

Cost Benefit Analysis

Rule 458-20-194

November 30, 2005

1. Introduction

WAC 458-20-194 is the department of revenue administrative rule implementing RCW 82.04.460(1). The statute describes the required methods used to apportion between states gross income reported under the service and other business and occupation tax classification, and the licensed boarding home classification. It provides for two methods of apportionment, (1) separate accounting, and (2) cost apportionment. Separate accounting is to be used unless it can not be accurately made. Cost apportionment divides income in proportion to the ratio of costs of doing business within Washington to the costs of doing business everywhere.

Rule 194 currently provides limited guidance on how to identify which costs are assigned to Washington or out of state. The department's current policy is stated most fully in Det. No.01-006, which provides for the assignment of costs based on the location of income-producing activity they are "related to." The rule to be adopted provides for a more categorical approach, assigning employees, property, and representative contractors by location, and remaining costs by the proxy of customer location. The new discussion and examples of separate accounting and nexus are intended as clarifications and restatements of existing guidance.

The purpose of this cost benefit analysis is to fulfill the requirements of RCW 34.05.328(1)(d) to determine if the probable benefits of the rule to be adopted are greater than its probable costs. The Department took into account both qualitative and quantitative benefits and costs in its analysis. Knowledgeable and experienced experts both internal and external to the Department supplied the qualitative judgments and analysis. Quantitative analysis was applied only when enough data existed to provide reasonable estimates.

The rule to be adopted explains how multi-state service providers should apportion income as required by RCW 82.04.460(1). It incorporates existing Department policies with regard to separate accounting and nexus and explains a new method of sourcing costs for cost apportionment purposes. Because the cost apportionment explanation represents a change in policy, the CBA primarily addresses this feature of the rule.

This cost benefit analysis compares three possible methodologies for cost apportionment of B&O service income: Det. No. 89-459A, Det. No. 01-006, and the proposed amendments to WAC 458-20-194. The cost benefit analysis also employs, for comparison purposes only, the conventional three factor formula, a method widely used for state income tax purposes. (The three factor methodology is generally not available under Washington statute.) A single sales factor formula is also used for comparison purposes only. (The single sales factor method is equivalent to a separate accounting method identified in the rule to be adopted but may be used by taxpayers only if the results are accurate.)

Costs and benefits are measured in terms of how closely each apportionment methodology meets the following three criteria:

- Ease of Compliance.
- Correspondence with taxpayer's activities in Washington, which reflect its use of the Washington market¹ and public services.
- Equity, how well the method provides a level playing field where similarly situated taxpayers are treated similarly.

To ascertain how well each of the options meets the criteria, hypothetical firm profiles representing five types of service providers are developed to determine taxability under each apportionment methodology. How well the criteria are met under each methodology is demonstrated or implied by the hypothetical firm comparison.

1.1 Ease of Compliance

Ease of compliance is implied in the hypothetical firm comparison according to the following criteria:

- A.* the amount of information needed to calculate and report taxes,
- B.* the difficulty in collecting the necessary data, and
- C.* the definitiveness or clarity of the tax calculation methodology.

1.2 Correspondence with Washington Activity and an Equitable Playing Field

A firm's state taxes should correspond to its in-state activity. Fair apportionment of revenues is required by the commerce clause of the U.S. constitution. This criterion concerns the ability of the various apportionment methodologies to reflect the taxpayer's activities in Washington and to meet the constitutional requirement.

Firms that are similar in size and operations should pay relatively similar levels of state taxes. This criterion measures the extent to which the various apportionment methodologies result in different tax treatment for firms that are similar. The greater the divergence in the tax treatment of similar firms, the less equitable is the playing field.

1.3 Apportionment Options for Comparison

The analysis compares three possible methods of cost apportionment that may be available to Washington taxpayers for apportioning their B&O service income. The three methods of cost apportionment are compared to a form of separate accounting and the three factor formula that is used by the majority of states for the apportioning income. While all five methods are used for apportioning income in other states and deemed to be constitutional by the U.S. Supreme Court, they are not readily available for use in apportioning income in Washington State.

¹ Market includes use of Washington customers, suppliers, and employees.

Cost apportionment methods:

Det. No. 89-459A is based on the assumption that all costs have a situs and must be assigned to that site. The department found that this methodology caused distortion when indirect costs, such as headquarters' administrative expenses, are considered.

Det. No. 01-006 is based on the assumption that costs can be assigned to locations because they are related to the taxable activity at that location. This has proven difficult to apply by both taxpayers and the Department.

The rule to be adopted is based on certain underlying principles. First, ease of administration and compliance is desirable both for taxpayers and the Department. Second, certain costs have a definite location and reflect a taxpayer's activities at that location, while other costs must be assigned in a manner that is consistent with the taxpayer's activities.

Comparison methods:

The single factor sales formula is a method of separate accounting and is used for comparison purposes only. It is not always available because it may not accurately reflect the activities of the taxpayer.

Three-factor apportionment was selected in this analysis for comparison for two reasons: (1) Basic three-factor apportionment is the most frequently used method of apportioning income for other state's income tax purposes, so most taxpayers are familiar with it; and (2) it is recognized as reasonable and equitable by courts, including the U.S. Supreme Court. However, three-factor apportionment is not authorized under Washington statute, except in limited cases (e.g., apportionment of financial institution income under RCW 82.04.460(2) and WAC 458-20-14601). The three factor convention apportions revenue to a particular state based on an average of that state's share of firm sales, payroll, and property value. The conventional three factor method will be used in this report but only as one basis of comparison for the proposed new method and the two existing determinations. The method used for comparison assumes a "destination sales" method to determine the sales factor.

1.4 Hypothetical Firm Analysis

Hypothetical firms are constructed to compare the five different apportionment options. Applying the various methods to a number of hypothetical firms is a convenient way to illustrate how each method determines the proportion of gross service revenue taxable in Washington.

The hypothetical firms represent five different activities or industries that report income apportioned under RCW 82.04.460(1):

- securities brokerages;
- professional services, such as an accounting firms;
- waste management firms;

- commissioned sales representatives; and
- electronic services providers.

Firm types chosen for modeling were those that frequently have questions or face challenges when apportioning service revenues. All firm types are assumed to have multi-state activity.

The hypothetical firms modeled in the cost benefit analysis are designed to be reasonably typical of those firms that might face apportionment of Washington service revenues. Although the firms are hypothetical, they are based on actual firm level and aggregate data from a number of sources. The firm profiles contain sufficient information to calculate the percentage of service income apportioned to Washington.

Each of the five firm types has two variants, a Washington headquartered firm and an out-of-state headquartered firm. The ten resulting firms were then modified ten times each so that every firm type generated a group of ten similarly situated taxpayers, but with slightly different assumptions about their operations, thus 100 firms in all.² This was done to determine whether small variances in operations by firm type created large variances in taxation for those firms.

To keep the report manageable, some of the results presented in the body of the report below, in Charts 4 through 9, cover only the initial ten firms. Charts 10 through 13, however, do display some of the results for the entire set of 100 firms. All results were analyzed for the entire set of 100 firms so created. Spot comparisons were also made for alternative sets of 100.

The appendix contains the complete results pertaining to the full set of 100 firms. The appendix also has complete descriptions or profiles of the initial ten firms, the apportionment calculations for each, and a list of data sources employed.

2. Measuring the Criteria

2.1 Criterion 1: Ease of Compliance

The three criteria for comparing ease of compliance are:

- A. the amount of information needed to calculate and report taxes,
- B. the difficulty in collecting the necessary data, and
- C. the definitiveness or clarity of the tax calculation methodology.

All five apportionment methodologies are rated on the basis of these criteria for each hypothetical firm. The rating is from 1 - 5, where 5 is the best rating. The hypothetical firm

² These modifications enable us to make comparisons of the percentage of service income apportioned to Washington under scenarios representing a reasonable set of changes in the characteristics of firms that are representative of their industries. Because we are not comparing the impact of the apportionment methodologies on actual Washington taxpayers, these modifications do not constitute a sample. Therefore, increasing the number of scenarios would not result in improving the statistical precision of these comparisons.

analysis informs this rating process by taking into account the amount of data, work, and assumptions that were needed to do the tax calculations for each firm.

A - The Amount of Information Needed

This criterion for comparing ease of compliance measures the sheer amount of data needed by firms to determine their tax liability under each of the apportionment methodologies. In rating each apportionment methodology for each firm, a rating of 5 was earned if the firm needed a relatively small amount of data, a rating of 3 was earned if the firm needed an average amount of data, and a rating of 1 was earned if the firm needed a relatively large amount of data.

The experience in creating the hypothetical firm profiles guided the rating process. The measure used was the relative amount of information needed to create the profiles and simulate taxes under each of the apportionment methods because this parallels the relative amount of information an actual firm would need for compliance purposes. One method may require little more than the location of each sale or delivery, while other apportionment methods require additional information such as: detailed travel times and costs, detailed list of property and values, classifications of different kinds of employees and payroll, which party initiated a transaction, and information linking costs and locations to specific activities. The modeling team found that some apportionment methods required the accumulation and sorting of a relatively greater volume of such information than other methods did and determined that firms face the same relative difficulties.

B - The Difficulty in Collecting Necessary Data

This criterion measures two aspects of the data needed for compliance: is it already available to the firm because the firm uses it for other reasons? If the information is not available, how difficult is it to modify currently maintained data or obtain new data? Creation of the hypothetical firms guided the rating process; if a specific type of information was not available in published sources (such as IRS and other federal publications), it was assumed to be data not typically used for tax preparation or other purposes. Similarly, readily available data that required modification for the hypothetical firm analysis was assumed to require similar modification when actual firms undertook apportionment calculations.

The apportionment methodologies were rated as follows:

- Rating of 5 -- All or almost all data are used by the firm for other reasons in a form that needs little or no modification.
- Rating of 3 -- At least half of the data needed are used by the firm for other reasons in a form that needs little or no modification.
- Rating of 1 -- Little or none of the data needed are used by the firm for other reasons, or the data require substantial modification to be used for apportionment purposes.

C - The Definitiveness or Clarity of the Equation for Tax Calculation

Definitiveness is the most important criterion in the analysis of simplicity because it affects three important areas for the taxpayer: ease of compliance for the taxpayer, certainty for the taxpayer, and equity among taxpayers. Definitiveness also has an impact on the public sector's administrative ease. A definitive methodology implies few ambiguities will impede compliance and administration; it also implies consistency for taxpayers. Consistency over time affects the predictability of tax payments and consistency across taxpayers has an impact on equity. If apportionment equations are not definitive, taxpayers face uncertainty and error when calculating taxes; this may also result in large audit adjustments. In addition, similarly situated taxpayers may have different interpretations of the law and rules and may pay different tax amounts, a violation of taxpayer equity.

The apportionment methodologies are rated as follows for this criterion:

- Rating of 5 -- The equations are definitive; there is little room for interpretation in the equations.
- Rating of 3 -- There is some room for interpretation in the equations, but the majority of the elements of the equation are definitive.
- Rating of 1 -- There is significant room for interpretation; the majority of the elements of the equation are open for interpretation.

2.2 Criteria 2 and 3: Correspondence to Washington Activity; Equitable Playing Field

There are two measures concerning the relationship between a firm's taxes and its activities in Washington. The first compares the share of Washington apportioned revenue with firm in-state activities where sales to state residents, in-state payroll, and the value of in-state property are proxies for in-state activities. The second measure compares Washington apportioned revenue to a generally accepted convention that is often considered to correspond with the taxpayer's activities in the state.

The cost benefit analysis also uses two measures related to the above to weigh the apportionment methods' impact on equity, or the provision of a level playing field. The first equity measure compares the share apportioned to Washington for a number of similar but slightly different firms. The second equity measure determines how each of these similar but slightly different firms compares to a generally accepted apportionment convention.

The generally accepted apportionment convention used as a comparison for both criteria above is the three factor convention. The three factor apportionment methodology is the most widely used and best understood method in income tax states and is considered to be equitable by the U.S. Supreme Court. The averaging function of the three factor convention helps to minimize distortions due to particularly large, or small, amounts of any one factor. Therefore, it is assumed that the three factor convention is an acceptable way to measure activity and use of public services in Washington and to evaluate the equity of the playing field. In comparing the other apportionment methods to the three factor convention, note again that the convention serves only as a point of reference in this cost benefit analysis; it is not assumed to be the best method and is not authorized under Washington statute, except in limited cases.

3. Conclusions

3.1 Ease of Compliance

Charts 1, 2, and 3 below present the ease of compliance findings for the three compliance sub-criteria.

Chart 1 concerns criterion *A*, the amount of information needed to calculate and report taxes. Chart 1 shows that the proposed new method ranks higher than Det. No. 01-006 but lower than Det. No. 89-459A. The proposed method scores 2.0 while Det. No. 89-459A has a score of 2.5 and Det. No. 01-006 scores 1.5. Of course, the single sales factor scores highest because it requires the least information to use. The three factor convention also scores fairly well.

Chart 1

**Ease of Compliance, Criterion A -
the amount of information firms need to calculate and report taxes**

<u>Firms</u>	<u>Det. 89-459A</u>	<u>Det. 01-006</u>	<u>New Proposal</u>	<u>Sales Factor</u>	<u>3 Factor Convention</u>
Brokerage Firm	2.5	1.5	2.0	4.0	2.5
Professional Servcs	2.5	1.5	2.0	4.0	2.5
Waste Mgmt.	2.5	1.5	2.0	4.0	2.5
Commissioned Sales	2.5	1.5	2.0	4.0	2.5
Electronic Services	2.5	1.5	2.0	4.0	2.5
<u>Average Score</u>	<u>2.5</u>	<u>1.5</u>	<u>2.0</u>	<u>4.0</u>	<u>2.5</u>

Rating 1 - 5 (where 5 is the easiest or best choice, as determined by the analysts when modeling.)

Regarding the difficulty of collecting necessary data, on the other hand, Chart 2 below shows that the proposed new method is a marked improvement over both Det. No. 89-459A and Det. No. 01-006. The proposed method scores 3.2 on criterion *B*, more than one and a half times greater than Det. No. 89-459A's score of 2.0, and almost two and a half times greater than Det. No. 01-006's score of 1.3.

In terms of the difficulty collecting data, the proposed new method's advantage more than compensates for the disadvantage it poses due to the quantity required because the information necessary for the new method is more likely to be on hand for other purposes.

The three factor convention and the single sales factor score highest because the required data is also needed for state income tax and other uses.

Chart 2
Ease of Compliance, Criterion B -
the difficulty in collecting necessary data

<u>Firms</u>	<u>Det. 89-459A</u>	<u>Det. 01-006</u>	<u>New Proposal</u>	<u>Sales Factor</u>	<u>3 Factor Convention</u>
Brokerage Firm	2.0	1.5	3.0	4.0	4.0
Professional Servcs	2.0	1.5	3.5	4.0	4.0
Waste Mgmt.	2.0	1.0	3.0	3.5	3.5
Commissioned Sales	2.0	1.0	3.0	4.0	4.0
Electronic Services	2.0	1.5	3.5	3.5	3.5
<u>Average Score</u>	<u>2.0</u>	<u>1.3</u>	<u>3.2</u>	<u>3.8</u>	<u>3.8</u>

Rating 1 - 5 (where 5 is the easiest or best choice, as determined by the analysts when modeling.)

Chart 3 below shows that the proposed new method enjoys an even stronger advantage over Det. No. 89-459A and Det. No. 01-006 in terms of criterion C, the definitiveness of the tax apportionment methodology. The new proposal scores 3.5, much higher than Det. No. 89-459A's score of 2.0, and three and a half times greater than Det. No. 01-006's score of 1.0.

Chart 3
Ease of Compliance, Criterion C -
the definitiveness or clarity of the tax calculation methodology

<u>Firms</u>	<u>Det. 89-459A</u>	<u>Det. 01-006</u>	<u>New Proposal</u>	<u>Sales Factor</u>	<u>3 Factor Convention</u>
Brokerage Firm	2.0	1.0	3.5	4.5	4.5
Professional Servcs	2.0	1.0	3.5	4.5	4.5
Waste Mgmt.	2.0	1.0	3.5	4.5	4.5
Commissioned Sales	2.0	1.0	3.5	4.5	4.5
Electronic Services	2.0	1.0	3.5	4.5	4.5
<u>Average Score</u>	<u>2.0</u>	<u>1.0</u>	<u>3.5</u>	<u>4.5</u>	<u>4.5</u>

Rating 1 - 5 (where 5 is the easiest or best choice, as determined by the analysts when modeling.)

This last criterion is the most important of the three because definitiveness also impacts predictability and equity. The significantly higher rating for the proposed method demonstrates that it would increase the ease of compliance as well as contribute to greater predictability and equity. Note that the proposed method does not rate as highly on ease of compliance as does the three factor convention or single factor sales method for which information is more readily available.

Conclusion: The proposed new apportionment method scores extremely well on criterion C, the most important criterion. It also scores much higher than the two existing determinations on criterion B, more than offsetting criterion A's average rating. Therefore, the proposed method

can be deemed to be a significant improvement in terms of ease of compliance when compared with Det. No. 89-459A and Det. No. 01-006.

3.2 Correspondence with Washington Activity

Chart 4 displays the percentage of revenues apportioned to Washington for each of the five typical firms headquartered in state. Chart 5 then shows the assumptions used for the five firm types included in Chart 4 (the profiles, tax calculations, and assumptions are all detailed in the study appendix).

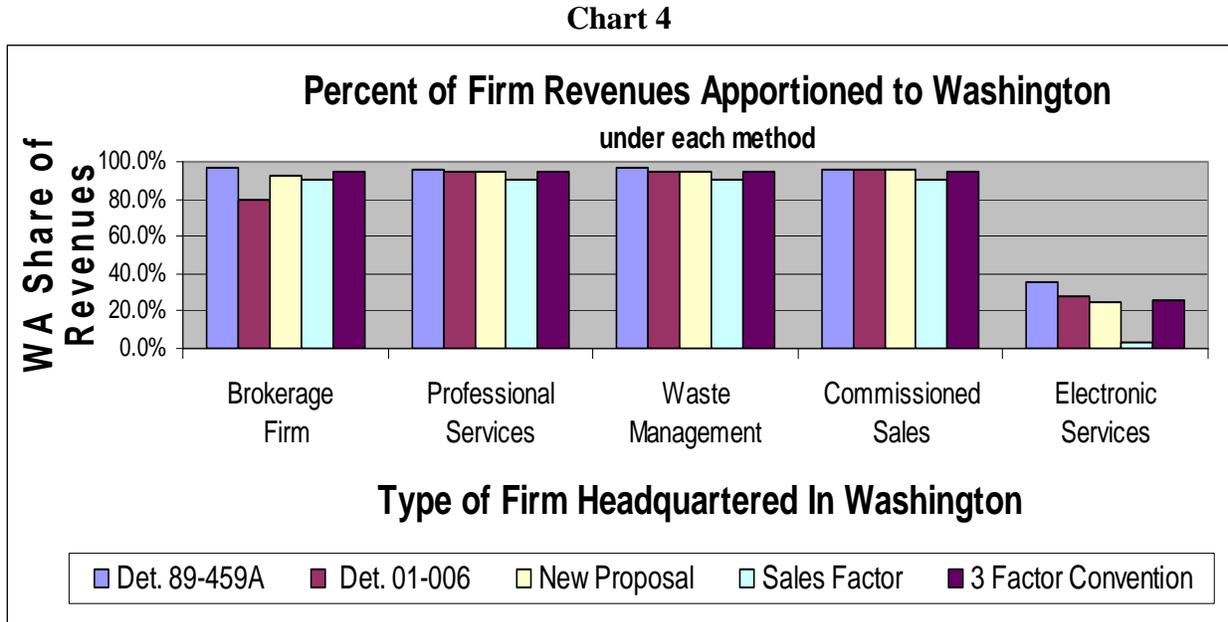


Chart 5
Underlying Firm Assumptions, WA Firms:
Sales to WA Customers and WA Share of Payroll and Property Value

	Broker	Professional Services	Waste Management	Commissioned Sales	Electronic Services
Sales	90.0%	90.0%	90.0%	90.0%	3.0%
Payroll	95.0%	95.0%	95.0%	NA*	35.0%
Property	100.0%	100.0%	100.0%	100.0%	40.0%

*compensation is in the form of profits, not payroll, for the commissioned sales firm

The assumptions in Chart 5 represent the "facts on the ground," the assumed Washington activity for each of the five firm types. Note that the commissioned sales representative has no payroll, as commissions are considered to be profits.

Chart 6 compares each of the other four apportionment methods to the three factor convention. Note again that the three factor convention is widely used and understood, but is utilized here only for comparison purposes. This method is generally not available under Washington statute and has not been demonstrated to be the best of all apportionment methodologies.

Chart 6

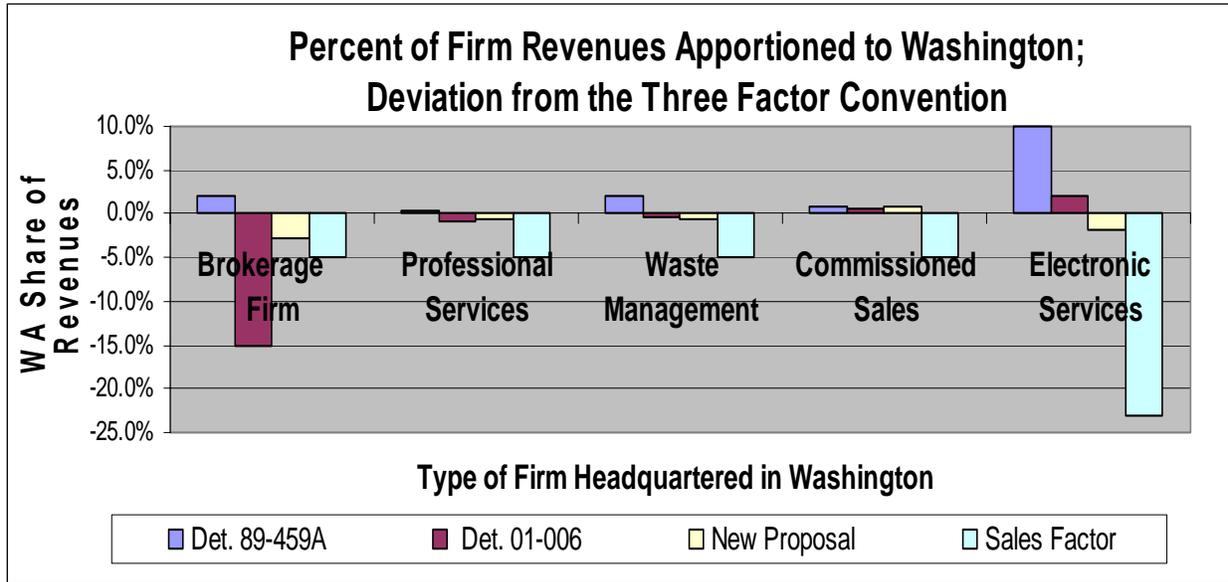


Chart 6 reveals that for Washington firms the new method appears to be at least as close to the three factor convention as the other apportionment methods, and generally closer. In fact, averaging across all five firm types, the difference between the three factor convention and the methodologies for the three determinations is:

- proposed method, 1.0 percent of revenues;
- Det. No. 01-006, 2.8 percent of revenues; and
- Det. No. 89-459A, 3.1 percent of revenues.

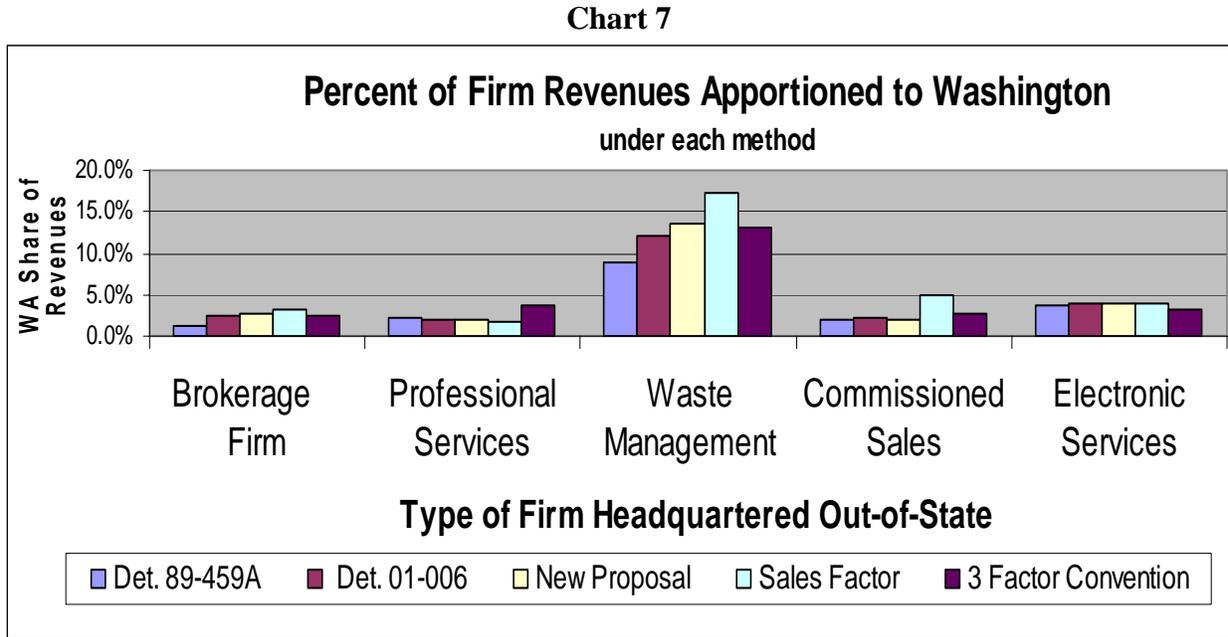
The difference averages 8.6 percent for the sales method, which does not have payroll or property factors to smooth out very small or very large sales amounts. Note that the percentages given are absolute values (that is, positive and negative signs in the differences are ignored).

These results imply that the new method is probably closer to the three factor convention than are the existing determinations. Once again, these results appear to hold in general for a wide range of reasonably constructed but different firms. Results of running iterations on many different firms are discussed in the equity section and in the appendix.

Conclusion for in-state firms: The rule to be adopted corresponds more closely to the Washington activity and presence of in-state firms than do the apportionment methods under Det. No. 89-459A and Det. No. 01-006.

Firms Headquartered Out of State

Charts 7, 8, and 9 below illustrate similar conclusions for firms headquartered out of state.



Note that Chart 7's scale differs from Chart 4's, despite the similar data, because Chart 4 firms can apportion more than 90 percent to Washington while Chart 7's firms apportion no more than 17 percent. A zero to 100 percent scale in Chart 7 would make the bars too small to see.

Chart 8
Underlying Firm Assumptions, Out-of-State Firms:
Sales to WA Customers and WA Share of Payroll and Property Value

	Broker	Professional Services	Waste Management	Commissioned Sales	Electronic Services
Sales	3.3%	1.7%	17.2%	5.0%	4.0%
Payroll	1.7%	1.5%	8.8%	NA*	5.0%
Property	2.3%	8.0%	13.0%	0.5%	0.5%

*compensation is in the form of profits, not payroll, for the commissioned sales firm

Chart 7 shows the Washington apportionment shares for out-of-state headquartered firms under the rule to be adopted, Det. No. 89-459A, and Det. No. 01-006; all three apportionment methods generally correspond to the Washington activity shown in Chart 8. Each of the methods results in a higher apportionment share for the waste management firm than for the other firms. This is consistent with the activities in Washington because the waste management firm has the highest

shares of sales and in-state property. (Note that the out-of-state waste firm is not a mirror image of the in-state waste firm.)

Chart 9 below uses apportionment shares from Chart 7 to compare the results from the first four methods to the three factor convention.

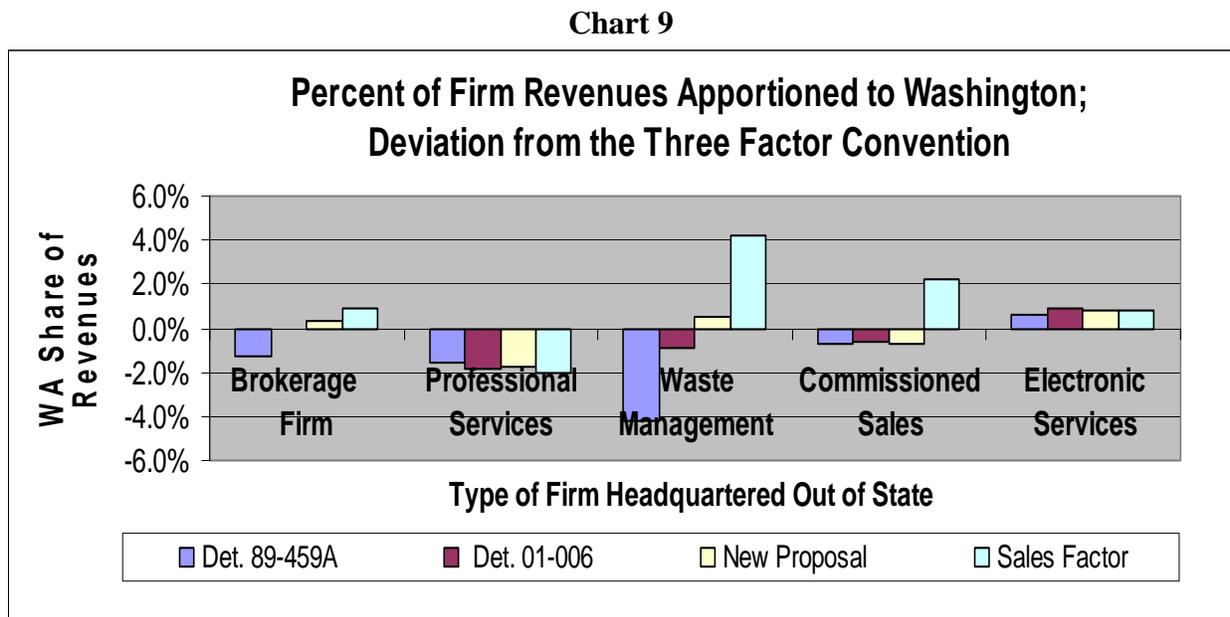


Chart 9 shows that overall for out-of-state firms, like in-state firms, the new method is closer to the three factor convention than are the two existing determinations.

Calculated across all five firms, the average deviation from the three factor convention is:

- proposed method, 0.2 percent of revenues;
- Det. No. 01-006, 0.5 percent of revenues; and
- Det. No. 89-459A, 1.4 percent of revenues.

The difference averages 1.2 percent for the sales method (these are still absolute values). Again, these results generally hold for a wide range of differently constructed firms.

Conclusion for out-of-state firms: The new proposal tracks the Washington activity and presence of out-of-state firms better than the apportionment methodologies under Det. No. 89-459A and Det. No. 01-006.

Conclusion for both in-state and out-of-state firms: Since the proposed new rule scores best in terms of correspondence with Washington activity and presence for both Washington headquartered firms and for out-of-state firms, the new method is a distinct improvement in terms of tracking the Washington activity.

4.3 Equity: Similarly situated taxpayers are treated similarly

A number of iterations were run to determine if similarly situated taxpayers are treated similarly under the various apportionment methods. Each iteration made one modest change in a firm's composition, holding all others factors constant. A wide range of cost structures were tried for each of the five firm types. Taxpayers who are similar but for one modest difference can be considered to constitute a group of similarly situated taxpayers.

The statistical variance of Washington apportioned revenue was calculated for the groups and compared for each of the apportionment methods. The variance measures the dispersion in taxes apportioned to Washington. The larger the variance, the greater the difference in how similarly situated taxpayers are treated. Variances are a relative measurement of equity. Note that it is important to look at the variance score for one method and compare it to the others; the absolute variance scores are not important. A lower relative variance implies greater relative equity.³

Washington Headquartered Firms (in-state firms)

Chart 10 below shows how the percentage of taxes apportioned to Washington varied for each type of Washington headquartered firm when ten such iterations were made.

Chart 10
Variance of Revenues Apportioned to Washington
for Each Firm Type

In-State Firms	Det. 89-459A	Det. 01-006	New Proposal	Sales Factor	3-Factor Convention
Brokerage Firm	0.015	0.012	0.015	0.052	0.004
Professional Services	0.032	0.024	0.027	0.052	0.004
Waste Management	0.015	0.007	0.005	0.052	0.004
Commissioned Sales	0.023	0.022	0.023	0.052	0.018
Electronic Services	0.003	0.002	0.001	0.000	0.001
Average Variance	0.018	0.014	0.014	0.042	0.007

Chart 10 shows that the proposed new method and Det. No. 01-006 are virtually identical in terms of the average variance of the Washington apportioned share. With a higher average variance, Det. No. 89-459A performs slightly worse in terms of treating similarly situated taxpayers in a similar fashion. The sales factor varies the most, implying that similarly situated firms are not treated the same. The three factor method varies only one-half as much as does Det. No. 01-006 and the rule to be adopted.

³ Note that the variances compare taxes apportioned to Washington under a set of modifications to hypothetical firms representative of businesses in their industries. Therefore, the variances are a quantification of the dispersion in apportionment factors for the various hypothetical firm scenarios. No measurement of statistical significance in the difference of variances is included because these variances are not based on a sample of actual taxpayers and the concept of “statistically significant” differences would be invalid.

That most straightforward comparison of firm variances is to analyze each firm type individually. The rule to be adopted generally compares well for each firm type, though Det. No. 01-006 is marginally better for the brokerage firm and professional services.

Whether analyzing each individual firm type, or averaging across the firm types, we can conclude that the rule to be adopted appears to be at least as good as Det. Nos. 89-459A and 01-006, if not marginally better. The variances of the Washington apportioned shares reported in Chart 10 are fairly typical of the numerous iterations that were run.

Chart 11 below shows how each apportionment method's variance deviates from the three factor convention. As in Chart 10, the proposed new method and Det. No. 01-006 are virtually identical. The variance for Det. No. 89-459A has the highest deviation from the three factor convention, therefore faring poorest of the three. The single sales factor performs the worst of all methods on this measure.

Chart 11
Variance of Revenues Apportioned to WA for Each Firm,
Deviation from the Three Factor Convention

In-State Firms	Det. 89-459A	Det. 01-006	New Proposal	Sales Factor
Brokerage Firm	0.009	0.007	0.008	0.034
Professional Services	0.018	0.013	0.015	0.034
Waste Management	0.007	0.002	0.001	0.034
Commissioned Sales	0.003	0.002	0.003	0.027
Electronic Services	0.001	0.001	0.000	0.001
Average Variance	0.008	0.005	0.005	0.026

Once again, these results were typical of the many iterations that were run.

Conclusion for in-state firms: The proposed new rule is comparable to Det. No. 01-006 and may be marginally better than Det. No. 89-459A in terms of treating similar Washington headquartered firms in a similar fashion.

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Out-of-State Firms

The same analysis was carried out for firms headquartered out of state. Chart 12 shows the variance for ten such iterations for each out-of-state firm type.

Chart 12
Variance of Revenues Apportioned to Washington
for Each Firm Type

Out-of-State Firms	Det. 89-459A	Det. 01-006	New Proposal	Sales Factor	3-Factor Convention
Brokerage Firm	0.00001	0.00002	0.00003	0.00008	0.00001
Professional Services	0.00001	0.00001	0.00001	0.00002	0.00005
Waste Management	0.00024	0.00031	0.00046	0.00204	0.00036
Commissioned Sales	0.00002	0.00002	0.00002	0.00017	0.00004
Electronic Services	0.00007	0.00007	0.00005	0.00011	0.00003
Average Variance	0.00007	0.00009	0.00011	0.00048	0.00010

The variances for the five methods are very small and round to 0.0001 for all but the single sales factor; the only reason for showing five decimal places is to allow comparisons of the individual firm variances. The two existing determinations and the rule to be adopted are so incredibly close that they are indistinguishable; meanwhile the sales factor is approximately five times higher. Therefore, there is no real difference between the proposed new method, the three factor convention, and the two existing determinations.

Chart 13 shows the variance for the deviation from the three factor framework for out-of-state firms.

Chart 13
Variance of Revenues Apportioned to WA for Each Firm,
Deviation from the Three Factor Convention

Out-of-State Firms	Det. 89-459A	Det. 01-006	New Proposal	Sales Factor
Brokerage Firm	0.000011	0.000010	0.000011	0.000052
Professional Services	0.000030	0.000042	0.000039	0.000071
Waste Management	0.000276	0.000039	0.000028	0.001435
Commissioned Sales	0.000005	0.000004	0.000005	0.000047
Electronic Services	0.000028	0.000017	0.000004	0.000091
Average Variance	0.000070	0.000022	0.000017	0.000339

The variances in the deviations from the three factor convention are extremely small for all apportionment methods in the out-of-state scenario. The proposed new method scores best -- just a hair better than Det. No. 01-006. The variance in the deviations from the three factor convention are third best for Det. No. 89-459A, some four times higher than the proposed new method, while the sales factor is almost 20 times higher than the new proposal.

Conclusion for out-of-state firms: The proposed new rule is comparable to Det. No. 89-459A and Det. No. 01-006 in terms of treating similar out-of-state firms in a similar fashion.

Conclusion for in-state and out-of-state firms: The proposed new rule is at least comparable, if not marginally better than, the existing apportionment methods in terms of equity.

Equity and Ease of Compliance

Ease of compliance affects equity because an unclear apportionment method leads to more variation among taxpayers in how the Washington tax liability is calculated (see the *Ease of Compliance* section). A clear apportionment method results in consistent calculation of tax liability, which leads to greater equity. Since the proposed method is clearer than previous methods, taxpayers would calculate their tax liability in a similar manner. Because of this, similarly situated taxpayers will be more likely to pay similar taxes under the proposed apportionment method. Therefore, the proposed method is an improvement in terms of equity.

4.4 Dollar savings from the implementation of the rule to be adopted.

Based on appeals, audit, and refund data the Department's reduction in on-going administrative costs under the rule to be adopted are estimated to be some \$120,000 per year. The cost in Department hours, resolution time, and the amount in dispute are typically greater when apportionment issues are present in an appeal, audit, or refund; this difference has grown since Det. No. 01-006 was implemented. It's conservatively assumed that the rule to be adopted will merely remove these additional costs imposed by Det. No. 01-006. This assumption is conservative because the previous apportionment methodology, Det. No. 89-459A, was based on the assumption that all costs have a situs, which imposed difficulties that the rule to be adopted avoids.

Taxpayer savings, in terms of foregone interest earnings, are estimated to be an average of \$7,000 for each appeal and for each refund that involve apportionment issues. Taxpayer savings for each appeal and each refund were separately estimated using DOR data for appeals, audits, and refunds.

Refunds represent overpayments of taxes. These refund savings to taxpayers result from the fact that firms will have greater use of those funds under the new rule than under the current, less certain Det. No. 01-006, and because the interest rate paid by DOR in the past few years has been lower than market rates (the market rate was assumed to be the prime rate.) The rate paid by DOR is expected to be lower than market rates for the next few years.

Savings to those appealing tax assessments also involve the difference between market rates and the rate paid by DOR. However, with an unsuccessful appeal a taxpayer benefits for a time from the use of the funds at the higher market rates. More certainty with fewer tax assessments and appeals, therefore, would represent a loss to the firm under the proposed rule if it were not for the

additional 5% issue penalty. Taking the 5% penalty into consideration, a rule providing greater certainty with fewer assessments and appeals also benefits taxpayers.

Note that the estimated savings to taxpayers do not include their savings in compliance costs or savings to those who have not appealed.

5. Conclusion Summary

The proposed new method is a distinct and significant improvement over both Det. No. 89-459A and Det. No. 01-006 in terms of the three criteria employed. The analysis here demonstrates that the proposed apportionment method does correspond more closely with the Washington activities and is comparable, if not marginally better, in terms of equity and level playing field. The analysis also shows the new method to be a strong improvement in terms of compliance ease and predictability. The proposed methodology is clearly more definitive than either Det. No. 89-459A or Det. No. 01-006. In addition to improving ease of compliance, the definitiveness of the proposed method also improves consistency over time.