1990 if the tax-exempt bond law prior to 1986 had been maintained. The second column predicts the 1990 level of issuance assuming the mortgage subsidy and small issue IDB sunsets do not take place. In 1990 the \$150 million volume cap will be equivalent to a \$130 per capita lid. According to the model, without the sunsets Nevada will find the volume cap constraining in 1990. Per capita issuance of all private activity bonds will fall to \$150 per capita from the \$240 per capita predicted under prior law, for a decrease of 38 percent.

TABLE 23.10

Project Effect of Tax Reform Act of 1986 on
Nevada's Issuance of Private Activity
Bonds in 1990

(\$ per capita)

Cases			
Types of Private Activity Bonds	Prior Law	TRA 86, but assuming sunsets repealed	TRA 86, Assuming sunsets hold
Capped	\$200	130 (cap binding)	93 (cap not binding)
Uncapped	40	20	20
Total	240	150	113

Source: Urban Institute projections using data from IRS Forms 8038 and Price Waterhouse Population Projections.

Note: The private activity volume cap for Nevada is \$150 million, which is projected to equal \$130 per capita in 1990, the sunsets are the 12/88 projected sunset for mortgage subsidy bonds and the 12/87 projected sunset for small issue LDBs for manufacturing.

If both sunsets do take place, column 3 shows that the volume cap will not be binding in 1990 as \$93 per capita bonds will be issued under the effective volume cap of \$130 per capita. Total private activity tax-exempt bond issuance in this case is predicted to be \$113 per capita, a reduction of 53 percent relative to the level predicted under prior law.

The nature of Nevada's small state volume cap is that it will become more constraining on a per capita basis over each year of population growth. In 1988 the \$150 million limitation is equivalent to a \$140 per capita lid; in 1990 it is equivalent to a \$130 per capita lid. Using Price Waterhouse population projections, assuming that both the mortgage subsidy and small issue IDB sunsets do take place, the unified volume cap will be binding for Nevada in about the year 2000.

It is important to note that the bond projection model just described applies to private activity bonds only. In the 1983 to 1986 period, private activity bonds accounted for about 40 percent of total Nevada tax-exempt bond issuance.¹⁷ Data are not available to project the effect of the Tax Reform Act of 1986 on future volume of governmental bonds. However, one intended result of TRA 86 was to reduce private activity bond volume to a greater extent than governmental bond volume. The U.S. Treasury Department's estimates just after passage of TRA 86 were that the cutback in private activity bond volume would be twice that for governmental bonds.¹⁸ Applying this to Nevada, one might predict a substantial future cutback in governmental tax-exempt bond volume relative to the recent past, but not as substantial a cutback as for private activity bonds.

Implications for State Allocation of Allowable Bond Volume

Congress gave state legislatures the power to set the allocation systems for allowable private activity debt. In the absence of state legislative action, however, the allowable volume

is divided equally between state and local issuers and then allocated to local issuers on the basis of relative population levels. The pressure on any given state's allocation system will depend crucially on the amount of debt desired to be issued relative to their allowable volume cap authority. As discussed above, if the mortgage subsidy and small industrial development bond sunsets do not take place, Nevada's allocation system will become important in the next few years; but if both sunsets do take place, Nevada's allocation system will only come under scrutiny beginning about the year 2000.

In 1988, the Nevada legislature adopted the federal default option for allocating bond volume, with a few minor changes. The Department of Commerce has the responsibility for managing the allocation system and a method has been set up so that the Department can augment a particular government's allowable volume cap authority if necessary.

A specific example may prove instructive. In 1988, Nevada's total allowable private activity bond issuance is \$150 million, of which \$75 million is set aside for local governments. Nevada law allocates this allowable bond volume among the counties on the basis of relative population levels. Incorporated cities are allocated volume cap authority on the basis of their relative population levels and county governments are allowed the remainder of allowable volume cap authority for the county as a whole. For 1988, then, Lovelock City in Pershing County, which accounts for approximately .21 percent of the state's population, is allowed to issue \$157,373 in private activity tax-exempt bonds, while Pershing County, whose unincorporated area accounts for approximately .20 percent of the state's total population, is allowed to issue \$153,100 in private activity tax-exempt bonds.

One important part of Nevada's legislation anticipates the problem of the "lumpy" capital project. If Lovelock City plans a capital project that would cost \$300,000, an amount in excess of its allowable bond volume, the city can apply to the Director of

the Department of Commerce for an augmentation of their volume cap. Alternatively, Pershing County would be allowed to transfer their volume cap authority to the city.

Once it is determined whether Nevada will find its volume cap binding or not, the state might want to reevaluate its allocation system. For example, the state might want to give preference to some types of private activity debt over others. Alternatively, the state might want to give preference to counties and local governments with lower fiscal capacities. At present, the allocation system that has been adopted appears workable.

POLICY OPTIONS

Nevada's voters will soon consider whether to raise the states' constitutional limit on state general obligation debt. This limit is currently set at one percent of the states assessed property value. Bonds issued for natural resource projects are exempt from the limit. The evidence gathered here indicates that raising this limit to two percent is not likely to affect the level of state GO debt since within the last decade no more than 65 percent of the allowable state debt limit has ever been used.

Although the level of state debt is moderate at present, the composition of debt issuance has changed so that general obligation debt makes up a smaller proportion of total debt issuances than it used to. Non-general obligation debt issuance is not limited by the state constitution.

The first recommendation is that a simple state agency collect data on all state debt issuances and monitor the level of other tax-supported debt and revenue debt as well as of general obligation debt. Nevada's current state debt limit has too narrow a base to effectively protect the state's credit rating should future generations decide to substantially increase issuance of non-general obligation debt. Monitoring total state debt issuance is preferable to getting on arbitrary and inflexible cap on all

debt.

In examining locally issued debt, again the level of debt outstanding does not appear worrisome, but the changing composition of debt does present a concern. In 1978, 50 percent of local debt was issued in GO form, but in 1987 only 32 percent was issued as GO debt. Non-GO debt often carries with it higher interest costs. In addition, issuance of non-GO debt can indicate a lessening of accountability to voters because non-GO issuances do not require referendum approval. The second recommendation is for the Department of Taxation to examine the changing composition of local debt issuance using data from its annual reports on local debt in order to determine whether the changing debt composition presents a significant problem.

Third, because of the usefulness of a state bond bank in aiding local borrowing, the legislature should consider expanding the bond bank to include local bonds issued for purposes other than natural resource projects. In some small communities, bond financing for schools may be a pressing concern and should not necessarily be given less support than bond financing of natural resource projects.

Finally, the state may want to consider changing its allocation system for allowable private activity bond volume. As noted in the text of the chapter, the importance of considering changes depends usually on future federal legislation with respect to mortgage subsidy bonds and small issue IDB sunsets. If these sunsets do not take place, Nevada is likely to find her volume cap constraining by about 1990. Before the cap begins to be binding, the state may want to consider which purposes it would like to give priority to decide whether housing or economic development bonds receive a higher priority under a bonding volume cap.

ENDNOTES

1. The 1970 figure is from Table 6-1 in Susannah E. Calkins, "Tax-Exempt Bonds" in Advisory Commission on Intergovernmental Relations, Strengthening the Federal Revenue System: Implications for State and Local Taxing and Borrowing, Washington, D.C., October 1984, p. 117. The other figures are from Credit Markets, January 18, 1988, p. 49.
2. John E. Petersen, "Recent Developments in Tax-Exempt Bond Markets," in Office of State and Local Finance, Department of the Treasury, Federal-State-Local Fiscal Relations, Technical Papers, Volume II, September 1986, Figure 2.3, p. 761.
3. The term "private purpose debt" is a nonlegal term which is related, but not the same as, the specific Internal Revenue Code category of bonds created by the Tax Reform Act of 1986 called "private activity debt."
4. South Carolina v. Baker (56 USLW 4311 (April 20, 1988)).
5. Computed from pp. 18-19, The Bond Buyer 1988 Yearbook.
6. Merrill Lynch, "Analyzing 'Special Tax' Bonds: 1988 Revised Edition," June 1988, p. 28.
7. Standard & Poors, Credit Week, September 7, 1987, p. 36.
8. J. Richard Aronson and John L. Hilley, Financing State and Local Governments (Washington, D.C.: The Brookings Institution, 1986), pp. 160-162.
9. The Bond Buyer 1988 Yearbook, pp. 8-9. General obligation bonds are secured by the issuer's full faith and credit. Alternatively, state and local debt can be issued in the form of revenue bonds. Debt service for revenue bonds is commonly payable from the revenue generated by operation of the project for which the debt is issued.
10. For more detailed information see U.S. Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism, Volume I, December 1987, pp. 102-103.
11. Claire Cohen, "The State Bond Rating Process," presentation at conference on "States and the Bond Markets," sponsored by the National Conference of State Legislatures, Boston, Massachusetts, June 2-4, 1988.
12. Lucille Maurer, State Treasurer, Maryland, "Debt Oversight--The Maryland Experience," presented at conference entitled "States and the Bond Market," Boston, Massachusetts, June 2-4, 1988.

13. For more detailed information see U.S. ACIR, Significant Features of Fiscal Federalism, Volume 1, pp. 104-109.
14. Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism, 1976-77 Edition, Volume II (Washington, D.C., 1977), pp. 92-93.
15. Thomas F. Mitchell, Survey of State Laws Governing the Issuance and Sale of General Obligation Bonds (Eugene, Oregon: University of Oregon, 1975). In addition to these two "macro" limits on local borrowing, there are an entire array of "micro" limitations that states impose on local governments. These include stipulations regarding maximum maturity, maximum allowable interest rates, debt service structure, call provisions, maximum and minimum price (as a percentage of par), method for computing interest rate, whether public sale is required or negotiated sales are permitted, and the manner in which the awarding of bonds among a group of bidders may be determined.
16. State of Nevada, Department of Taxation, Annual Report of Local Government Indebtedness, various years.
17. Computed by the author using IRS Form 8038 data and data from The Bond Buyer 1988 Yearbook.
18. Reported in Daphne A. Kenyon, "Recent Developments in Federal-State-Local Fiscal Relations," Hamline Journal of Law and Policy, Spring 1987, Volume 8, Number 1, p. 146.