Literature Review of the State Corporate Income Tax Single-Sales-Factor Apportionment Formula

		Findings		
Article	**Summary**	**Effect on Revenue**	**Effect on Employment**	**Effect on Business Investment**
Journal Goolsbee, Austan and Edward Maydew. Coveting Thy Neighbor's Manufacturing: The Dilemma of State Income Apportionment. *Journal of Public Economics* 75 (January 2000): 125-143.	The apportionment formula has a significant real effect on a state's economy.	As evidenced in previous studies, the corporate income tax revenues are expected to decline when more weight is placed on the sales factor of the apportionment formula. However, increased employment from additional personal income tax revenue will reduce and may even exceed the corporate revenue loss for some proposed formula changes.	The payroll factor is a significant determinant of state employment; reducing the payroll weight from one-third to one-fourth increases manufacturing employment by 1.1 percent. Moving to a double-weighted sales factor can increase manufacturing employment 2.8 percent over several years. Additionally, employment gains in one state result in employment losses in another state (zero-sum).	
Journal Gupta, Sanjay and Mary Ann Hofmann. The Effect of State Income Tax Apportionment and Tax Incentives on New Capital Expenditures. *Journal of the American Tax Association* 25 (2003 Supplement): 1-25.	"The primary purpose of this paper is to provide empirical evidence on the effects of…factor apportionment. Specifically, [it] examines whether states with lower property factor weights in their apportionment formulae… experience a higher level of new capital spending by business."	Tampering with the three-factor apportionment formula could lead to revenue loss.		"The corporate income tax burden on property has a significant negative effect on new capital expenditures by manufacturers. Since large capital expenditures are often budgeted for years in advance, it is likely that the timing of investment decisions is influenced by past rather than current tax factors. Regardless of the exact multitude of the relationship between new capital expenditures and income tax factors, it appears unlikely to be large. Therefore our results suggest that state tax policymakers should think carefully about using the corporate income tax code as the means for stimulating economic growth...altering the apportionment formula...has broad-based implications for all firms doing business within the state."

Article	Summary	Effect on Revenue	Effect on Employment	Effect on Business Investment
News Article Edmiston, Kelly D. Single-Factor Sales Apportionment Formula in Georgia: What is the Net Revenue Effect? *State Tax Notes* 31 (January 2004): 107-111.	There are economic benefits from moving to single-sales-factor apportionment.	"A move to a sales-only apportionment formula is expected to result in a decline in corporate income tax collections that will become greater over a few years. However, gains in personal income tax collections will mitigate corporate income tax revenue losses and in later years could lead to net revenue gains. The initial losses arise from the fact that the change in corporate income tax collections will be immediate, while the effect on personal income tax collections will be dynamic."	A move to a sales-only formula would increase multistate corporate payroll in the state by 6.9 percent over three years.	The Georgia property of multistate firms is likely to be stimulated by the move to a sales-only apportionment formula.
News Articlel Hassell, C. Daniel, and Shane D. Sanders. 2005. The Revenue Effects of a Single-Sales-Factor Apportionment Formula on the Pennsylvania Corporate Net Income Tax. *Tax Analysts, State Tax Today, 31 January.*	"[The authors] examine the effects of adopting single-sales-factor apportionment on the Pennsylvania corporate income tax. The Revenue Department recommends that any proposal to increase the weight of the sales factor should be made in conjunction with statutory changes to strengthen the definition of the sales factor."	The net impact on corporate income tax revenues is negative.		"Companies that have a physical presence percentage between 0 and 4 percent are the hardest hit. These companies can be thought of as national corporations primarily engaged in shipping products into Pennsylvania. Because they have a small presence it is possible that they would be able to restructure to avoid the tax increase."
Think Tank Mazerov, Michael. Revised 2005. State Enactments of the "Single Sales Factor" Tax Incentive Have Had Little Impact on Intel Corp.'s Major Plant Location Decisions. *Center on Budget and Policy Priorities, 15 March.* At http://www.cbpp.org/files/3-8-05sfp.pdf	The article reviews the site location decisions of Intel as a case study as to whether single-sales-factor apportionment entices business investment.	"It is not surprising that the presence or absence of SSF does not appear to have had a significant impact on Intel's major plant location decisions. The state corporate income tax is an almost trivial expense for a large corporation like Intel." "The presence or absence of a single sales factor formula in a state's corporate tax code has not had a significant impact on where Intel has chosen to site its major facilities or on how many jobs these facilities generated." "Intel has placed more than eight and one-half times as much investment in non-SSF states as in SSF states since 1990." "Neither the single sales factor formula itself nor state corporate tax policy in general has been a significant driver of Intel's location choices." "It appears that the presence of a major Intel investment in a state--and the political influence such investment brings--motivates Intel to seek single sales factor legislation to reduce its tax liability."		

Article	Summary	Effect on Revenue	Effect on Employment	Effect on Business Investment
Think Tank Brunori, David, and Joseph J. Cordes. 2005. The State Corporate Income Tax: Recent Trends for a Troubled Tax. *American Institute of Tax Policy, 15 August.*	"States are under political pressure to structure their business tax systems in a manner that promotes economic development. This has led to the adoption of single and double weighted apportionment formulas…states should be wary about moving to replace either the three-factor or the double-weighted sales formula with single factor apportionment."	"…using the single-weighted sales formula has a negative and statistically significant impact on state corporate tax collections." The authors found suggestive evidence that use of the single-sales apportionment formula has negative effects on revenue.		
Think Tank Mazerov, Michael. Revised 2005. The "Single Sales Factor" Formula for State Corporate Taxes: A Boon to Economic Development or a Costly Giveaway? *Center on Budget and Policy Priorities, 1 September.* At http://www.cbpp.org/cms/index.cfm?fa=view&id=1754	Mazerov offers a point-by-point refutation of single-sales apportionment. (One appendix is devoted to examining Goolsbee and Maydew's seminal research.)	"The loss of corporate tax revenue that results from the formula shift could impair the ability of an adopting state to provide high-quality public services sought by businesses when they contemplate locating or expanding in a state."	Adoption of single-sales apportionment could easily lead to net job losses.	Single-sales apportionment creates an incentive for businesses to remove their payroll and property. Public Law 86-272 provides that an out-of-state corporation cannot be subjected to a state's corporate income tax merely because it solicits sales within the state's borders (provided the corporation is selling goods, the sales are actually approved and executed outside the state, the goods sold are shipped into the state, and the company does not own any facilities or inventory located in the state). P.L. 86-272 even immunizes corporations from income tax liability in states in which the companies have a sales force, provided the sales people work out of their homes or visit from out of state.
Journal Fox, William F. and LeAnn Luna. Do Limited Liability Companies Explain Declining State Corporate Tax Revenues? *Public Finance Review* 33 (November 2005): 690-720.	The authors examine the reasons behind the decline in corporate income tax revenues with specific emphasis on LLC's.	"As a general rule, the political expectation is that aggregate state tax revenues would fall to some extent with greater emphasis on the sales factor…"		

Article	Summary	Effect on Revenue	Effect on Employment	Effect on Business Investment
Journal Edmiston, Kelly D., and F. Javier Arze del Granado. 2006. Economic Effects of Apportionment Formula Changes. *Public Finance Review 34, no. 5 (September): 483-504.*	Empirical analysis of firm-level data following Georgia's move to a double-weighted-sales apportionment formula.	Gains in personal income tax revenues and property tax revenues mitigate corporate income tax revenue losses. (Other tax bases increase as a result of the move to increase the sales weight and concomitantly decrease the payroll and property weights.)	Multistate payroll in a state will increase.	"We find evidence of a substantial impact on local sales, payroll, and property following the move to double-weighted sales. For the average firm, increases in Georgia payroll and property were $37,110 and $190,829, respectively, while the decrease in Georgia sales was $634,367." "The results here suggest that a switch to an even greater weight on sales relative to productive factors would likely stimulate payroll and property in the state, probably to an even greater degree, as such a move involves a 100 percent reduction in weights on payroll and property factors."
Conference Proceedings Landers, Jim, and Diane Powers. 2006. Have Recent Changes to Corporate Income Apportionment Formulas Contributed to the Decline of State Corporate Income Taxes? *Proceedings of the 99th Annual Conference on Taxation, November 16-18, 2006* by the National Tax Association.	"[The authors] employ a 43-state panel spanning 1983-2005 to estimate the determinants of CIT revenue and the CIT base."	"The estimation results suggest that increases in the sales factor weight may, on average, reduce CIT revenues and diminish the CIT base. The analysis also suggests that these reductions may be short-lived, with the potential, in the long run, for CIT revenue and the CIT base to rebound within a few years of the policy change."		"Sales factor weight increases may lead to long-run corporate expansion increasing taxable income…"
Book Bruce, Donald, John Deskins, and William F. Fox. On the Extent, Growth, and Efficiency Consequences of State Business Tax Planning. In Alan Auerbach, James Hines, and Joel Slemrod, eds. *Taxing Corporate Income in the 21st Century.* Cambridge: Cambridge, University Press, 2007.	"[The authors'] focus in this essay is on the extent to which tax planning in response to variations in state tax policy has affected state corporate income tax bases and revenues."	"Throwback" rules--the origination state may tax sales made in states that cannot tax them--may not counteract Public Law 86-272.		Firms may be enticed to expand into a state with greater sales-factor weight. "Changing the apportionment formula does not create any additional tax base across the 50 states, but differences in state apportionment formulas appear to allow those states with higher sales ratios to tax a greater share of the corporate tax base." "The model predicts that a sales factor weight increase from 33 percent to 50 percent would increase GSP by 1.7 percent."

Article	Summary	Effect on Revenue	Effect on Employment	Effect on Business Investment
Journal Gupta, Sanjay, Et. Al. Empirical Evidence on the Revenue Effects of State Corporate Income Tax Policies. *National Tax Journal 62* (June 2009): 237-67.	Using aggregate state-level data from 1982 to 2002, we provide new evidence to inform the active debate on the likely causes and potential remedies for the decline in state corporate income tax (SCIT) revenues.	"When a state increases the sales factor weight, the expected short-run effect is to collect less SCIT revenue from in-state firms and more revenue from out-of-state firms, although it is difficult to predict which effect will dominate." "a throwback rule is associated with an increase in SCIT revenues of roughly 15.6 percent..."		"In the long run, however, lower weights on the property and payroll factors may provide an incentive for new or transient firms to locate within the state, boosting the states' economy and over time bringing in additional tax revenues not only from corporate taxes but also from property taxes, sales taxes, and individual income taxes."
Think Tank Florida Center for Fiscal and Economic Policy. 2009. The Single Sales Factor for Corporate Income Taxes: Is it Really a Good Deal for Florida? April. At http://www.fcfep.org/newversion/attachments/004_SingleSaleFactorCorporateIncomeTaxes.pdf	"The lost tax revenue that will result from changing the apportionment formula may impa ir the ability of Florida to provide vital and critical services needed."		"Switching to a single sales factor may cause some companies with significant sales outside of Florida to expand their operations in our state (as proponents argue) but it may also lead some companies to pull out of the state (unintended consequence) leading to both job gains and losses." "Of the 18 states with a single sales factor (either implemented or approved for implementation), nine are above and nine are below the median percentage of employment change in manufacturing for the period December 2001 to December 2007."	"The change from a property□payroll□sales formula to a sales□only formula substantially reduces the corporate tax burden of businesses that arguably are benefiting the most from public services in a state and unfairly shifts the tax burden to out□of□state businesses (or in□state businesses that have a high sales factor) that benefit from state services to a lesser extent."