Department of Revenue Research Report #2006-2 June 30, 2006 Donald Gutmann Operations Research Program Manager (360) 570-6073 Julie Williams Tax Policy Specialist (360) 570-6074

DEPARTMENT OF REVENUE COMPLIANCE STUDY

Executive Summary

This study focuses exclusively on taxpayers registered with the Washington State Department of Revenue. Using the results of a stratified random sample of audits completed between 2001 and 2004, this report estimates taxpayer noncompliance for state taxes included on the Department's combined excise tax return. Drawing on multiple years of sample data necessitated annualizing the assessments and statistically projecting the figures to a single mid year to account for inflation factors and to create informative, measurable information. For the 2006 study, we projected the figures to Calendar Year (CY) 2002. All estimates represent the total population of registered taxpayers. Additionally, noncompliance figures discussed in this report equal the net of the estimated debit and credit assessments, unless labeled otherwise. Major findings include the following:

- For CY 2002, we estimated \$148.3 million in total annual excise tax noncompliance for registered taxpayers. This equals 1.8 percent of the total tax liability.
- ◆ Use tax holds the highest level of noncompliance at 18.1 percent, with nearly \$49.6 million in unreported tax.
- ◆ The estimated annual noncompliance for sales tax is \$54.8 million. However, this only represents 1.0 percent of the total sales tax liability.
- Business and occupation tax possesses the second highest rate of noncompliance at 2.2 percent.
- ◆ For the local share of noncompliance, we estimate \$30.5 million \$14.5 million of this represents use tax and the remaining \$16.0 million represents unreported sales tax.

- ◆ The retail industry holds the largest dollar amount (\$32.6 million) but the lowest rate of noncompliance (5.5 percent).
- ♦ The service 7000 industry possesses the highest rate of noncompliance and the second largest dollar amount. The industry's total estimated unreported tax equals \$29.2 million which equates to 3.2 percent of the industry's total tax liability.
- ◆ Rates of noncompliance increase for firms with less than \$500,000 of gross income and for firms with more than \$10 million of gross business income, while noncompliance decreases for firms between \$500,000 and \$10 million of gross business income.
- Despite higher rates of noncompliance, the actual dollar amount unreported per firm for small taxpayers is much less than for large taxpayers.
- Newer firms hold a much higher rate of noncompliance than older firms (7.8 percent compared to 0.9 percent, respectively).

Table 1. 2006 Compliance Study Compared to the 2005 Compliance Study Noncompliance Estimates by Tax Type

	2005 Compl	iance Study	2006 Compliance Study		
	Estimated	Noncompliance as a Percent of Total Tax	Estimated	Noncompliance as a Percent of Total Tax	
Type of Tax	Noncompliance	Liability	Noncompliance	Liability	
Sales	\$64,104,915	1.1%	\$54,815,603	1.0%	
Use	\$56,523,828	19.5%	\$49,613,604	18.1%	
Business &					
Occupation	\$54,503,763	2.6%	\$45,439,535	2.2%	
Public Utility	\$746,999	0.3%	(\$945,732)	-0.3%	
Hazardous			Ì		
Substance	\$6,896,733	9.9%	(\$550,338)	-1.2%	
Other	(\$157,148)	-0.3%	(\$81,880)	-0.2%	
Total	\$182,619,090	2.2%	\$148,290,747	1.8%	

INTRODUCTION

This study presents the results of the 2006 Compliance Study and exclusively focuses on unreported tax by taxpayers registered with the Washington State Department of Revenue. For the purposes of this study, the terms "unreported tax" and "noncompliance" are used interchangeably.

Using the results of a stratified random sample of audits completed between 2001 and 2004, this report estimates taxpayer noncompliance for state taxes included on the Department's combined excise tax return. To statistically represent the universe of registered Washington taxpayers, we stratified the sample data by firm size and industry. Many of the smaller firms randomly selected for audits depict taxpayers that are excluded by standard audit selection procedures. All of the noncompliance figures provided in this report equal the net of the estimated debit and credit assessments, unless labeled otherwise. A debit assessment means the taxpayer underpaid their tax liability and a credit assessment means the taxpayer overpaid their tax liability. Additionally, when referring to total tax liability, we mean the noncompliance amount plus the amount of voluntarily reported tax.

The state taxes discussed in this study include sales, use, business and occupation (B&O), public utility, and hazardous substance tax. Figure 2 provides some limited estimates of noncompliance for local sales and use tax; however, 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. Additionally, this report does not attempt to estimate noncompliance for unregistered businesses.

Audits usually cover a number of years, with four years being the most common. Drawing on multiple years of sample data necessitated annualizing the assessments and statistically projecting the figures to a single mid year to account for inflation factors and to create informative, measurable information. For the 2006 study, we projected the figures to CY 2002.

All estimates represent the total population of registered taxpayers. In other words, these figures estimate the total noncompliance that the Department of Revenue would discover if the Department performed an audit on each combined excise tax return filed.

TOTAL NONCOMPLIANCE

Table 2. Estimated Excise Tax Noncompliance for Registered Taxpayers

3,604 \$2	,548,388,702 5224,332,536 ,988,421,894	18.1%
9,535	000 421 004	2.20/
	,200,421,024	2.2%
(,732) \$2	273,121,188	-0.3%
,383)	\$47,508,997	-1.2%
,880)	\$50,362,405	-0.2%

We estimate \$148.3 million in total annual excise tax noncompliance for registered taxpayers. This equals 1.8 percent of the total tax liability. As shown in Table 2, use tax holds the highest rate of noncompliance at 18.1 percent. Although sales tax noncompliance comprises a larger dollar value of unreported tax with \$54.8 million, compared to only \$49.6 million of use tax, this amount represents only 1.0 percent of the total sales tax liability. The B&O tax holds the second highest rate of noncompliance at 2.2 percent.

Figure 1 depicts the relative proportions of debit and credit assessments. Projections from the years sampled showed \$216.3 million in annual underreporting of tax and \$68.0 million in overreported tax.



Credit Assessments

(\$68.0) Million

Figure 1. Estimated Debit and Credit Assessments

250

200

150

100

50

0

(50)

(100)

Dollars in Millions

Although this report focuses on state excise taxes, sales and use tax noncompliance estimates are also subject to local taxation. As seen in Figure 2, we estimate the local share of noncompliance at \$30.5 million per year; \$14.5 million of this represents use tax and the remaining \$16.0 million represents unreported sales tax.

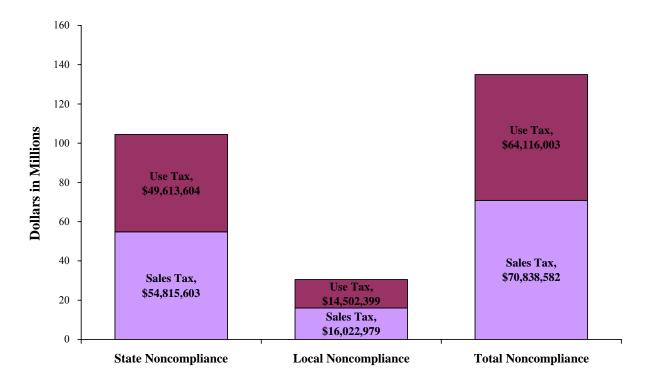


Figure 2. State and Local Sales and Use Tax Noncompliance

NONCOMPLIANCE BY INDUSTRY

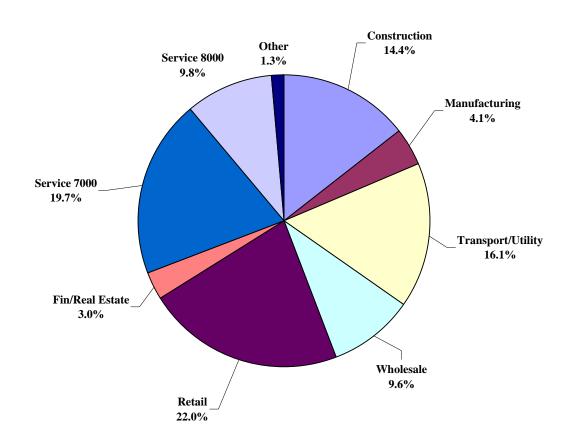
In Table 3 and Figure 3 each industry grouping represents a Standard Industrial Classification (SIC) at the two-digit level. However, we split the service industry into two categories based on SIC range. Service 7000 includes personal, business, computer, hotels/motels, and recreational services. Service 8000 mainly comprises professional services such as health, legal, accounting, engineering, and education. The "other" category includes government services and the agriculture and mining industries.

Table 3 details CY 2002's estimated noncompliance by industry and provides each industry's voluntarily reported tax liability. This table also quantifies noncompliance as a percent of the total tax liability. According to the percentages, the transportation and utility and the service 7000 industries hold the highest rate of noncompliance with 3.2 percent. However, the retail industry comprises the largest dollar amount of noncompliance at \$32.6 million.

Table 3. Noncompliance by Industry

Industry	Estimated Noncompliance	Estimated Noncompliance as a Percent of Total Noncompliance	Voluntarily Reported Tax	Noncompliance as a Percent of Total Tax Liability
Construction	\$21,421,314	14.4%	\$1,031,812,779	2.0%
Manufacturing	\$6,048,187	4.1%	\$484,314,193	1.2%
Transport/Utility	\$23,849,438	16.1%	\$719,937,661	3.2%
Wholesale	\$14,240,652	9.6%	\$851,217,124	1.7%
Retail	\$32,578,969	22.0%	\$3,319,163,211	1.0%
Fin/Real Estate	\$4,495,299	3.0%	\$271,419,775	1.6%
Service 7000	\$29,228,243	19.7%	\$874,868,546	3.2%
Service 8000	\$14,532,480	9.8%	\$482,065,339	2.9%
Other	\$1,896,164	1.3%	\$97,337,094	1.9%
Total	\$148,290,747	100.0%	\$8,132,135,722	1.8%

Figure 3. Noncompliance by Industry as a Percent of Total Noncompliance for All Industries



Noncompliance not only includes firms that purposefully avoid paying their full tax liability but also firms who may underpay or overpay their tax liability for a variety of reasons including ignorance, accounting errors, difference of opinion, and/or negligence/fraud. Underreporting figures tend to be of the most interest. Therefore, Tables 4 and 5 provide estimates of noncompliance by tax type and industry based on debit assessments only.

Table 4. Industry Noncompliance by Tax Type
Total Industry Noncompliance
Debit Assessments Only

Industry	Sales	Use	B&O	Public Utility	Hazardous Substance	Other	Total Non- Compliance
Construction	\$17,680,285	\$5,686,377	\$1,892,523	\$16,606	\$0	\$244	\$25,276,036
Manufacturing	\$3,678,128	\$3,206,595	\$7,323,949	\$3,756	\$19,497	\$0	\$14,231,925
Transport/Utility	\$4,355,095	\$8,975,854	\$15,932,077	\$1,524,897	\$3,852	\$55,668	\$30,847,444
Wholesale	\$6,467,873	\$3,921,396	\$13,436,072	\$4,829	\$4,319,878	\$17,757	\$28,167,806
Retail	\$19,032,852	\$7,008,294	\$11,505,253	\$7,084	\$113,443	\$0	\$37,666,926
Fin/Real Estate	\$1,867,154	\$1,209,246	\$7,673,121	\$0	\$0	\$0	\$10,749,522
Service 7000	\$15,173,473	\$13,490,552	\$9,107,779	\$69,556	\$0	\$0	\$37,841,360
Service 8000	\$2,520,563	\$10,349,289	\$15,899,649	\$0	\$316,665	\$0	\$29,086,166
Other	\$128,926	\$2,016,506	\$250,754	\$0	\$0	\$0	\$2,396,186
All Industries	\$70.904.350	\$55,864,110	\$83,021,178	\$1,626,728	\$4,773,335	\$73,670	\$216,263,371

Table 5. Industry Noncompliance by Tax Type as a Percent of Total Industry Noncompliance Debit Assessments Only

				Public	Hazardous		Total Non-
Industry	Sales	Use	B&O	Utility	Substance	Other	Compliance
Construction	69.9%	22.5%	7.5%	0.1%	0.0%	0.0%	100%
Manufacturing	25.8%	22.5%	51.5%	0.0%	0.1%	0.0%	100%
Transport/Utility	14.1%	29.1%	51.6%	4.9%	0.0%	0.2%	100%
Wholesale	23.0%	13.9%	47.7%	0.0%	15.3%	0.1%	100%
Retail	50.5%	18.6%	30.5%	0.0%	0.3%	0.0%	100%
Fin/Real Estate	17.4%	11.2%	71.4%	0.0%	0.0%	0.0%	100%
Service 7000	40.1%	35.7%	24.1%	0.2%	0.0%	0.0%	100%
Service 8000	8.7%	35.6%	54.7%	0.0%	1.1%	0.0%	100%
Other	5.4%	84.2%	10.5%	0.0%	0.0%	0.0%	100%
All Industries	32.8%	25.8%	38.4%	0.8%	2.2%	0.0%	100%

Sales tax noncompliance occurs most frequently for construction at 69.9 percent (\$17.7 million) and retailing at 50.5 percent (\$19.0 million). The B&O tax constitutes the majority of tax not reported for manufacturing and other firms. The B&O tax noncompliance level is highest for the finance and real estate industry.

NONCOMPLIANCE BY SIZE OF FIRM

Table 6. Noncompliance by Size of Firm

Annual Gross Business Income (\$ in Thousands)	Estimated Noncompliance	Estimated Noncompliance as a Percent of Total Noncompliance	Voluntarily Reported Tax	Noncompliance as a Percent of Total Tax Liability	Average Noncompliance Per Firm
<\$100	\$13,748,109	9.3%	\$181,249,826	7.1%	\$365
\$100-500	\$37,361,859	25.2%	\$565,308,884	6.2%	\$515
\$500-1,000	\$9,582,654	6.5%	\$454,511,556	2.1%	\$918
\$1,000-5,000	\$9,389,869	6.3%	\$1,290,559,716	0.7%	\$1,166
\$5,000-10,000	\$1,880,681	1.3%	\$635,259,158	0.3%	\$3,878
\$10,000-50,000	\$25,216,264	17.0%	\$1,805,077,248	1.4%	\$14,024
>\$50,000	\$51,111,310	34.5%	\$3,200,169,334	1.6%	\$44,604
Total	\$148,290,747	100%	\$8,132,135,722	1.8%	\$1,122

Table 6 and Figure 4 show noncompliance by size of firm. Table 6 includes estimated noncompliance, voluntarily reported tax liability, and the average noncompliance amount per firm by category. Figure 4 depicts noncompliance estimates based on size of firm as a percent of the total noncompliance for all firms. Size is measured by annual gross business income (GBI). Although firms with over \$50 million constitute the largest percent of total noncompliance (34.5 percent), the noncompliance estimate for these firms represents only 1.6 percent of the total tax liability. While smaller firms in the \$100,000 to \$500,000 gross business income range comprise nearly 25.2 percent of the total noncompliance, their noncompliance estimate represents 6.2 percent of the total tax liability. Firms with \$500,000 to \$10 million in gross business income hold much lower rates of noncompliance than the smallest and largest firms. However, when comparing the average noncompliance per firm, the dollar amount generally increases as the firm size increases.

Figure 4. Noncompliance by Size of Firm as a Percent of Total Noncompliance for All Firms Size Based on Annual Gross Business Income

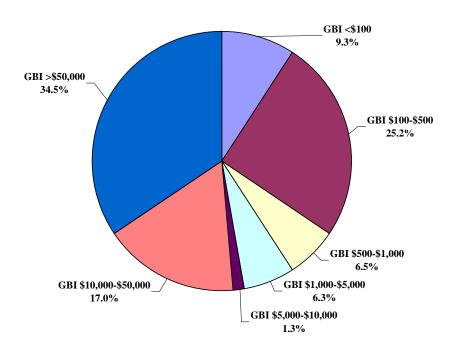


Table 7 shows noncompliance by size and tax type, and Table 8 shows noncompliance by size and tax type as a percent of the total tax type noncompliance. Firms with over \$50 million in gross income comprise the largest amount of noncompliance in the use tax and the B&O tax. Those with a gross income between \$100,000 and \$500,000 hold the largest portion of sales tax noncompliance (39.2 percent of the total). The public utility tax, hazardous substance tax, and the other tax category showed a net overpayment. The most underreporting occurred in the hazardous substance tax for firms earning over \$50 million in gross income; they underreported \$0.9 million.

Table 7. Noncompliance by Tax Type and Size of Firm

Gross Income (\$ Thousands)	Sales	Use	B&O	Public Utility	Hazardous Substance	Other	Total Non- Compliance
<\$100	\$10,692,529	\$2,264,090	\$752,196	\$39,294	\$0	\$0	\$13,748,109
\$100-500	\$21,460,906	\$8,528,712	\$6,834,704	\$537,537	\$0	\$0	\$37,361,859
\$500-1,000	\$2,292,089	\$1,589,876	\$5,700,835	(\$146)	\$0	\$0	\$9,582,654
\$1,000-5,000	\$2,710,712	\$3,015,963	\$3,809,962	(\$148,831)	\$0	\$2,063	\$9,389,869
\$5,000-10,000	\$943,640	\$662,564	\$258,622	\$15,071	\$0	\$784	\$1,880,681
\$10,000-50,000	\$12,972,373	\$7,917,671	\$4,660,250	(\$641,749)	\$312,801	(\$5,081)	\$25,216,264
>\$50,000	\$3,743,353	\$25,634,727	\$23,422,966	(\$746,908)	(\$863,184)	(\$79,645)	\$51,111,310
Total	\$54,815,603	\$49,613,604	\$45,439,535	(\$945,732)	(\$550,383)	(\$81,880)	\$148,290,747

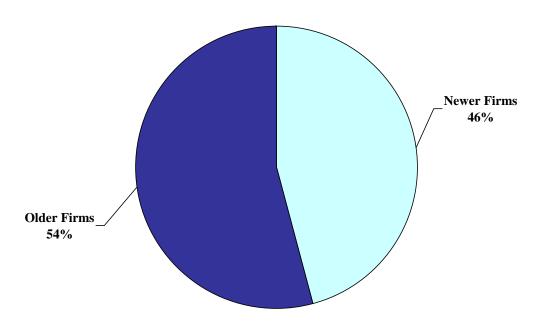
Table 8. Noncompliance by Tax Type and Size as a Percent of the Total Tax Type Noncompliance

Gross Income (\$ Thousands)	Sales	Use	B&O	Public Utility	Hazardous Substance	Other
<\$100	19.5%	4.6%	1.7%	4.2%	0.0%	0.0%
\$100-500	39.2%	17.2%	15.0%	56.8%	0.0%	0.0%
\$500-1,000	4.2%	3.2%	12.5%	0.0%	0.0%	0.0%
\$1,000-5,000	4.9%	6.1%	8.4%	-15.7%	0.0%	2.5%
\$5,000-10,000	1.7%	1.3%	0.6%	1.6%	0.0%	1.0%
\$10,000-50,000	23.7%	16.0%	10.3%	-67.9%	56.8%	-6.2%
>\$50,000	6.8%	51.7%	51.5%	-79.0%	-156.8%	-97.3%
Total	100%	100%	100%	100%	100%	100%

NONCOMPLIANCE BY AGE OF FIRM

We determined a correlation between a firm's age and its size. We found that new firms tend to be small; and while older firms may also be small, large firms usually have been established for a number of years. For the purposes of this study, we defined "newer firms" as firms that opened less than two years before the beginning of the sample audit period. Although newer firms accounted for 46 percent of total noncompliance among registered taxpayers (Figure 5), the ratio of credit assessments to debit assessments for older firms is much higher than for newer firms. As a result, the net of the credit and debit assessments makes older firms appear to account for less noncompliance than they actually do. When comparing only debit assessments, older firms account for 64 percent of the total debit assessments while newer firms account for 36 percent.





In CY 2002 newer firms underreported \$80.3 million, which equates to 7.8 percent of their total tax liability. Older firms underreported \$70.0 million, which represented only 0.9 percent of their total tax liability.

Table 9. Noncompliance by Age of Firm

	Estimated Noncompliance	Voluntarily Reported Tax	Noncompliance as a Percent of Total Tax Liability
Newer Firms	\$80,326,405	\$945,222,836	7.8%
Older Firms	\$67,964,342	\$7,186,931,267	0.9%
All Firms	\$148,290,747	\$8,132,154,103	1.8%

CONCLUSIONS

For this study, we estimated \$148.3 million in total annual excise tax noncompliance for registered taxpayers, which equates to 1.8 percent of the total tax liability. In the 2005 compliance study, we estimated 2.2 percent noncompliance. This suggests that the overall noncompliance has declined slightly.

As in the previous study, sales tax remained the largest dollar amount of noncompliance (\$64.1 million), while use tax was the leader in the rate of noncompliance (19.5 percent, compared to the sales tax rate of 1.1 percent).

Both the debit and credit assessments decreased in the 2006 compliance study. In the 2005 study, debit assessments totaled \$256.9 million and credit assessments totaled \$74.2 million, whereas in the 2006 study, debit assessments equaled \$216.3 million and credit assessments equaled \$68.0 million. The overall decrease in both credit and debit assessments may be linked to the increased taxpayer education efforts put forth by the Department of Revenue's Taxpayer Services Division and the increased use of the Department's E-file system. Both activities help to decrease reporting errors.

Between the 2005 and 2006 studies, the transportation and utility industries continued to have the highest rate of noncompliance at 3.2 percent. However, the transportation and utility industry no longer has the largest dollar noncompliance. The largest dollar noncompliance now belongs to the retail industry.

As in the 2005 study, the 2006 study shows that firms with a gross income greater than \$50 million constitute the largest portion of total noncompliance for all firms. The average noncompliance per firm increases as the firm size increases in both studies.

The newer firms in both the 2005 and 2006 studies underreport at a higher rate than the older firms. In the 2006 study, newer firms have a noncompliance rate of 7.8 percent whereas older firms underreport 0.9 percent.