2007 Nebraska Tax Burden Study

Nebraska Department of

REVENUE

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The 2007 Nebraska Tax Burden Study

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Introduction

Pursuant to Neb. Rev. Stat. §§ 77-3,115 and 77-3,116, the Nebraska Department of Revenue (Department) has completed the *2007 Nebraska Tax Burden Study*. The Legislature directed the Department to gather, prepare, and study material that could be used as a basis for developing tax policy. The intention of the Legislature is to study the impact of taxes on different economic sectors, and to determine the impact of those sectors on the Nebraska economy.

This is the sixth Nebraska tax burden study produced by the Department. The study makes use of a computable general equilibrium (CGE) model to determine the true economic incidence of taxes in Nebraska. The genesis of this model was LB 1373, passed by the Nebraska Legislature in 1996. The resulting model is referred to as the TRAIN model (Tax and Revenue Analysis in Nebraska), and is currently used by the Department for analysis of tax policy issues.

Economic theory suggests that tax burdens do not fall entirely on the businesses or individuals who are required to remit the tax. Tax burdens are shifted from businesses to households, either in the form of lower wages to workers, higher prices to consumers, or lower profits or dividends to business owners and shareholders. Taxes on individuals may be shifted to other individuals depending upon the structure of the tax. Tax burdens shift because the imposition of a tax affects prices; both the price of what is taxed and the price of related goods or services. "Thus, people bear the burden of a tax not only when they remit taxes, but also when there is a change in the prices of the goods and services they buy and sell."[1] This study provides policymakers with a better understanding of who bears the final tax burdens in Nebraska.

The *2007 Nebraska Tax Burden Study* is presented in four major sections:

(1) **Tax incidence and general equilibrium analysis** – develops these concepts and introduces the TRAIN model in more detail.

(2) **2007 tax burden case studies, income and sales tax reductions** – explores the change in tax incidence from two separate hypothetical tax rate reductions in sales tax and in individual income tax.

(3) **Historical analysis of Nebraska income tax by decile, 1995-2007** (groups containing 10% of all returns ranked by adjusted gross income [AGI])-presents a historical analysis of income share, effective tax rate, and income tax burden paid by income group from 1995 through 2007.

(4) **2007 Nebraska Tax Burden Study recommendations.**

The Department thanks the Legislative Fiscal Office for their assistance in providing state expenditure data necessary for this analysis.

SECTION 1
Tax Incidence and General Equilibrium Analysis
Figure 1 and Tables 1 – 3

Tax incidence analysis is the study of who ultimately bears the economic burden of taxes. Economic tax incidence is different from legal incidence, which refers to who files tax returns and sends money to the tax agency. Economic incidence is concerned with how the tax burden is distributed among sectors of the economy as determined by market forces, not by statute. For example, when the government introduces a new tax that business firms are required to remit, the firms may pass the tax along to their customers in the form of higher prices, to their employees in the form of lower wages or reduced hours, to their suppliers in the form of reduced purchases, to their shareholders through reduced dividends and profits, or a combination of the these. A true analysis of tax incidence must measure the final share of costs imposed on the economy beyond the legal liability.

Tax researchers Joel Slemrod and Jon Bakija provide a rule of thumb for determining the extent to which taxes are shifted through an economy from those who bear the legal incidence to those who bear the economic burden in terms of lower wages, higher prices, and/or lower profits. "The better one's alternatives to what is taxed, the less likely one is to bear a burden."[2]

Unfortunately, the various alternatives open to each business and household in an economy cannot be observed directly. To determine the economic incidence of taxes, a detailed model of the economy is used to track the impact of a tax from one market to another, by accounting for price and quantity changes throughout the economy.

This is where economic theory and a CGE model, like the TRAIN model, come into the analysis. CGE models use actual economic data to estimate how an economy will react to changes in external factors. The starting point in economic theory is equilibrium analysis.

General Equilibrium Analysis

A general equilibrium analysis using a CGE model seeks to comprehensively describe the economic interactions among different markets. Equilibrium is the economic notion that under certain conditions, combinations of prices and quantities exist that result in all available goods being sold, and at these prices and quantities, individuals maximize their utility and firms maximize their profits. A general equilibrium model considers, implicitly or explicitly, all sectors of the economy simultaneously. "CGE models are a standard tool of empirical analysis, and are widely used to analyze welfare and distributional impacts of policies whose effects may be transferred through multiple markets, or contain menus of different tax, subsidy, quota or transfer instruments."[3]

An analysis using a CGE model begins with the assumption of an economy in equilibrium. From this initial position, the economy is "shocked" by a change in tax or monetary policy, a change in technology, or an increase or decrease in quantities of some good due to some outside influence, such as a natural disaster, and a new equilibrium is found. The model solves for new equilibrium levels of supply, demand, and price, that result in a unique equilibrium solution across the economic sectors included in the model. Measuring the change in prices and quantities of goods and services between the initial equilibrium and the new equilibrium tells researchers how each sector of the economy was affected by the shock.

Figure 1 – The Circular Flow Diagram. A CGE model reflects the economic interrelationships illustrated in Figure 1. It describes the flow of money and resources between the two major types of economic agents: producers and households. Producers are represented in the model as industry sectors, and each sector is treated as a representative firm. Perfect competition in the economy is assumed, which allows producers to treat prices for its inputs and products as fixed. Each firm is assumed to choose inputs and output levels so as to maximize profits. The producer's inputs are labor, capital, and intermediate goods. The other type of economic agent, the household, is assumed to maximize its utility through decisions about which goods and services to buy, and how much labor and capital services it will sell to producers. Like firms, households are price-takers. That is, prices for labor (wages), as well as dividends and interest payments for ownership interests in capital, are assumed fixed; as are prices for the goods and services that households purchase. The economic agents are depicted in Figure 1 by the rectangles.

Figure 1 – The Circular Flow Diagram.
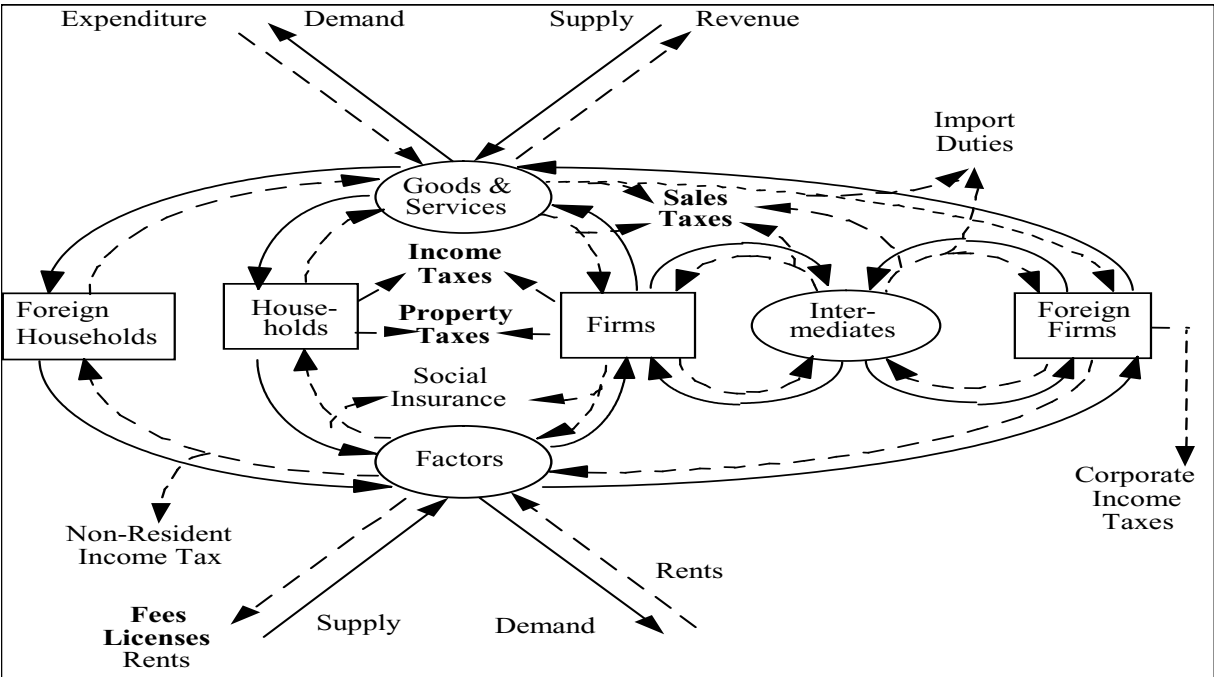
As depicted in Figure 1, households and firms interact through two types of markets: factor markets; and goods-and-services markets. Firms sell goods and services to households in the goods-and-services markets. Households sell labor and capital services to firms in the factor markets. These markets—along with the intermediates markets, which sell intermediate goods to other firms—are depicted as ovals. The solid arrows depict the flows of goods and services and of factors through the economy; and the dashed lines depict the flows of money through the economy. "Equilibrium in the factor markets for labor and capital and [equilibrium] in the output markets for goods and services defines a simple general equilibrium system."[4]

TRAIN Model

The *2007 Nebraska Tax Burden Study* relies on the TRAIN[5] model, a custom-built CGE model. TRAIN divides the Nebraska economy into sectors to explicitly trace economic flows. The model details state government sectors to capture the sensitivity of state government revenue and expenditure flows. The model calculates most tax impacts endogenously—inside the model—without requiring additional calculations

outside the model to obtain final results. This approach allows the researcher to avoid rigid assumptions that may deliver vague results. The 2007 study is based on an updated version of the TRAIN model.

The TRAIN model works well for analyzing policy changes and their consequences in the long run—after sufficient time has passed for all prices and quantities to achieve a new equilibrium—rather than analyzing short-run fluctuations. The current version of the TRAIN model assumes that after a shock it will take the economy five or six years to reach a new equilibrium position.

The TRAIN model uses over 1,300 equations to describe the economic behavior of the sectors represented in the Nebraska economy. Those equations are the body of the model. The other important unit of the model is a set of data matrices that contains several thousand data points representing the initial economic conditions of the state. Using the sets of equations that describe economic behavior and the data matrices that represent initial conditions, the model describes the economy at an initial point. For the *2007 Nebraska Tax Burden Study*, the model describes the Nebraska economy as it was in 2007 and analyzes the tax burdens and the impact of tax policy changes that occurred from a 2007 base year.

Table 1. **Economic Sectors Modeled in TRAIN.** Much of the Nebraska-specific data were obtained from IMPLAN, a commercial Input/Output model. State spending data were obtained from the Legislature's Fiscal Office. TRAIN divides the Nebraska economy into 28 industrial sectors, two factor sectors (labor and capital) that are supplied by households, nine household sectors, 33 government sectors, and a rest-of-world sector (see Table 1).

Table 2. **Description of Industrial Sectors and Base Industrial Output and Employment.** Table 2 presents the industrial sectors including the NAICS (North American Industrial Classification System) codes, and baseline Nebraska industrial output and employment for each sector in the model.

Table 3. **Description of Household Sectors in TRAIN.** Table 3 presents summary information about the nine household sectors in TRAIN.

The household sectors represent a total of 700,880 Nebraska households. Total household income for 2007 is $64,737,025,850. The first sector, with household incomes between $0 and $10,000, represents 8.3% of the total households and 0.8% of the household income, with average household income of $9,107. The largest household sector is number 6, with incomes between $50,000 and $75,000. There are 143,088 households in this group, or 20.4% of the total. These households earn 28.2% of total household income in Nebraska. The smallest sector, in terms of the number of households, represents households with incomes greater than $150,000 per year. This sector contains 2.6% of the households and 10.4% of the income.

Data for the household sectors are provided by IMPLAN using data from the Regional Economic Information System (REIS) of the Bureau of Economic Analysis (BEA), US Department of Commerce. The data are the most inclusive available. The numbers of households in each group are obtained from the US Census. Household spending in TRAIN is developed from personal consumption expenditures that are based on the Consumer Expenditure Survey (CES) of the Bureau of Labor Statistics.

Defining household income presents a challenge. This is because federal agencies use three different measures of income, and because different federal agencies use different definitions of populations. Income is measured as personal income by the BEA, money income by the Census, and AGI by the Internal Revenue Service (IRS). The number of individuals in households is counted differently because counting personal income by region must account for commuters, while the Census adjusts the number of

individuals to account for those who do not live in household settings. Because of these difficulties, the household sectors in TRAIN use a combination of data sources to identify income and spending in the household sectors.

The problems that arise from using Census data to define households, and BEA data to define income, are immediately seen in Table 3. Except for the first household sector, average household income is greater than the high end of the household income range. This is because the Census's money income measure is narrower than the BEA's personal income measure. Further, in considering household expenditures, the CES data show that consumption expenditures are much higher than income for some household sectors, yet the CES, using Census income data, does not correct personal consumption expenditures to broader income measures. As a result, money income appears to significantly underreport household income, given levels of reported household spending. IMPLAN adjusts its data for income, using something closer to personal income, but continues to use Census household definitions. Therefore, average income exceeds the income range for most groups. According to IMPLAN, the underreporting of income to the CES is "significant."

In updating TRAIN for the 2007 study, the number of households was reduced compared to the 2003 study. Reviews of the household sector suggested that the number of households in the 2003 study was too high, and needed to be reduced for the 2007 study. The total number of Nebraska households in 2007 is estimated to be 700,880, which is 47,933 less than the 2003 study.

TRAIN continues to use the same IMPLAN estimates of the proportion of households in each income sector, but adjusts the number of households in each sector downward. Because IMPLAN's personal income data appear to be correct, adjustments were made to average and total household incomes in TRAIN to account for the different number of households. The population of each household sector is a function of existing population in Nebraska. Population growth is limited to the natural rate of population growth plus net migration. The working population in TRAIN is a function of after-tax returns to labor, and the model assumes that labor is imported or exported as needed to keep wage rates constant.

SECTION 2
2007 Tax Burden Case Studies: Income and Sales Tax Reductions
Figure 2 and Tables 4 – 10

This section of the *2007 Nebraska Tax Burden Study* analyzes the impact of a hypothetical reduction in the sales and use tax, and a second hypothetical reduction in the individual income tax. These taxes represent the major sources of state revenue in Nebraska.

The case study is based on a hypothetical reduction of $10 million in each of these taxes. The $10 million figure is used because it represents a relatively small change, approximately one percent of net tax receipts, but one large enough to easily see the results. Net sales and use tax receipts in calendar year 2007 were $1.285 billion. Net Nebraska individual income tax paid by Nebraska resident taxpayers for tax year 2007 was $1.633 billion. It is assumed that the hypothetical tax reductions were achieved by means of across-the-board reductions in tax rates, so that the policy change does not affect the relationships between taxed goods in the case of the sales tax, or between households in the case of the income tax. The analyses were run separately, with the results summarized in Tables 4 through 7.

Imposing a tax or changing tax rates alters the relationship between prices of alternative goods and services throughout the economy. A tax reduction has the effect of cutting prices and costs, resulting in increased

economic activity that creates additional income and taxable sales. In the case of a reduction in the sales and use tax rate, the tax cut reduces the price of taxable goods and services and allows households and businesses to purchase more of these goods and services. This in turn results in additional tax collections on those additional goods and services sold. In the case of the individual income tax, the cut allows businesses to sell more goods, pay employees or other suppliers more, pay larger dividends, or some combination of all of these options. This results in more income taxes paid by employees, owners, or suppliers.

Table 4. Impact of $10 Million Tax Reduction. This table presents the TRAIN model results of the final changes in state revenues due to hypothetical $10 million tax reductions. In each case, the model is shocked by a $10 million reduction in the appropriate tax. Table 4 indicates that the final net reductions in state revenue are $7.895 million, and $9.323 million, for sales and use and individual income taxes, respectively. This means that for sales and use tax, $2.105 million of the cut is offset by increased revenue due to increased economic activity. Similarly, $0.677 million of the income tax cut is offset by increased activity.

Analysis of a Sales Tax Reduction

Changing the sales tax rate results in an immediate impact on the relative prices of all goods and services in the economy. This impact affects consumers' purchasing patterns, which in turn affect the entire economy.

When a tax is imposed on a specified set of goods and services, the price of the untaxed goods falls relative to the price of taxed goods and services. For example, a sales tax rate increase may induce consumers to substitute untaxed food for taxed manufactured goods. As a result, fewer manufactured goods and more food are produced. As the production of manufactured goods falls, some of the capital and labor formerly used in manufacturing are forced to find employment in food production. In order for the food production sector to be willing to absorb the newly unemployed capital and labor factors from manufacturing production, the relative prices of capital and labor have to change. If one assumes that the manufacturing sector is the capital-intensive sector—that is, manufacturing uses more capital—then a relatively larger amount of capital must be absorbed in the food production sector. The only way for this capital to find employment in the food sector, and for the markets to reach a new equilibrium, is for the relative price of capital to fall. At the new equilibrium position, all capital is relatively worse off, not just capital in the food sector.

In general, a tax on the output of a particular sector results in a decline in the relative price of the inputs used intensively in that sector. For example, a tax on manufactured goods tends to hurt households who receive a proportionately larger share of their income from capital. In addition, households that consume a proportionately larger amount of manufactured goods tend to bear relatively larger shares of the tax burden. The total incidence of the tax on manufactured goods depends on both the household and firm sides of Figure 1. For example, a household that supplies capital and consumes a relatively large amount of manufactured goods is worse off on both counts. On the other hand, a household supplying labor to firms and consuming relatively smaller amounts of manufactured goods is better off. Compared to the first household, the second household is better off from the point of view of receiving a relatively smaller negative impact on labor income, and better off in terms of using relatively less of the taxed goods.

Figure 2 – The Economic Consequences of a Sales Tax. Figure 2 depicts the economic consequences of a sales tax rate reduction. The solid line at the top represents the tax reduction. However, the change in the sales tax rate results in a change in the relative price of taxed and untaxed goods and services. This change in relative prices affects consumers' choices. The tax cut has two effects on consumers. First, taxed goods become relatively less expensive, and second, consumers receive more disposable income because the tax

is reduced. Consumers' purchasing decisions in turn affect the production decisions of firms. The change in firms' production decisions affects both household income and the income taxes paid by firms. The change in household income due to changes in production decisions results in more income tax collected from households; and increased household income affects consumers' choices, which in this case, results in more relative price changes and increased disposable income, another round of tax revenue increases, and further impacts on firms' production decisions.

Figure 2 – The Economic Consequences of a Sales Tax Rate Reduction
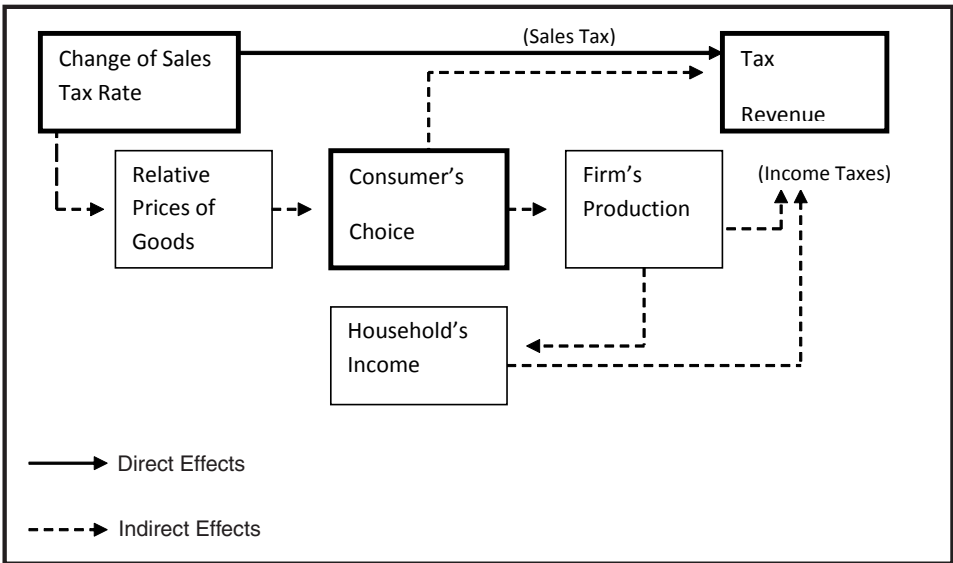
Table 5. **Effect of Sales Tax Reduction by Household Sector.** Table 5 shows the impact of a reduction of the sales and use tax burden on each household sector. The total reduction in sales tax paid by households is $10.835 million. Note that the total reduction in sales tax in Table 4 is only $7.895 million. This shows that ultimate tax savings by households is more than the amount of revenue foregone by the state. Table 4 presents the net reduction in state revenues after all the economic impacts of the sales tax reduction have been accounted for by the model. These are the economic impacts depicted in Figure 2. A large reason why households gain more than $10 million after a $10 million reduction in the sales and use tax can be accounted for by increased income tax receipts to the state.

Table 5 shows the impact on each household sector. The third column, "Percent of Income in Sector," is a repeat of the last column of Table 3, the share of total income earned by each income group. The fourth column presents the sales tax reduction that accrues to each sector in millions of dollars. The fifth column, "Share of Sales Tax (Percent)," is the share of the total sales tax reduction to households received by each sector. Finally, the last column of the Table 5, labeled "Burden Index Share/Income," is the share of the sales tax reduction for each group divided by the percentage of total household income for the same group.

Note that the share of the sales tax reduction increases steadily from the second household income sector through the sixth sector from approximately 2.5% to 22.7% of the benefit. Households above $75,000 see their share of the sales tax reduction dropping to approximately 15% of the total. The Burden Index in the last column provides some notion of the progressivity of the tax. For example, the fifth household income group has 15.4% of the household income and receives 15.5% of the hypothetical sales tax reduction. The resulting burden index is 1.01, indicating that for this sector the share of the sales tax reduction is almost exactly equal to its share of the income. Reading down the column, the index numbers tend to decrease, indicating that as income goes up, the sales tax burden tends to fall. This indicates how sales tax is a tax on consumption, and lower income households tend to consume a greater proportion of their income. This is a classic example of a regressive tax.

Table 6. Effects of Sales Tax Reduction by Industrial Sector. Table 6 presents the share of the $10 million sales and use tax reduction by industrial sector. A sales and use tax rate reduction may be viewed from either the household or the industry sector. The slight difference between $10.835 million in Table 5 and $10.847 million in Table 6—the impact on the housing sector versus the impact on the industrial sectors—is due to rounding errors in the different sets of equations. In the *2003 Nebraska Tax Burden Study*, price effects due to the tax change were not accounted for in the same manner, which had the effect of measuring the effect of trade outside Nebraska resulting from the tax cut.

Because most retail transactions are subject to the sales tax, it is not surprising that most of the impact of a sales and use tax reduction falls on the retail sector (58.9%). However, there are other sectors that are affected by the sales and use tax. Utilities are taxable for most non-manufacturing uses. The accommodation and food services sector is affected due to sales taxes on prepared food and hotel and motel rooms. The tax reduction lowers prices of taxable goods for consumers. The TRAIN model allows us to determine the extent to which consumers, producers, firms, and households benefit from the tax cut.

Analysis of an Income Tax Reduction

The structure of the analysis of an individual income tax is more straightforward than that of a sales tax. An income tax is equivalent to a set of taxes on capital and labor at the same rate. A tax on income, including labor income and capital income, is a tax on labor and capital in all sectors. As a result, the income tax creates no incentives to change labor or capital usage between sectors. Further, the assumption that the tax rate on capital and labor is equal and does not affect factor usage implies that labor must bear the entire burden of the tax. Reducing the tax increases disposable income, with the consequence that Nebraskans pay less tax and receive more real income due to the positive economic impact of tax reductions.

Table 7. Effect of Individual Income Tax Reduction by Household Group. Table 7 shows the impacts of a reduction of the individual income tax burden on each household sector. Note that the total reduction in income tax for households is $9.790 million, which is $467,000 more than the actual revenue loss in Table 4. The original $10 million income tax cut generates an actual revenue loss to the state of $9.323 million, due to the effects of increased economic activity. The $467,000 difference is largely due to increased sales tax collections due to the income tax cut.

The fourth column of Table 7 presents the percentage share of the hypothetical income tax cut received by each household sector. The share of the income tax borne by households in the first household group is 0.4%. This percentage rises as income increases, reaching 24.6% for those households earning more than $150,000 in 2007. Because the hypothetical income tax cut is designed to be based on the percentage of the tax paid by each household sector, the share of tax reduction approximates the percentage of the Nebraska individual income tax burden borne by each household sector. The last column of Table 7, labeled, "Burden Index Share/Income," provides insight on the progressivity of the Nebraska individual income tax. Reading down the column, the index numbers tend to increase, indicating that as income goes up the income tax burden increases. This is a classic example of a progressive tax.

Analysis of Tax Reductions on Personal Income

The final portion of this analysis, based on hypothetical reductions of income and sales taxes, considers the impact of tax reductions on real personal income. The previous sections were designed to determine the incidence of sales and individual income taxes on various sectors of Nebraska's economy. In this section, a series of analyses is conducted to estimate how personal income, industrial output, investment, and employment change with the hypothetical tax cuts. The tax reductions in Tables 4 through 7 are net tax

reductions. That is, the $10 million reductions are not represented in the share of the personal income, because the personal income increases are due to increased economic activity, and not merely the tax reduction. Tables 8 through 10 present the impact of the two hypothetical tax reductions in terms of the impact on personal income, industrial output, investment, and employment.

Table 8. Net Change in Real Personal Income Due to Hypothetical Tax Reductions. Table 8 presents changes in personal income due to the hypothetical tax reductions by household sector. The table shows the amount of gain in personal income due to the hypothetical $10 million reduction in both sales and income taxes. This analysis does not take into account the impact of the tax cuts depicted in the previous sections.

Table 8 is divided into two sections: one showing the impact of a sales tax reduction; and one showing the impact of an income tax reduction. Each section shows the change in personal income in millions of dollars, and the percentage change in total household income. As the table shows, a hypothetical $10 million reduction in sales tax results in an additional $18.233 million in personal income. The next column shows the percentage increase in total household income for each sector due to additional economic activity. The additional $18.233 million in Table 8 includes the increase in disposable personal income of $7.895 million that accrues to households due to the sales tax reduction shown in Table 4.

The impact of a hypothetical $10 million reduction in income tax is also shown in Table 8. The first column under the income tax reduction scenario indicates that an additional $12.277 million in personal income would be generated when the state economy again reached an equilibrium condition.

Table 9. Tax Impact on the State Economy. Table 9 presents the impact of the hypothetical $10 million income and sales tax reductions on the Nebraska economy in terms of industrial output, investment, and employment. The sales tax reduction results in an additional $18.427 million in industrial output, $1.157 million in additional investment, and additional employment of 259 persons. The income tax reduction results in an additional $16.490 million in industrial output, $0.611 million in additional investment, and additional employment of 176 persons.

Table 10. Base Industrial Output and Impact Due to Income and Sales Tax Changes. Table 10 presents the impact on industrial output due to the hypothetical $10 million reductions in income and sales taxes by industrial sector. Table 9 showed that a reduction in sales tax rates generates more positive economic impacts in industrial output, investment, and employment. However, Table 10 shows that the impacts of sales and income tax reductions are quite different between sectors, although in terms of total industrial output, they are nearly identical. Retailers and service industries generally get more positive effects in terms of industrial output from a sales tax reduction, while manufacturing industries get relatively smaller benefits. Some primary industries that produce mostly nontaxable goods, such as agriculture, the food industry, and construction, experience negative impacts due to higher relative prices for their output.

The reduction in the income tax uniformly increases personal income across all sectors. The health services sector (HEALT) benefits most in percentage terms from an income tax cut, and gains $1.648 million in industrial output. The retail sector expands output under either tax cut scenario. Output in this sector increases under both a sales tax cut and an income tax cut. The largest sector in terms of industrial output, meat processing (MEATS), is largely unaffected by either type of tax reduction.

Table 11. **Analysis by Deciles of Nebraska Income Tax Burden Ranked by Federal AGI, Resident Returns.** Table 11 presents Nebraska income tax records by decile from 1995 through 2007. This table was created by sorting all Form 1040N individual income tax returns by federal AGI, dividing the sorted returns into ten groups, and summing each group. For convenience, the first seven deciles, or 70% of the returns, are treated as a single group.

Table 11 includes the number of resident returns by tax year, and in four blocks, presents the total amounts of AGI and Nebraska individual income tax liability. The blocks on the bottom half of Table 11 present the percentage share of total AGI for each decile report, and each decile's share of tax liability. Thus, the 10th decile in 2007 represents the 80,958 returns reporting the top 10% of AGI. This group reported $19,034.7 million in AGI and $863.9 million in Nebraska individual income tax liability, net of nonrefundable credits. In 2007, taxpayers in this decile reported 43.2% of the income and 58.6% of the liability. Reading down the columns provides a history of AGI and liability for returns in that decile. For example, AGI reported from the bottom 70% of returns, increased from $6,781.4 million to $12,920.2 million, and Nebraska tax liability increased from $129.8 million to $215.8 million between 1995 and 2007. Summing the numbers across all 10 deciles will result in the total AGI or of the Nebraska income tax liability. The sums of the percentages of the rows in the bottom two blocks of Table 11 equal 100% of the AGI and tax liability, respectively.

The last column in each decile group is labeled "Top 500 Returns." This represents a portion of the 10th decile and contains the 500 returns with the highest AGI. The top 500 returns are presented separately because the characteristics of the returns at the extremes are very different from other returns in the same decile and from returns in the different deciles. Relatively large proportions of returns in the first and tenth deciles report business income for sole proprietors and "pass-through" business entities such as S corporations, partnerships, or limited liability companies. The tax code operates differently for these taxpayers than it does for those returns where the primary source of income is wages. For example, many of the returns in the first decile report negative AGI, due to business losses, which is nearly impossible for taxpayers who have only wage and salary income. At the tenth decile, a relatively large share of the returns report business income whose tax liability is offset by business incentive tax credits. This has an effect on effective tax rates and measures of tax progressivity.

Note that income and liability totals for the top decile include the values for the top 500 returns. For example, in 2007 the top decile begins at an AGI of $100,759 compared to the top 500, which begins at an AGI of $2,055,360. This column in Table 11 indicates that in 2007, the top 500 returns reported $3,887.7 million of the $19,034.7 million of the total AGI, reported by the top decile. The top 500 returns, in terms of federal AGI, paid $125.0 million of the $863.9 million paid by the top decile. Another way to look at this is that the top 500 returns represent 0.6% of the returns in the top decile, report 20.4% of the federal AGI reported by the top decile, and pay 14.5% of the taxes paid by the top decile.

Table 12. **Effective Tax Rate and Burden Index by Deciles (Resident Returns).** Table 12 presents the information from Table 11 in two different formats. The first block, labeled "Effective Tax Rate," is calculated as a percentage of the Nebraska income tax paid by the decile class divided by the AGI total for that class. This effective tax rate reflects the rate at which all the AGI in the decile is taxed. Reading these effective tax rate numbers down the columns shows that the effective income tax rates have generally

decreased since 2003 for the bottom seven deciles. From 2000 through 2006, the effective rate has tended to increase for the other deciles. Individual income tax rate increases in 2003 were responsible for the increase in the effective tax rate increases through 2006, and tax cuts in 2006 and 2007 are responsible for the declining effective rates in this period. Although Nebraska's income tax rates have not changed since they were increased in 2003, LB 968 in 2006 and LB 367 in 2007 adjusted tax brackets upward. In addition, in 2007 the brackets were adjusted along with the standard deduction, resulting in an elimination of the "marriage penalty." This resulted in a reduction in effective tax rates across all decile groups.

The second block of Table 12, labeled "Tax Burden Index," is calculated by dividing the numbers in the lower right block of Table 11, labeled "Nebraska Liability after Non-Refundable Credits as a percent of Total," by the numbers in the lower left block of Table 11, labeled "Federal AGI as a Percent of Total." The result is a share index that relates the percent share of income in each decile to the percent share of tax paid by the same decile group.

A hypothetical decile group with a tax burden index of 1.00 reporting 20% of the AGI would have paid 20% of the tax. Similarly, if this decile paid less than 20% of the tax, the tax burden index would be less than 1.00. This index provides a measure of the tax burden imposed on Nebraska residents as income rises. Moving horizontally across the table, the index increases from 0.5 for the bottom 70% to 1.36 for the top 10%. This also indicates that the Nebraska individual income tax is progressive, as tax liability increases faster than income.

Looking down the columns of the Nebraska burden index, we can see that index has generally decreased for the bottom seven deciles since 1995. Note that the index for the top 500 returns is lower than the index for the top decile as a whole. The same is true for the effective tax rate on the left side of Table 12. A possible explanation for this apparent exception to the general progressivity of Nebraska's income tax code was mentioned above. The top 500 resident returns are much more likely to report pass-through income from business investment, and therefore, they are also much more likely to report large amounts of capital gains from the sale of businesses or business assets. In addition, these taxpayers are also more likely to have benefited from Nebraska's economic development programs—including the Employment and Investment Growth Act (LB 775) and the Nebraska Advantage Act—reducing tax liability for individuals. See the Nebraska Tax Incentives Annual Report to the Legislature for more details.

Table 13. **Beginning AGI Level.** Finally, Table 13 presents the starting points for the relevant deciles by AGI for selected years. Note that the starting point for the eighth decile—which is also the ending point for the seventh decile—decreased from $56,381 to $55,859 between 2003 and 2007. The starting point for the ninth and tenth deciles increased every year of the burden study. The starting point for the top 500 returns increased from 1996 to 1999, but decreased in 2003, and increased dramatically in 2007. The decline in 2003 is likely due to the negative impact on business incomes and capital gains during the 2001 recession.

SECTION 4
2007 Nebraska Tax Burden Study Recommendations

This section of the *2007 Nebraska Tax Burden Study* presents the recommendations of the Department for future tax burden studies. These recommendations are based on the Department's experience in producing the current study.

Previous tax burden studies were attempts to link employees' income tax information to their employers' business sector in order to measure each sector's tax burden. These attempts suffered from incomplete or inaccurate Nebraska Business Classification Codes and from federal tax records that could not be matched with Nebraska records. This approach also did not incorporate other Nebraska taxes, especially sales tax. The reliance on the TRAIN model in the 2007 Nebraska Tax Burden Study provides a much more comprehensive picture of the role of taxes in the Nebraska economy, and support for this model should be continued.

Recommendation 1 – Change the frequency and due date. The Department recommends changing the frequency and due date of this study. It would be more valuable to policy makers if this study is conducted more frequently than once every four years. Currently, this report is due December 1 of an even-numbered year, which means it must be completed in the same year as the Nebraska Tax Expenditure Report. The Expenditure Report is due October 15 of even-numbered years, and directly competes for Department resources in years where both reports are produced. Moving the due date of the Tax Burden Study to December 1 of odd-numbered years would enhance the usefulness of the report and reduce the strain on resources when both reports are due.

Recommendation 2 – Consider alternative tax policies. The Department recommends that future reports be expanded to consider alternative tax policies. The study considers the burden of the current tax code on business sectors and households. The TRAIN model can be used to study how the tax burden would be shifted if Nebraska moved toward more "ideal" tax structures. Ideal tax structures are generally considered to have lower rates and broader bases than currently exist in Nebraska. Other examples of alternative tax policies to be explored include moving from income to consumption-based taxation, and eliminating business taxes.

Tables

Table 1. Economic Sectors Modeled in TRAIN

SECTOR	DESCRIPTION
Industrial	
AGCRO	Crops
AGLIV	Livestock
OTHPR	Primary Resources
UTILI	Utility
CONST	Construction
FOODS	Food Manufacturing
MEATS	Meat Processing
MFRCO	Construction-Oriented Manufacturing
CHEMS	Chemicals and Related
METAL	Metals and Machinery
FARMM	Farm Machinery
ELECT	Electronic Technology
TRANM	Transportation Equipment
OTHMA	Other Manufacturing
WHOLE	Wholesale Trade
RETAI	Retail Trade
TRAST	Transportation
INFOR	Information
BANKS	Banking
INSUR	Insurance Carriers
REALE	Real Estate
PSERV	Professional Services
BSERV	Business Services
ESERV	Educational Services
OSERV	Other Services
HEALT	Health Services
ENTER	Entertainment
AFSER	Accommodation

SECTOR	DESCRIPTION
Federal Government	
FTSOC	Social-Security Tax
FTPIT	Personal Income Tax
FTPRO	Corporate Income Tax
FTDUT	Import Duty Tax
FTMSC	Miscellaneous Taxes
FSDNO	Federal Non-Defense Spending
FSDDE	Federal Defense Spending
State Government	
NTINS	Insurance Tax
NTMVS	Motor Vehicle Taxes
NTGAS	Gasoline Taxes
NTSAU	Sales and Use Tax
NTPRO	Corporation Tax
NTLAB	Unemployment
NTPIT	Personal Income Tax
NTUNI	University Fees
NTINH	Inheritance Tax
NTSIN	Alcohol, Tobacco, and Horse Racing Tax
NTMSC	Miscellaneous Taxes
NGENF	General Revenue Fund
NSTRA	Transportation Expenditures
NSCOR	Correction Expenditure
NSK12	Educational Expenditure
NSUNI	Higher Educational Expenditures
NSHAW	Health and Welfare Expenditure
NSOTH	Other Expenditures

SECTOR	DESCRIPTION
Local Government	
LTPRP	Property Tax
LTSAU	Local Sales and Use Tax
LTMSC	Miscellaneous Taxes
LSTRA	Local Transportation Expenditure
LSCOR	Local Corrections Expenditure
LSK12	K-12 Education Expenditure
LSHAW	Local Health and Welfare Expenditure
LSOTH	Other Expenditure
Household	
1	$0–$10,000
2	$10,000–$15,000
3	$15,000–$25,000
4	$25,000–$35,000
5	$35,000–$50,000
6	$50,000–$75,000
7	$75,000–$100,000
8	$100,000–$150,000
9	Above $150,000
Factor	
LABOR	Labor
CAPIT	Capital
Other Sectors	
ROW	Other States and Foreign Countries

Table 2. Description of Industrial Sectors and Base Industrial Output and Employment

TRAIN Sector	Description	NAICS	Industrial Output* ($ million)	Employment (Persons)
AGCRO	Crop Production	111	9,260.17	32,222
AGLIV	Animal Production	112	8,280.98	25,987
OTHPR	Forestry and Logging; Fishing, Hunting, and Trapping; Supporting Activities for Agriculture and Forestry; Mining	113, 114, 115, 21	1,152.17	10,372
UTILI	Utility	22	4,700.92	1,931
CONST	Construction	23	9,570.43	74,359
FOODS	Food Manufacturing	3111-3115, 3117-3121	6,808.04	9,248
MEATS	Meat Processing	3116	11,344.92	24,370
MFRCO	Wood and Paper Manufacturing; Nonmetallic Mineral Production; Furniture and Related Production	321-322, 327, 327	2,569.60	10,850
CHEMS	Petroleum and Coal Production; Chemical Manufacturing; Plastics and Rubber Production	324, 325, 326	8,732.39	10,315
METAL	Primary Metal Manufacturing; Fabricated Metal Production; Machinery Manufacturing	331, 332, 33312-33399	4,727.93	14,681
FARMM	Agriculture Implement Manufacturing	333111	2,988.60	5,430
ELECT	Computer and Electronic Production; Electrical Equipment, Appliance and Component Manufacturing	334,335	2,572.69	6,780
TRANM	Transportation Equipment Manufacturing	336	3,728.36	9,369
OTHMA	Tobacco, Textile Mills and Production; Apparel, Leather, and Allied Production; Printing and Related Support Activities; Miscellaneous Manufacturing	3122-3169, 323,339	2,050.08	11,353
WHOLE	Wholesale Trade	42	7,283.58	43,314
RETAI	Retail Trade	44-45	7,861.57	136,981
TRAST	Transportation and Warehousing Except Postal Services	48-49	10,422.33	60,464
INFOR	Information	51	6,265.45	21,331
BANKS	Finance and Related Activities	521, 522, 523, 525	6,476.33	37,486
INSUR	Insurance Carriers and Related Activities	524	6,908.60	32,697
REALE	Real Estate	531	2,936.09	26,273
PSERV	Professional, Scientific, and Technical Services	54	7,936.88	61,960
BSERV	Management of Companies and Enterprises; Administrative and Support; Waste Management and Remediation Services	55	6,889.26	74,405
ESERV	Educational Services	61	1,139.96	19,233
OSERV	Other Services	532, 533, 81	4,432.47	70,768
HEALT	Health Care and Social Assistance	62	9,640.33	122,920
ENTER	Arts, Entertainment, and Recreation	71	1,142.26	20,117
ACCOM	Accommodation and Food Services	72	3,647.84	73,937

* Source: IMPLAN 2007 database

Table 3. Description of Household Sectors in TRAIN

Household Sector	Household Income	Number of Households	Percent of Households	Average Household Income	Total Household Income	Percent of Income in Sector
1	$0–10,000	58,258	8.3%	$9,107	$530,558,744	0.8%
2	$10,000–15,000	46,185	6.6%	$22,766	$1,051,449,718	1.6%
3	$15,000–25,000	103,511	14.8%	$36,426	$3,770,497,822	5.8%
4	$25,000–35,000	102,683	14.7%	$54,639	$5,610,486, 041	8.7%
5	$35,000–50,000	128,666	18.4%	$77,406	$9, 959,516,572	15.4%
6	$50,000–75,000	143,088	20.4%	$127,492	$18,24 2,532,779	28.2%
7	$75,000–100,000	61,477	8.7%	$163,918	$10,077,267,991	15.6%
8	$100,000–150,000	38,598	5.5%	$227,664	$8,787,387,234	13.6%
9	Over $150,000	18,431	2.6%	$364,263	$6,707,328,948	10.4%
Total		700,880	100.0%		$64,737,025,850	100.0%

Table 4. Impact of $10 Million Tax Reduction

	REVENUE IMPACT	
	Sales Tax ($ Millions)	Income Tax ($ Millions)
Initial Revenue Reduction	-10.000	-10.000
Revenue Offset by Economic Impact	2.105	0.677
Net Revenue Impact	-7.895	-9.323

Table 5. Effect of Sales Tax Reduction by Household Sector

Household Sector	Household Income	Percent of Income in Sector	Sales Tax Reduction ($ Millions)	Share of Sales Tax (Percent)	Burden Index Share Income
1	$0–10,000	0.8%	-0. 376	3.5%	4.23
2	$10,000–15,000	1.6%	-0. 266	2.5%	1.51
3	$15,000–25,000	5.8%	-0.788	7.3%	1.25
4	$25,000–35,000	8.7%	-0.686	8.0%	0.92
5	$35,000–50,000	15.4%	-1.684	15.5%	1.01
6	$50,000–75,000	28.2%	-2.461	22.7%	0.81
7	$75,000–100,000	15.6%	-1.600	14.8%	0.95
8	$100,000–150,000	13.6%	-1.377	12.7%	0.94
9	Over $150,000	10.4%	-1.415	13.6%	1.26
Total		100.0%	-10.835	100.0%	

Table 6. Effect of Sales Tax Reduction by Industrial Sector

Sector	Description	Sales Tax ($ Millions)	Share (Percent)
AGCRO	Crop Production	-0.003	0.03%
AGLIV	Animal Production	-0.001	0.01%
OTHPR	Forestry and Logging; Fishing, Hunting, and Trapping; Supporting Activities for Agriculture and Forestry; Mining	0.000	0.00%
UTILI	Utility	-0.665	6.13%
CONST	Construction	0.000	0.00%
FOODS	Food Manufacturing	-0.007	0.06%
MEATS	Meat Processing	-0.008	0.07%
MFRCO	Wood and Paper Manufacturing; Nonmetallic Mineral Production; Furniture and Related Production	-0.045	0.41%
CHEMS	Petroleum and Coal Production; Chemical Manufacturing; Plastics and Rubber Production	-0.137	1.26%
METAL	Primary Metal Manufacturing; Fabricated Metal Production; Machinery Manufacturing	-0.013	0.12%
FARMM	Agriculture Implement Manufacturing	0.000	0.00%
ELECT	Computer and Electronic Production; Electrical Equipment, Appliance and Component Manufacturing	-0.069	0.64%
TRANM	Transportation Equipment Manufacturing	-0.052	0.48%
OTHMA	Tobacco, Textile Mills and Production; Apparel, Leather, and Allied Production; Printing and Related Support Activities; Miscellaneous Manufacturing	-0.105	0.97%
WHOLE	Wholesale Trade	-0.499	4.60%
RETAI	Retail Trade	-6.391	58.92%
TRAST	Transportation and Warehousing Except Postal Services	-0.034	0.31%
INFOR	Information	-0.310	2.86%
BANKS	Finance and Related Activities	-0.044	0.41%
INSUR	Insurance Carriers and Related Activities	-0.025	0.23%
REALE	Real Estate	-0.111	1.02%
PSERV	Professional, Scientific, and Technical Services	-0.027	0.25%
BSERV	Management of Companies and Enterprises; Administrative and Support; Waste Management and Remediation Services	-0.019	0.18%
ESERV	Educational Services	-0.067	0.62%
OSERV	Other Services	-0.392	3.61%
HEALT	Health Care and Social Assistance	-0.197	1.82%
ENTER	Arts, Entertainment, and Recreation	-0.212	1.95%
ACCOM	Accommodation and Food Services	-1.414	13.04%
Total		-10.847	100.00%

Table 7. Effect of Individual Income Tax Reduction by Household Sector

Household Sector	Percentage Household Income	Income Tax of Income in Sector	Share of Reduction ($ Millions)	Income Tax Cut (Percent)	Burden Index Share/Income
1	$0–10,000	0.8%	-0.043	0.4%	0.48
2	$10,000–15,000	1.6%	-0.074	0.7%	0.42
3	$15,000–25,000	5.8%	-0.337	3.1%	0.53
4	$25,000–35,000	8.7%	-0.536	5.0%	0.57
5	$35,000–50,000	15.4%	-0.922	8.5%	0.55
6	$50,000–75,000	28.2%	-1.733	16.0%	0.57
7	$75,000–100,000	15.6%	-1.450	13.4%	0.86
8	$100,000–150,000	13.6%	-2.025	17.7%	1.38
9	Over $150,000	10.4%	-2.670	24.6%	2.38
Total		100.0%	-9.790	90.4%	

Table 8. Net Change in Real Personal Income Due to Hypothetical Tax Reductions

Household Sector	Household Income	SALES TAX		INCOME TAX	
		Additional Personal Income ($ Millions)	Change in Total Household Income	Additional Personal Income ($ Millions)	Change in Total Household Income
1	$0–10,000	0.177	0.03%	0.019	0.04%
2	$10,000–15,000	0.148	0.01%	0.012	0.00%
3	$15,000–25,000	0.813	0.02%	0.283	0.01%
4	$25,000–35,000	0.970	0.02%	0.318	0.01%
5	$35,000–50,000	2.390	0.02%	1.081	0.01%
6	$50,000–75,000	3.730	0.02%	2.027	0.01%
7	$75,000–100,000	2.815	0.03%	2.505	0.03%
8	$100,000–150,000	3.145	0.04%	2.643	0.03%
9	Over $150,000	4.045	0.06%	3.389	0.05%
Total		18.233		12.277	

Table 9. Tax Impact on the State Economy

	Sales Tax	Income Tax
Industrial Output ($ Millions)	18.427	16.490
Investment ($ Millions)	1.157	0.611
Employment (Persons)	259	176

Table 10. Base Industrial Output and Impact Due to Income and Sales Tax Changes

TRAIN Sector	Industrial Output ($ Millions)	SALES TAX		INCOME TAX	
		Industrial Output ($ Millions)	Percent Change	Industrial Output ($ Millions)	Percent Change
AGCRO	9,260.2	-0.073	0.00%	0.193	0.00%
AGLIV	8,281.0	-0.079	0.00%	0.454	0.01%
OTHPR	1,152.2	0.058	0.01%	0.126	0.01%
UTILI	4,700.9	0.961	0.02%	0.373	0.01%
CONST	9,570.4	0.537	0.01%	0.617	0.01%
FOODS	6,808.0	-0.078	0.00%	0.504	0.01%
MEATS	11,344.9	-0.082	0.00%	0.711	0.01%
MFRCO	2,569.6	-0.120	0.00%	0.353	0.01%
CHEMS	8,732.4	0.399	0.00%	0.972	0.01%
METAL	4,727.9	-0.203	0.00%	0.583	0.01%
FARMM	2,988.6	-0.040	0.00%	0.092	0.00%
ELECT	2,572.7	0.144	0.01%	0.441	0.02%
TRANM	3,728.4	-0.083	0.00%	0.434	0.01%
OTHMA	2,050.1	0.305	0.01%	0.417	0.02%
WHOLE	7,283.6	1.078	0.01%	0.785	0.01%
RETAI	7,861.6	6.286	0.08%	1.231	0.02%
TRAST	10,422.3	0.591	0.01%	0.633	0.01%
INFOR	6,265.5	0.510	0.01%	0.495	0.01%
BANKS	6,476.3	0.826	0.01%	0.868	0.01%
INSUR	6,908.6	0.446	0.01%	0.768	0.01%
REALE	2,936.1	0.631	0.02%	0.357	0.01%
PSERV	7,936.9	0.790	0.01%	1.053	0.01%
BSERV	6,889.3	0.431	0.01%	0.835	0.01%
ESERV	1,140.0	0.231	0.02%	0.172	0.02%
OSERV	4,432.5	0.976	0.02%	0.681	0.02%
HEALT	9,640.3	1.998	0.02%	1.648	0.02%
ENTER	1,142.3	0.381	0.03%	0.196	0.02%
ACCOM	3,647.8	1.606	0.04%	0.498	0.02%
Total	161,470.2	18.427	0.01%	16.490	0.01%

Table 11. Analysis by Deciles of Nebraska Income Tax Burden Ranked by Federal AGI (Resident Returns).

Tax Year	Number of Returns	Federal AGI					Nebraska Liability Net of Non-Refundable Credits				
		First 7 Deciles (mil.$)	8th Decile (mil.$)	9th Decile (mil.$)	10th Decile (mil.$)	Top 500 Returns (mil.$)	First 7 Deciles (mil.$)	8th Decile (mil.$)	9th Decile (mil.$)	10th Decile (mil.$)	Top 500 Returns (mil.$)
1995	716,195	6,781.4	2,945.4	3,886.9	8,903.5	1,392.1	129.8	79.5	123.6	393.4	39.6
1996	729,023	7,143.2	3,141.0	4,148.7	9,529.3	1,281.8	140.6	86.9	135.6	445.6	49.8
1997[3]	739,103	7,976.3	3,372.4	4,448.8	10,586.5	1,564.1	135.2	84.9	132.8	427.8	48.8
1998	748,163	8,505.6	3,572.1	4,724.8	12,042.1	2,221.4	153.9	97.2	154.3	521.6	59.4
1999[4]	757,222	9,001.7	3,779.8	4,995.6	12,666.5	2,113.2	167.8	106.6	168.6	576.7	69.7
2000	763,282	9,472.5	3,964.3	5,243.1	13,607.8	2,529.4	184.1	113.8	180.5	607.0	71.9
2001[5]	757,159	9,476.0	3,965.1	5,224.2	12,205.1	1,717.4	182.6	112.1	177.4	553.4	59.2
2002	752,974	9,495.1	3,958.0	5,228.7	11,989.6	1,641.2	176.3	110.6	175.6	536.7	54.2
2003[6]	751,000	9,968.1	4,063.9	5,387.4	12,459.8	1,784.3	190.5	119.3	190.6	588.5	62.8
2004	754,702	10,485.6	4,274.7	5,675.8	13,926.7	2,276.3	201.1	129.1	206.6	667.4	84.2
2005	762,519	11,042.9	4,482.5	5,948.1	15,114.6	2,582.1	214.2	137.5	219.4	722.8	91.7
2006[7]	775,856	12,024.0	4,764.0	6,331.0	17,488.2	3,869.9	210.6	145.3	230.4	799.3	135.8
2007[8]	809,583	12,920.2	5,188.0	6,912.0	19,034.7	3,887.7	215.8	150.6	242.9	863.9	125.0

Tax Year		Federal AGI as Percent of Total (AGI Share Index)					Nebraska Liability Net of Non-Refundable Credits as Percent of Total (Net-Liability Share Index)				
1995		30.12	13.08	17.26	39.54	6.18	17.87	10.94	17.02	54.16	5.45
1996		29.81	13.11	17.31	39.77	5.35	17.39	10.75	16.77	55.10	6.16
1997[3]		30.23	12.78	16.86	40.12	5.93	17.32	10.88	17.01	54.81	6.25
1998		29.49	12.38	16.38	41.75	7.70	16.60	10.49	16.65	56.27	6.41
1999[4]		29.57	12.42	16.41	41.61	6.94	16.45	10.45	16.53	56.55	6.83
2000		29.34	12.28	16.24	42.15	7.83	16.96	10.48	16.63	55.92	6.62
2001[5]		30.70	12.84	16.92	39.54	5.56	17.81	10.93	17.30	53.96	5.77
2002		30.96	12.90	17.05	39.09	5.35	17.65	11.07	17.58	53.72	5.42
2003[6]		31.27	12.75	16.90	39.08	5.60	17.49	10.96	17.50	54.05	5.77
2004		30.51	12.44	16.52	40.53	6.62	16.70	10.72	17.16	55.42	6.99
2005		30.18	12.25	16.26	41.31	7.06	16.55	10.63	16.96	55.86	7.09
2006[7]		29.61	11.73	15.59	43.07	9.53	15.20	10.49	16.63	57.69	9.80
2007[8]		29.33	11.78	15.69	43.21	8.82	14.65	10.22	16.49	58.64	8.48

Table 12. Effective Tax Rate and Burden Index by Deciles (Resident Returns)

Tax Year	EFFECTIVE TAX RATE[1]					NEBRASKA TAX BURDEN INDEX[2]				
	First 7 Deciles (mil.$)	8th Decile (mil.$)	9th Decile (mil.$)	10th Decile (mil.$)	Top 500 Returns (mil.$)	First 7 Deciles (mil.$)	8th Decile (mil.$)	9th Decile (mil.$)	10th Decile (mil.$)	Top 500 Returns (mil.$)
1995	1.91	2.70	3.18	4.42	2.84	0.59	0.84	0.99	1.37	0.88
1996	1.97	2.77	3.27	4.68	3.89	0.58	0.82	0.97	1.39	1.15
1997[3]	1.70	2.52	2.99	4.04	3.12	0.57	0.85	1.01	1.37	1.05
1998	1.81	2.72	3.27	4.33	2.67	0.56	0.85	1.02	1.35	0.83
1999[4]	1.86	2.82	3.37	4.55	3.30	0.56	0.84	1.01	1.36	0.98
2000	1.94	2.87	3.44	4.46	2.84	0.58	0.85	1.02	1.33	0.85
2001[5]	1.93	2.83	3.40	4.53	3.45	0.58	0.85	1.02	1.36	1.04
2002	1.86	2.79	3.36	4.48	3.30	0.57	0.86	1.03	1.37	1.01
2003[6]	1.91	2.94	3.54	4.72	3.52	0.56	0.86	1.04	1.38	1.03
2004	1.92	3.02	3.64	4.79	3.70	0.55	0.86	1.04	1.37	1.06
2005	1.94	3.07	3.69	4.78	3.55	0.55	0.87	1.04	1.35	1.00
2006[7]	1.75	3.05	3.64	4.57	3.51	0.51	0.89	1.07	1.34	1.03
2007[8]	1.67	2.90	3.51	4.54	3.22	0.50	0.87	1.05	1.36	0.96

Table 13. Beginning AGI Level (Dollars)

Tax Year	8th Decile	9th Decile	10th Decile	Top 500
1996	37,687	48,098	66,701	907,097
1999	43,611	56,781	77,690	1,345,486
2003	56,381	61,698	84,175	1,121,786
2007	55,859	73,140	100,759	2,055,360

Footnotes to Tables 11-12

[1] Effective rate is defined as Nebraska individual income tax liability net of non-refundable credits as percent of federal AGI.

[2] Tax burden index is defined as the net-liability share index weighted by the AGI share index:

      Index < 1 indicates that income share is greater than net liability share; and

      Index > 1 indicates that income share is less than net liability share.

[3] Nebraska individual income tax rate reduction.

[4] For tax years beginning 1999, the Nebraska liability net of non-refundable credits has been modified to include the effect of the refundable portion of the child care credit.

[5] For the tax years after 2001, the Nebraska liability net of non-refundable credits has been modified to include the effect of the refundable beginning farmer tax credit.

[6] Nebraska individual income tax rate increase.

[7] Expand individual income tax brackets.

[8] Expand individual income tax brackets and eliminate "marriage penalty."

Endnotes

[1] Joel Slemrod and Jon Bakija, *Taxing Ourselves: A Citizen's Guide to the Great Debate over Tax Reform* (Cambridge, MA: MIT Press, 1998), p. 64.

[2] Slemrod and Bakija, Taxing Ourselves, p. 64.

[3] Ian Sue Wing, "Computable General Equilibrium Models and Their Use in Economy-Wide Policy Analysis: Everything You Ever Wanted to Know (But Were Afraid to Ask)." In MIT Joint Program on the Science and Policy of Global Change, Technical Note Number 6, March 2006. http://globalchange.mit.edu/files/document/MITJPSPGC_TechNote6.pdf, p. 2.

[4] Iksoo Cho, "General Equilibrium Analysis of Investment Tax Credits in Nebraska" (Ph.D. dissertation, University of Nebraska, 1999), p. 29.

[5] The 2007 Nebraska Tax Burden Study uses an updated version of TRAIN by Iksoo Cho. Full documentation of TRAIN is available in Matthew Cushing and Iksoo Cho, "Tax and Revenue Analysis in Nebraska" (Lincoln: Nebraska Legislature, 1998), and Cho, "General Equilibrium Analysis of Investment Tax Credits in Nebraska."

[6] Jeffrey L. Newman, "Alternative Measures of Household Income," Bureau of Economic Analysis, http://www.bea.gov/regional/pdf/spi2005/alternative_measures.pdf.

[7] Minnesota IMPLAN Group Inc., *IMPLAN Pro Users Manual* (Stillwater, MN: Minnesota IMPLAN Group Inc., 2000), p. 269.