## 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 selected between 2005 and 2008, this report estimates taxpayer noncompliance for state taxes included on the Department's combined excise tax return. Drawing on multiple years of sample data required statistically projecting the assessments to a single mid year to account for inflation factors and to create measurable and comparable information. For the 2010 study we projected the figures to Calendar Year 2006. 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 Calendar Year 2006 we estimated $\$ 235.4$ million in total annual excise tax noncompliance for registered taxpayers. This equals 2.1 percent of the total tax liability.
- Use tax has the highest level of noncompliance at 23 percent, with nearly $\$ 89.1$ million in unreported tax.
- Hazardous substance tax has the second highest rate of noncompliance at 4.6 percent.
- The estimated annual noncompliance for sales tax is $\$ 75.8$ million. However, this only represents 1 percent of the total sales tax liability.
- For the local share of noncompliance, we estimate $\$ 51.5$ million - $\$ 27.8$ million of this represents use tax and the remaining $\$ 23.7$ million represents unreported sales tax.
- The retail industry has the largest dollar amount of noncompliance ( $\$ 57$ million) with a rate of noncompliance of 1.3 percent.
- The transportation and utility industry has the highest rate of noncompliance and the second highest dollar amount. The industry's total estimated unreported tax equals $\$ 47$ million which equates to 4.5 percent of the industry's total tax liability.
- Rates of noncompliance are highest for firms with less than $\$ 500,000$ of gross income while noncompliance decreases for firms between $\$ 500,000$ and $\$ 10$ million of gross business income.
- Newer firms have a much higher rate of noncompliance than older firms (4.5 percent compared to 1.8 percent, respectively).

Table 1. 2010 Compliance Study Compared
To the 2008 Compliance Study Noncompliance Estimates by Tax Type

|  | 2008 Compliance Study |  | 2010 Compliance Study |  |
| :--- | ---: | ---: | ---: | :---: |
|  | $\begin{array}{c}\text { Noncompliance } \\ \text { as a Percent of } \\ \text { Total Tax } \\ \text { Liability }\end{array}$ | $\begin{array}{c}\text { Noncompliance } \\ \text { as a Percent of } \\ \text { Type of Tax }\end{array}$ |  |  |
| Estimated Tax |  |  |  |  |
| Noncompliance |  |  |  |  |$)$

## INTRODUCTION

This study presents the results of the 2010 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 selected between 2005 and 2008, 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 represents taxpayer underpayment of tax liability and a credit assessment represents taxpayer overpayment of tax liability. Additionally, when referring to total tax liability, this represents 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. Other state taxes such as the property tax, real estate excise tax, timber excise tax, leasehold excise tax, litter tax, cigarette taxes, and taxes not administered by the Department of Revenue are not included. 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 measurable and comparable information. For the 2010 study, we projected the figures to Calendar Year 2006.

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

|  | Estimated <br> Noncompliance | Voluntarily <br> Reported Tax | Noncompliance as a <br> Percent of Total <br> Tax Liability |
| :--- | ---: | ---: | ---: |
| Sales of Tax | $\$ 75,768,923$ | $\$ 7,246,169,046$ | $1.0 \%$ |
| Use | $89,058,203$ | $297,610,965$ | 23.0 |
| Business \& Occupation | $67,146,544$ | $2,711,227,586$ | 2.4 |
| Public Utility | $(1,885,443)$ | $341,460,692$ | -0.6 |
| Hazardous Substance | $5,490,412$ | $112,979,826$ | 4.6 |
| Other | $(107,791)$ | $120,491,636$ | -0.1 |
| Total | $\$ 235,470,849$ | $\mathbf{\$ 1 0 , 8 2 9 , 9 3 9 , 7 5 1}$ | $\mathbf{2 . 1 \%}$ |

We estimate $\$ 235.5$ million in total annual excise tax noncompliance for registered taxpayers. This equals 2.1 percent of the total tax liability.

As shown in Table 2, use tax holds the highest rate of noncompliance at 23 percent. Use tax also comprises the largest dollar value of unreported tax with $\$ 89.1$ million.

Figure 1 depicts the relative proportions of debit and credit assessments. Projections from the years sampled show $\$ 325$ million in annual underreported tax and $\$ 90$ million in over reported tax.

Figure 1. Estimated Debit and Credit Assessments
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 below, we estimate the local share of noncompliance to be $\$ 51.5$ million per year; $\$ 27.8$ million of this represents use tax and the remaining $\$ 23.7$ million represents unreported sales tax.

Figure 2. State and Local Sales and Use Tax Noncompliance Dollars in Millions


## 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. Business and personal services include personal, business, computer, hotels/motels, and recreational services. Professional services include health, legal, accounting, engineering, and education. The "other" category includes government services and the agriculture and mining industries.

Table 3 details Calendar Year 2006'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 industry holds the highest rate of noncompliance with 4.5 percent. However, the retail industry has the highest dollar amount of noncompliance at $\$ 57$ million.

Table 3. Noncompliance by Industry

|  | Estimated <br> Noncompliance | Noncompliance as a <br> Percent of Total <br> Noncompliance | Voluntarily <br> Reported Tax | Noncompliance <br> as a Percent of <br> Total Tax <br> Liability |
| :--- | ---: | ---: | ---: | ---: |
| Industry | $\$ 29,385,610$ | $12.5 \%$ | $\$ 1,644,186,273$ | $1.8 \%$ |
| Construction | $11,118,349$ | 4.7 | $755,858,120$ | 1.4 |
| Manufacturing | $46,977,921$ | 20.0 | $1,000,822,142$ | 4.5 |
| Transport/Utility | $39,497,132$ | 16.8 | $973,840,402$ | 3.9 |
| Wholesale | $27,015,983$ | 4.2 | $4,305,367,694$ | 1.3 |
| Retail | $10,919,082$ | 10.7 | $542,928,994$ | 2.0 |
| Fin/Real Estate | $25,267,402$ | 6.1 | $668,945,323$ | 2.8 |
| Personal Services | $14,342,166$ | 0.4 | $51,807,309$ | 2.1 |
| Business Services | 947,202 |  |  | 1.8 |
| Other |  | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{\$ 1 0 , 8 2 9 , 9 3 9 , 7 5 1}$ | $\mathbf{2 . 1 \%}$ |
| Total | $\mathbf{\$ 2 3 5 , 4 7 0 , 8 4 9}$ |  |  |  |

Figure 3. Noncompliance by Industry


Noncompliance not only includes firms that purposefully avoid paying their full tax liability, but also firms that may underpay or overpay their tax liability for a variety of reasons including ignorance, accounting errors and differences of opinion. 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
Debit Assessments Only

| Industry | Sales | Use | B\&O | Public Utility | Hazardous Substance | Other | Total NonCompliance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Construction | \$24,731,677 | \$6,058,265 | \$2,805,173 | \$127,666 | \$4,605 | \$0 | \$33,727,385 |
| Manufacturing | 4,589,805 | 8,887,948 | 6,747,626 | 114,592 | 5,404,702 | 168,791 | 25,913,465 |
| Transport/Util | 8,080,265 | 41,227,287 | 5,688,232 | 2,527,876 | 10,497 | 56,722 | 57,590,879 |
| Wholesale | 8,933,010 | 7,298,666 | 38,562,232 | 242,702 | 807,194 | 493,559 | 56,337,364 |
| Retail | 28,992,246 | 10,146,685 | 21,831,328 | 0 | 296,123 | 182,913 | 61,449,295 |
| Fin/Real Estate | 3,948,796 | 1,814,321 | 18,138,016 | 0 | 0 | 0 | 23,901,133 |
| Bus/Personal Svcs | 15,489,653 | 7,225,262 | 17,816,882 | 130,560 | 0 | 0 | 40,662,357 |
| Professional Svcs | 3,411,199 | 10,136,177 | 10,979,022 | 114,287 | 3,586 | 863 | 24,645,134 |
| Other | 177,784 | 598,349 | 164,249 | 70,823 | 0 | 0 | 1,011,205 |
|  |  |  |  |  |  |  |  |
| All Industries | \$98,354,435 | \$93,392,960 | \$122,732,762 | \$3,328,506 | \$6,526,707 | \$902,848 | \$325,238,218 |

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

| Industry | Sales | Use | B\&O | Public <br> Utility | Hazardous <br> Substance | Other | Total Non- <br> Compliance |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Construction | $73.3 \%$ | $18.0 \%$ | $8.3 \%$ | $0.4 \%$ | $0.0 \%$ | $0.0 \%$ | $100.0 \%$ |  |
| Manufacturing | 17.7 | 34.3 | 26.0 | 0.4 | 20.9 | 0.7 | 100.0 |  |
| Transport/Utility | 14.0 | 71.6 | 9.9 | 4.4 | 0.0 | 0.1 | 100.0 |  |
| Wholesale | 15.9 | 13.0 | 68.4 | 0.4 | 1.4 | 0.9 | 100.0 |  |
| Retail | 47.2 | 16.5 | 35.5 | 0.0 | 0.5 | 0.3 | 100.0 |  |
| Fin/Real Estate | 16.5 | 7.6 | 75.9 | 0.0 | 0.0 | 0.0 | 100.0 |  |
| Bus/Personal | 38.1 | 17.8 | 43.8 | 0.3 | 0.0 | 0.0 | 100.0 |  |
| Services |  |  |  |  |  | 0.0 | 0.0 | 100.0 |
| Professional <br> Services | 13.8 | 41.1 | 44.5 | 0.5 | 0.0 | 0.0 | 100.0 |  |
| Other | 17.6 | 59.2 | 16.2 | 7.0 |  |  |  |  |
|  |  |  |  |  |  | 0.0 |  |  |
| All Industries | $30.2 \%$ | $28.7 \%$ | $37.7 \%$ | $1.0 \%$ | $2.0 \%$ | $0.3 \%$ | $100.0 \%$ |  |

Sales tax noncompliance occurs most frequently for construction at 73.3 percent ( $\$ 24.7$ million) and retailing at 47.2 percent ( $\$ 29$ million). The B\&O tax constitutes the majority of tax not reported. The $\mathrm{B} \& \mathrm{O}$ 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 (dollars in Thousands) | Estimated Noncompliance | Estimated Noncompliance as a Percent of Total <br> Noncompliance | Voluntarily <br> Reported Tax | Noncompliance as <br> a Percent of Total Tax Liability | Average Noncompliance Per Firm |
| :---: | :---: | :---: | :---: | :---: | :---: |
| <\$100 | \$24,265,957 | 10.3\% | \$207,603,974 | 10.5\% | \$605 |
| \$100-500 | 52,121,742 | 22.1 | 650,156,225 | 7.4 | 592 |
| \$500-1,000 | 11,727,271 | 5.0 | 526,779,172 | 2.2 | 774 |
| \$1,000-5,000 | 12,258,665 | 5.2 | 1,619,100,565 | 0.8 | 1,154 |
| \$5,000-10,000 | 2,279,532 | 1.0 | 833,437,764 | 0.3 | 2,916 |
| \$10,000-50,000 | 32,115,383 | 13.6 | 2,289,288,123 | 1.4 | 14,071 |
| > \$50,000 | 100,702,300 | 42.8 | 4,703,573,928 | 2.1 | 57,020 |
| Total | \$235,470,849 | 100.0\% | \$10,829,939,751 | 2.1\% | \$1,483 |

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 ( 42.8 percent), the noncompliance estimate for these firms represents only 2.1 percent of the total tax liability. While smaller firms in the $\$ 100,000$ to $\$ 500,000$ gross business income range comprise nearly 22.1 percent of the total noncompliance, their noncompliance is only 7.4 percent of their total tax liability. Firms with $\$ 1$ million to $\$ 50$ million in gross business income have 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. Percent of Noncompliance by Size of Firm 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. The public utility as well as the "other" category tax shows a net overpayment.

Table 7. Noncompliance by Size of Firm and Tax Type

| Gross Income (\$ Thousands) | Sales | Use | B\&O | Public Utility | Hazardous Substance | Other | Total NonCompliance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <\$100 | \$14,443,731 | \$3,013,070 | \$6,710,102 | \$99,054 | - | - | \$24,265,957 |
| \$100-500 | 31,821,839 | 8,296,529 | 10,771,986 | 1,231,388 | - | - | 52,121,742 |
| \$500-1,000 | 3,989,031 | 4,551,310 | 2,952,694 | 234,235 | - | - | 11,727,271 |
| \$1,000-5,000 | 3,796,781 | 5,703,125 | 2,692,597 | 61,773 | - | 4,389 | 12,258,665 |
| \$5,000-10,000 | 928,064 | 1,912,639 | $(413,202)$ | $(151,936)$ | 181 | 3,786 | 2,279,532 |
| \$10,000-50,000 | 3,880,347 | 19,222,117 | 8,688,884 | $(220,156)$ | 533,309 | 10,882 | 32,115,383 |
| >\$50,000 | 16,909,130 | 46,359,413 | 35,743,483 | $(3,139,800)$ | 4,956,922 | $(126,849)$ | 100,702,300 |


| Total | $\$ 75,768,923$ | $\$ 89,058,203$ | $\$ 67,146,544$ | $\$(1,885,443)$ | $\$ 5,490,412$ | $\$(107,791)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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

| Gross Income <br> (\$ Thousands) | Sales | Use | B\&O | Public <br> Utility | Hazardous <br> Substance | Other |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| $<\$ 100$ | $19.1 \%$ | $3.4 \%$ | $10.0 \%$ | $-5.3 \%$ | $0.0 \%$ | $0.0 \%$ |
| $\$ 100-500$ | 42.0 | 9.3 | 16.0 | -65.3 | 0.0 | 0.0 |
| $\$ 500-1,000$ | 5.3 | 5.1 | 4.4 | -12.4 | 0.0 | 0.0 |
| $\$ 1,000-5,000$ | 5.0 | 6.4 | 4.0 | -3.3 | 0.0 | -4.1 |
| $\$ 5,000-10,000$ | 1.2 | 2.1 | -0.6 | 8.1 | 0.0 | -3.5 |
| $\$ 10,000-50,000$ | 5.1 | 21.6 | 12.9 | 11.7 | 9.7 | -10.1 |
| $>\$ 50,000$ | 22.3 | 52.1 | 53.2 | 166.5 | 90.3 | 117.7 |
|  |  |  |  |  |  |  |
| Total | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ |

## 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. Newer firms accounted for 26.8 percent of total noncompliance among registered taxpayers (Figure 5) with older firms accounting for 73.2 percent.

Figure 5. Net Noncompliance by Age of Firm


In Calendar Year 2006 newer firms underreported $\$ 63.2$ million, which equates to 4.5 percent of their total tax liability. Older firms underreported $\$ 172.3$ million, which represented 1.8 percent of their total tax liability.

Table 9. Noncompliance by Age of Firm

|  |  |  | Noncompliance <br> as a Percent of <br> Total Tax |
| :--- | ---: | :---: | :---: |
|  | Estimated <br> Noncompliance | Voluntarily <br> Reported Tax | Liability |
| Newer Firms | $\$ 63,163,944$ | $\$ 1,348,336,621$ | $4.5 \%$ |
| Older Firms | $\$ 172,306,905$ | $\$ 9,481,603,130$ | $1.8 \%$ |
| All Firms | $\$ 235,470,849$ | $\$ 10,829,939,751$ | $2.1 \%$ |

## CONCLUSIONS

For this study we estimated $\$ 235.5$ million in total annual excise tax noncompliance for registered taxpayers, which equates to 2.1 percent of the total tax liability. This is down from the 2008 Compliance Study, where we estimated 2.5 percent noncompliance.

In this study, use tax had the largest dollar amount of noncompliance ( $\$ 89.1$ million) and was also the leader in the rate of noncompliance ( 23 percent).

Both the debit and credit assessments increased in the 2010 Compliance Study. In the 2008 study, debit assessments totaled $\$ 309$ million and credit assessments totaled $\$ 78$ million, whereas in the 2010 study, debit assessments equaled $\$ 325$ million and credit assessments equaled $\$ 90$ million.

The transportation and utility industry has the highest rate of noncompliance at 4.5 percent. The largest dollar noncompliance belongs to the retail industry at $\$ 57$ million.

As in the 2008 study, the 2010 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 2008 and 2010 studies underreport at a higher rate than the older firms. In the 2010 study, newer firms have a noncompliance rate of 4.5 percent whereas older firms underreport 1.8 percent. However, the rate for newer firms has continued to decline from a high of 7.8 percent in the 2006 study.

