Department of Revenue Research Report #2003-1 January 17, 2003 Don Gutmann Operations Research Program Manager (360) 570-6073 Stan Woodwell Research Information Manager (360) 570-6074

## Department of Revenue Compliance Study Executive Summary

The exclusive focus of this study is on taxpayers registered with the Washington State Department of Revenue. Estimates of taxpayer noncompliance have been developed for state taxes included on the Department's combined excise tax return. Estimates are based on the results of a stratified random sample of audits completed between 1997 and 2000. Assessments were annualized to a single year and statistically projected to Calendar Year (CY) 1998. All estimates are for the total population of registered taxpayers, as if an audit was performed on each Department of Revenue combined excise tax return filed. Major findings include the following:

- Total annual excise tax noncompliance for registered taxpayers was estimated at \$183.6 million for CY 1998. This equaled 2.5 percent of total tax liability.
- Use tax had the highest level of noncompliance (\$79.1 million annually, equal to almost 27.9 percent of total use tax liability).
- Annual noncompliance for sales tax was estimated at \$65.5 million. However, this represented only 1.3 percent of total sales tax liability.
- Hazardous substance tax had the second highest rate of noncompliance (14 percent).
- The local share of noncompliance was estimated at \$40.6 million per year -- \$22.2 million of this was for use tax and the remaining \$18.4 million for unreported sales tax.
- Accounting errors were the most common reason for noncompliance, occurring 56.9 percent of the time. Ignorance of statute accounted for 21.6 percent of noncompliance, difference of opinion for 15.7 percent, and negligence/fraud for 5.7 percent.

- The transportation/utility industry had the highest dollar level and the highest rate of noncompliance. Their estimated annual noncompliance of \$44.4 million equaled 7.7 percent of total tax liability.
- Construction firms had the second highest dollar level of noncompliance at \$40.3 million, equaling 4.5 percent of tax liability.
- Rates of noncompliance generally decreased as the size of firms increased. Firms under \$100,000 gross income did not report an estimated 3.4 percent of tax liability while firms between \$100,000 and \$500,000 did not report 7.8 percent. The rate was 1.5 percent for firms between \$10 million and \$50 million and 2 percent for firms with more than \$50 million in gross income.
- Despite higher rates of noncompliance, the actual dollar amount of non-reporting per firm for small taxpayers was much less than for large taxpayers.
- Noncompliance rates for newer firms were several times higher than those for older firms.

The data sources employed in this study are different than those used for the compliance estimates which were released in 1999, and the results may not be directly comparable. However, at the highest aggregate level the results are quite similar. The previous study estimated that the unreported percentage of total tax liability was 3.4 percent among registered taxpayers. This study found the unreported percentage to be 2.5 percent. This suggests that noncompliance among registered taxpayers may have declined slightly.

## **INTRODUCTION**

This study presents the results of the 2002 compliance study. The exclusive focus is on unreported tax by taxpayers registered with the Washington State Department of Revenue. For the purposes of this study, the terms "unreported tax" as measured by audit assessments and "noncompliance" are used interchangeably. Audit assessments are just one piece of the Department of Revenue's enforcement activities. For Fiscal Year 2002, collections on excise tax assessments constituted 36 percent of the \$210 million in total enforcement collections (Chart A). Warrants on known tax liability over a period of time accounted for 25 percent. Unpaid tax returns (returns filed with no remittance at all) accounted for 17 percent while collections on balance assessments (not fully paid in a given reporting period) were 13 percent of the total.



Chart A

The estimates presented here are based on the results of a stratified random sample of audits completed between 1997 and 2000. The sample was stratified by firm size and industry to be statistically representative of the universe of registered Washington taxpayers. Many of the smaller firms randomly selected for audits represent taxpayers normally ignored by standard audit selection procedures.

Taxes included in the estimates are state taxes included on the Department's combined excise tax return. These are sales, use, business and occupation (B&O), public utility and hazardous substance tax. Local sales and use tax is estimated in Table 2, but local tax is excluded from all other tables. State taxes not included are property tax, real estate excise tax, timber excise tax, leasehold excise tax, and taxes not administered by the Department of Revenue.

Audits usually cover a number of years (four years being the most common). For the purposes of this study, assessments were annualized to a single year. Estimates are statistically projected to Calendar Year 1998, the approximate midpoint of the sample audit completion dates. All estimates are for the total population of registered taxpayers, as if an audit was performed on each Department of Revenue combined excise tax return filed.

## TOTAL NONCOMPLIANCE

#### Table 1

## Estimated Excise Tax Noncompliance for Registered Taxpayers Calendar Year 1998

	Voluntarily <u>Reported Tax</u>	Estimated Noncompliance	Noncompliance as Percentage of <u>Total Liability</u>
Sales	\$4,847,628,069	\$65,530,997	1.3%
B&O	\$1,848,849,684	\$27,463,349	1.5%
Use	\$204,399,711	\$79,066,822	27.9%
Public Utility	\$208,152,985	\$5,040,801	2.4%
Hazardous Substance	\$36,790,179	\$5,990,217	14.0%
Other	\$128,570,574	\$497,987	0.4%
Total	\$7,274,391,202	\$183,590,173	2.5%

Total annual excise tax noncompliance for registered taxpayers was estimated at \$183.6 million. This equals 2.5 percent of total tax liability. As shown in Table 1, use tax had the highest level of noncompliance (\$79.1 million annually, equal to 27.9 percent of total use tax liability). Annual noncompliance for sales tax was estimated at \$65.5 million. However, this represented only 1.3 percent of total sales tax liability. Hazardous substance tax had the second highest rate of noncompliance (14 percent).

The relative proportions of debit and credit audits are shown in Chart B. Projections from the years sampled showed \$263.9 million in annual underreporting of tax and \$80.3 million in overreported tax.



Chart B Estimated Debit and Refund Assessments

While the focus of this report is on state excise taxes, the sales and use excise tax estimates would also be subject to local taxation. As seen in Table 2, the local share of noncompliance was estimated at \$40.6 million per year; \$22.2 million of this was for use tax and the remaining \$18.4 million for unreported sales tax.

## State and Local Sales and Use Tax Noncompliance

	State <u>Noncompliance</u>	Local <u>Noncompliance</u>	<u>Total</u>
Sales Tax Use Tax	\$65,530,997 \$79,066,822	\$18,406,558 \$22,208,545	\$83,937,556 \$101,275,367
Total	\$144,597,819	\$40,615,103	\$185,212,922

#### **REASONS FOR ASSESSMENT**

Department of Revenue auditors assign causes or reasons for the assessments they make. These reasons are useful for understanding the nature of taxpayer underreporting. Reasons for noncompliance are attributed to four basic categories:

<u>Accounting Errors</u> - Errors due to omission, computational errors or a lack of records. In these cases, the taxpayer is aware of the regulations involved and does not dispute the tax liability.

Ignorance - Errors due to taxpayer ignorance of statutory or tax rule requirements.

<u>Difference of Opinion</u> - This category is used when a taxpayer disagrees with a legal interpretation or a departmental policy.

<u>Negligence/Fraud</u> - This category implies some degree of evasion. It would include a situation where the taxpayer knew an activity was taxable but did not set up a procedure for reporting the tax. It would also include seemingly fraudulent actions willfully taken to avoid taxation, though actual charges of fraud may be difficult or impossible to prove.





Accounting errors were the most common reason for noncompliance, occurring 56 percent of the time (see Chart C). Ignorance of statute accounted for 22 percent of noncompliance and difference of opinion for 16 percent. Negligence/fraud comprised only 6 percent of the total. It should be noted that when auditors cannot determine the appropriate reason, they typically default to the "accounting errors" category. Thus, the high percentage for this category may be somewhat overstated.

#### NONCOMPLIANCE BY INDUSTRY

Chart D shows noncompliance by industry. The nine industry groups are based on Standard Industrial Classification (SIC) at the two-digit level. The service industry was split into two categories based on SIC range. Service 7000 includes personal services, business and computer services, hotels/motels and recreational services. Service 8000 is comprised mainly of professional services such as health, legal, accounting, engineering, and educational services.



**Chart D Percentage of Total Noncompliance by Industry** 

Table 3 shows estimated annual noncompliance by industry. It also shows the percentages of taxable income and tax liability that unreported tax represents. By all three measures, noncompliance was highest among Transportation/Utility firms. The estimated annual noncompliance of \$46.4 million equaled 7.7 percent of total tax liability and 0.302 percent of taxable activity (the income base from which tax liability is computed). Construction had the second highest noncompliance as a percentage of tax liability and as a percentage of taxable income. The \$30.4 million noncompliance for retailing was the third highest dollar level of noncompliance, but this represented only 1.1 percent of tax liability.

## Table 3

# Total Noncompliance by Industry

	Estimated Annual <u>Noncompliance</u>	Noncompliance as Percentage of <u>Taxable Income</u>	Noncompliance as Percentage of <u>Total Liability</u>
Construction	\$40,326,312	0.209%	4.5%
Manufacturing	\$6,928,477	0.010%	1.3%
Transport/Utility	\$46,353,267	0.302%	7.7%
Wholesale	\$20,320,799	0.033%	2.0%
Retail	\$30,375,194	0.059%	1.1%
Fin/Real Estate	\$5,818,655	0.052%	2.5%
Service 7000	\$23,430,887	0.097%	2.7%
Service 8000	\$7,965,044	0.038%	2.0%
Other	\$2,071,538	0.086%	2.7%
	\$183,590,173	0.066%	2.5%

To avoid major interpretive problems caused by negative percentages, Table 4 provides estimates of noncompliance within industries by tax type based on positive assessments only. Sales tax noncompliance occurred most frequently for construction (72.5 percent of unreported tax) and retail (44.9 percent). Use tax constituted a majority of tax not reported for transportation/utility and manufacturing firms. Business and occupation tax noncompliance was most common for the financial/real estate and service 8000 industries.

Construction Manufacturing Transport/Utility Wholesale Retail Fin/Real Estate Service 7000	Sales 72.5% 26.7% 13.5% 13.0% 44.9% 14.2% 29.3% 6.2%	<u>Use</u> 18.3% 50.2% 55.2% 37.3% 24.6% 29.5% 40.9% 25.7%	B&O 8.0% 22.2% 11.9% 40.0% 30.4% 56.2% 29.6% 54.5%	Public <u>Utility</u> 1.2% 0.5% 13.6% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%	Hazardous <u>Substance</u> 0.0% 0.2% 5.7% 9.1% 0.1% 0.0% 0.0% 1.5%	Other 0.0% 0.1% 0.2% 0.6% 0.0% 0.0% 0.0%	<u>Total</u> 100.0% 100.0% 100.0% 100.0% 100.0% 100.0% 100.0%
Service 7000	29.3%	40.9%	29.6%	0.1%	0.0%	0.0%	100.0%
Service 8000	6.2%	35.7%	54.5%	0.0%	1.5%	2.1%	100.0%
Other	3.9%	40.6%	55.4%	0.2%	0.0%	0.0%	100.0%

## Noncompliance by Type of Tax by Industry **Positive Assessments Only**

## **NONCOMPLIANCE BY SIZE OF FIRM**

As seen in Chart E, annual noncompliance in total dollars is spread across the various size categories based on gross income. However, there is a very strong relationship between size of firm and rates of noncompliance (Table 5). Except for the smallest category, smaller firms generally had much higher noncompliance rates than larger firms. Both unreported tax as a percentage of taxable income and the unreported percentage of total tax liability were far higher for firms with gross income of less than \$500,000 annually.



**Chart E Total Noncompliance by Size of Firm** 

Annual Gross Income <u>\$ Thousands</u>	Estimated Annual <u>Noncompliance</u>	Noncompliance as Percentage of <u>Taxable Income</u>	Noncompliance as Percentage of <u>Total Liability</u>	Average Noncompliance <u>Per Firm</u>
\$100<	\$8,186,783	0.205%	3.4%	\$57
\$100-500	\$57,841,579	0.413%	7.8%	\$882
\$500-1,000	\$11,407,806	0.102%	2.2%	\$628
\$1,000-5,000	\$26,317,576	0.074%	1.9%	\$1,305
\$5,000-10,000	\$8,356,731	0.042%	1.3%	\$2,369
\$10,000-50,000	\$24,828,395	0.042%	1.5%	\$6,916
>\$50,000	\$46,651,302	0.035%	2.0%	\$52,893
	\$183,590,173	0.066%	2.5%	\$719

#### Noncompliance by Size of Firm

Noncompliance as a percentage of taxable income decreased as size increased (from 0.205 percent to 0.035 percent). The pattern for unreported percentage of tax liability was similar though not as absolute. Firms under \$100,000 gross income did not report an estimated 3.4 percent of tax liability while firms between \$100,000 and \$500,000 did not report an estimated 7.8 percent of tax liability. This was opposed to 1.5 percent for firms between \$10 million and \$50 million. The rate for firms with more than \$50 million in gross income was 2 percent.

Table 6 shows noncompliance by size by tax type. The largest firms (above \$5 million gross income) had the most B&O noncompliance. In general, however, there were no clear patterns. Those firms above \$50 million had the highest percentage of use tax noncompliance (59.2 percent), while firms in the \$500 thousand to \$1 million group had the highest level of sales tax noncompliance (78.3 percent).

#### Table 6

#### Noncompliance by Type of Tax by Size

Annual							
Gross Income				Public	Hazardous		
<u>\$ Thousands</u>	Sales	Use	<u>B&amp;O</u>	<u>Utility</u>	Substance	Other	Total
\$100<	68.2%	17.7%	11.2%	3.0%	0.0%	0.0%	100.0%
\$100-500	47.2%	32.3%	14.1%	1.0%	5.4%	0.0%	100.0%
\$500-1,000	78.3%	9.5%	12.1%	0.1%	0.0%	0.0%	100.0%
\$1,000-5,000	41.2%	53.5%	-0.6%	4.7%	1.0%	0.0%	100.0%
\$5,000-10,000	62.5%	18.7%	21.2%	-1.8%	0.0%	-0.7%	100.0%
\$10,000-50,000	16.6%	58.7%	25.8%	-1.3%	-0.5%	0.8%	100.0%
>\$50,000	7.6%	59.2%	19.2%	7.3%	5.9%	0.8%	100.0%
	35.7%	43.1%	15.0%	2.7%	3.3%	0.3%	100.0%
NONCOMPLIANCE BY AGE OF FIRM							

The age of a firm is related to its size. New firms tend to be small and, while many older businesses are also small, large firms have usually been established for a number of years. For the purposes of this study, "newer firms" were defined as firms that were less than two years old at the beginning of the sample audit period. Newer firms accounted for 21 percent of total noncompliance among registered taxpayers (Chart F). Noncompliance rates for newer firms were several times higher than those for older firms (Table 7).

**Chart F Total Noncompliance by Age of Firm** 



The unreported percentage of taxable income was 0.206 percent for newer firms as compared with 0.056 percent for older firms. Newer firms did not report 6.7 percent of tax liability, while the unreported share for older firms was 2.2 percent.

#### Noncompliance by Age of Firm

	Estimated	Noncompliance	Noncompliance
	Annual	as Percentage of	as Percentage of
	<u>Noncompliance</u>	<u>Taxable Income</u>	<u>Total Liability</u>
Newer Firms	\$39,141,915	0.206%	6.7%
Older Firms	\$144,448,257	0.056%	2.2%
	\$183,590,173	0.066%	2.5%

#### CONCLUSIONS

The data sources employed in this study are different than those used for the compliance estimates which were released in 1999, and the results may not be directly comparable. However, at the highest aggregate level the results are quite similar. The previous study estimated that the unreported percentage of total tax liability was 3.4 percent among registered taxpayers. This study found the unreported percentage to be 2.5 percent. This suggests that noncompliance among registered taxpayers may have declined slightly.

The transportation/utility industry had the highest dollar level (\$46.4 million) and rate of noncompliance (7.7 percent). The construction industry was second with a dollar level of \$40.3 million and a rate of noncompliance equaling 4.5 percent. The 1999 estimates found the service 7000 industry to have the highest dollar level at \$63.1 million and a rate of noncompliance at 9.8 percent. The 2002 results found that the rate of noncompliance for the service 7000 industry had dropped to 2.7 percent. The retail and manufacturing industries had the lowest levels of noncompliance at 1.1 percent and 1.3 percent, respectively.