

CAPITAL PERSPECTIVE

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A REPORT TO LEAGUE MEMBERS ON SIGNIFICANT STATE GOVERNMENT DEVELOPMENTS

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A Single Sales Factor Apportionment Formula: Economic Development Implications for Pennsylvania

Background

Each state requires multi-state corporations to use a formula to apportion corporate income tax liabilities for their companies among the multiple states in which they do business. In the past, most states used an equally weighted three-factor apportionment formula to apportion business income for tax purposes.

The formula equally weights the taxpayer's proportion of property, payroll, and sales in a state vs. the taxpayer's total value of property, payroll and sales. The result of the calculations yields a percentage to be applied to the company's total taxable income. A uniform application of an equally-weighted formula by all states would result in all of a company's income being apportioned proportionately among all of the states in which it operates.

The percentage of apportionment to any state is the result of the following equally-weighted formula:

$$\left(\frac{\text{property in-state}}{\text{total property}} + \frac{\text{payroll in-state}}{\text{total payroll}} + \frac{\text{sales in-state}}{\text{total sales}} \right) / 3$$

In recent years, many states, including Pennsylvania, have changed the formula to "double-weight" the sales factor. Several states have taken an additional step to more than double-weight the sales factor or to eliminate the property and payroll factors altogether in favor of a "single sales factor formula." The percentage of apportionment to any state using only the sales factor is the result of the following formula:

$$\frac{\text{in-state sales}}{\text{total sales}}$$

Table 1 on the next page illustrates the differences in tax liability for hypothetical companies in each of three states, each using a different allocation formula. The examples assume that each company has a company-wide taxable income of \$500,000 and a 7% tax rate in each state.

The table shows that proportionately large in-state operations would produce the highest tax liability in a state that equally weights the three factors and the lowest tax liability in a state that employs the single sales factor apportionment formula.

Table 1
Comparisons of Hypothetical Tax Burdens
Using Three Apportionment Formulas - In-State Company

State	Factors			Allocation Percentage	Tax Liability
	Property	Payroll	Sales		
state with a 3-factor, simple average formula	70%	65%	30%	55%	\$19,250
state with a 3-factor, double-weighted sales formula	70%	65%	30%	48.75%	\$17,063
state with a 1-factor, single sales formula	70%	65%	30%	30%	\$10,500

Table 2 shows that the effects of the three formulas are just the reverse for a company with a relatively small portion of its property and payroll in a state. The tax burden increases as

the formula weighting of sales increases. As noted above, the examples assume that each company has a company-wide taxable income of \$500,000 and a 7% tax rate in each state.

Table 2
Comparisons of Hypothetical Tax Burdens
Using Three Apportionment Formulas - Out- of-State Company

State	Factors			Apportionment Percentage	Tax Liability
	Property	Payroll	Sales		
state with a 3-factor, simple average formula	10%	10%	30%	16.67%	\$5,835
state with a 3-factor, double-weighted sales formula	10%	10%	30%	20%	\$7,000
state with a 1-factor, single sales formula	10%	10%	30%	30%	\$10,500

Currently, 15 states equally weight the three factors, 24 states double-weight the sales factor, and eight states more than double-weight the sales factor. Of the eight states, four use a sales factor weighting of 60% to 90% and four employ a single sales factor formula. Three states do not levy any type of tax to which an apportionment formula would apply (Nevada, Washington and Wyoming). As of 1997 virtually every major

manufacturing state, including Pennsylvania, now at least double-weights the sales factor in its apportionment formula. The only exception is Virginia.

States such as Pennsylvania which adopted this measure in the past two or three years are merely catching up with the competition and, therefore, have no advantage over competing states.

Issues Related to Single Sales Factor Formulas

The adoption of a single sales factor formula has implications for changed behavior, especially as the tax system relates to economic development. Most important, a single sales factor formula

rewards companies which invest in property and payroll in a state. When eliminating the payroll and property functions from the formula, a company will no longer be penalized simply

because of a new investment in plant and employees. This provides an incentive to invest in a state with a single sales factor formula.

In practice, it is difficult to track the actual behavior of businesses in response to tax changes since a company considers a number of elements as part of its decision-making process. However, this study suggests that increases in the weighting of the sales factor in the apportionment formula can have significant positive economic and fiscal impacts for a state.

One study, conducted at the University of Chicago in 1996, assessed the impact on employment in states which increased their sales factor weighting in the past. The study found a high correlation between the tax change and increases in employment when compared to the states not making the change and the nation as a whole. For Illinois, this would translate into a longer term impact of an additional 285,000 jobs, of which 155,000 would be in the manufacturing sector. The economic advantages are reduced as competing states adopt more heavily-weighted sales factor formulas.

A second study in Massachusetts came to a similar conclusion using a completely different approach. Researchers at DRI McGraw-Hill used their econometric model to simulate a change using the single sales factor formula for manufacturers in Massachusetts. Compared

with the baseline or no change in formula scenario, the model projected 17,600 new jobs generated in Massachusetts by 2005. The same analysis also projected the generation of over \$800 million in additional personal income in ten years from these new jobs.

In addition to encouraging investment, a single sales factor formula provides a strong incentive to increase exports (outside of the state and country). Increases in export sales relative to total sales actually lowers the apportionment factor (increases the denominator in the formula), and therefore reduces tax liability.

A single sales factor formula eases administrative compliance for taxpayers and state auditing agencies. Since the formula eliminates the payroll and property functions, taxpayers have fewer issues to document and state auditors have fewer issues to audit.

By relying solely on sales for apportioning income, the formula represents a closer relationship to profits than does a multi-factor formula. Changes in property and payroll are not usually as good an indication of profit as changes in sales.

Finally, the constitutionality of the single sales factor has been raised. The overwhelming judicial precedents on the subject indicate that any future challenges will not be successful.

Impacts on State Tax Collections

A state which changes its apportionment formula to a single sales factor formula will experience a short term reduction in the revenues from corporation income tax collections. The Pennsylvania Department of Revenue estimates a net reduction of \$92.1 million in the first full year of implementation in Pennsylvania.

This estimated loss is based on a static assessment of the revenue impact and does not

take into account either the long term behavior of the corporations paying the tax or the impact the change has on other state and local revenue sources. Economic studies in Illinois and Massachusetts estimate the additional tax revenues resulting from increased economic activity or, retained economic activity which otherwise would have been lost, more than offset the direct cost in lower corporation income taxes after two or three years in those states.

In addition, the tax reduction alone would have positive effects on Pennsylvania's economy. PEL estimates that injecting these tax dollars back into the private sector would increase total output of goods and services in the state by \$168 million, increase employment by nearly 1,000 jobs and provide \$42 million in new personal

income for Pennsylvania residents. Again, these impacts would be over and above the employment gains and increases in personal income achieved as a direct result of the formula change itself.

Conclusion

The formula for apportioning the income of multi-state corporations appears to be a necessary, but complicated aspect of a state's tax code. Up to now, considerably less attention has been paid to the implications the formula has for promoting economic development.

An analysis of the single sales factor formula suggests many reasons for supporting such a change. Most important, the formula change would more directly tie tax reduction for business to investment in Pennsylvania and therefore, will

be an important step forward for business development. The opportunity to gain this competitive advantage is at its highest now. While other states have taken this step or are considering a change, Pennsylvania is in the unique position of being located in a region where most states have not adopted heavily-weighted sales factor formulas. Enactment of a full single sales factor formula would place Pennsylvania ahead of the curve and at a competitive advantage within the region.

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