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Multistate Tax Commission Review

A Journal on State Taxation of Multijurisdictional Commerce

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Contributions: Submissions of articles, article ideas, suggestions, and comments are welcome. Please send them to the managing editor at the address listed on the back. We also welcome information concerning changes in employment status of persons active in state taxation in both the public and private sectors.

The opinions expressed in the Review are those of the authors and do not necessarily represent the official position of the Multistate Tax Commission or any of its Member States.

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This issue of the **Review** is being prepared right after The Executive Committee met in person and by telephone on December 9th. The Executive Committee voted to send the Uniformity project on Captive REITS to the states for a Bylaw 7 survey and sent the Model Statute on Tax Collection Procedures for Accommodation Intermediaries back to the Uniformity Committee to clarify the language and redo the Bylaw 7 survey of the affected states.

This issue contains three articles all of which are written by members of the MTC staff. The first article is **"Broadband Deployment Encounters State and Local Taxation"** by Ken Beier, MTC's Director of Training. Ken's article looks at the impact of the Federal Communication Commission's (FCC) National Broadband Plan, released in March of this year, on state and local taxation of telecommunication services and the taxation of digital goods and services. The paper also examines the FCC's plans to lower the cost of telecommunications infrastructure deployment, and to suggest that Congress consider ways to eliminating tax and regulatory barriers to teleworking – including potential double taxation.

The second article is my response to the Organization for Economic Cooperation and Development (OECD) request for comments from interested parties on its new project regarding transfer pricing aspects of intangible assets. Basically, MTC's response supports worldwide combined reporting which mitigates the need to perform the extremely difficult task of placing a realistic value on intracompany transfers of intellectual and intangible capital.

The third article is by Elliott Dubin, MTC's Director of Policy Research. This article builds on his previous article on apportioning corporate income tax bases to the various states. The focus of this paper is to examine the impact of the current recession on the corporate income tax base of the states.

On the personnel front, we wish Shan Chen, Policy Research Intern the best of luck on her new position of Economic Research Analyst with the International Monetary Fund here in Washington, D.C.

We welcome your comments on these articles, suggestions for topics, and submissions for future issues of the *Review*.

Joe Huddleston Executive Director Multistate Tax Commission **Broadband Deployment Encounters State and Local Taxation**

Ken Beier, MTC Director of Training

This article reviews the Federal Communication Commission (FCC) National Broadband Plan released in March of 2010; including elements of the plan that relate to state and local taxation. Specifically, the paper examines the FCC's plans to lower the cost of telecommunications infrastructure deployment, extend the Universal Service Fund to cover broadband access, and to suggest that Congress consider ways to eliminate tax and regulatory barriers to teleworking – including potential double taxation. The paper also looks at four legislative proposals from the 111th Congress relating state tax authority and the sourcing of telecommunications services.

I. Introduction

The Federal Communications Commission (FCC), following a year of hearings and information gathering, released the National Broadband Plan (Plan) in March, 2010.¹ The Plan sets forth laudable and ambitions goals for broadband access and download and upload speeds for American homes, businesses, and communities. This is based on the keen understanding of the role that high-speed and universally available broadband can have in support a vibrant economy and effective public services. Subsequent to issuing the plan, the FCC issued a Broadband Action Agenda, which identifies key actions, proceedings, and initiatives that the FCC intends to undertake over the next year and beyond to implement the recommendations of the Plan.

The aspects of the Plan that relate to state and local taxation and the universal service funds are discussed in the next section of this article. This is followed a review of state tax items in the Broadband Action Agenda, comments on the relationship of the Plan to federal legislation, and ends with suggestions for tax administrators that may help them have a positive role in the broadband discussion, rulemaking and future legislation. The Plan includes over 200 recommendations regarding regulation, infrastructure development and utilization of broadband in the healthcare, education, energy and public sectors of the economy. Tax issues are not a major focus of the Plan, but ones which merit the attention of tax policy makers. The legislative outcome with the Telecommunications Act of 1996—that included a state tax savings clause—reminds us that attention to the legislative process is necessary if states are to retain their tax authority.

II. State and Local Tax Aspects of the Plan

The Plan touches on several aspects of state and local taxation that may affect broadband accessibility. The tax-related recommendations, which can be found on page 9, fall into the following areas:

Digital Goods and Services Taxation

Recommendation 4.20, states that a "national framework for digital goods and services taxation" that would "remove one barrier to online entrepreneurship and investment."

Infrastructure

Recommendation 6.2 states that the FCC should implement rules that will lower the cost of the pole attachment "make ready" process.

Recommendation 6.6 prescribes that the FCC should establish a joint task force with state, Tribal and local policymakers to craft guidelines for rates, terms and conditions for access to public rights-of-way. In the discussion of this

¹The development of the Plan, which can be found at www. broadband.gov, was directed by Congress, as part of the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

recommendation, the Plan cites state-level guidelines on uniform public rights-of-way fees in Michigan and Missouri and state-level collection of fees in South Carolina, Florida, and Illinois as good examples of reform of right-of-way fee systems.

Universal Service Fund

Recommendation 8.2 suggests that the FCC create a Connect America Fund (CAF) which would extend current universal service fund revenues to support broadband deployment.

Recommendation 8.10 suggests that the FCC broaden the universal service fund contribution base to include broadband services.

Economic Opportunity

Recommendation 13.6 suggests that Congress consider eliminating tax and regulatory barriers to telework, including potential double taxation.

III. Action Agenda

As a follow-up to the Broadband Plan, the FCC has issued a Broadband Action Agenda http://www.broadband.gov/plan/broadbandaction-agenda.html, that focuses on near term (primarily 2010) notice and comment proceedings and other actions that will be taken up by the FCC. Thus, it provides an overview of near-term FCC actions to implement the Plan. Two items in the action agenda relate to the infrastructure recommendations (6.2 and 6.6) that were cited in the previous section:

> 42. Pole Attachments Order and FNPRM (Recs. 6.1-6.4) (WCB): To promote broadband deployment and new broadband entrants, in Q2 2010, recommend adopting an order and FNPRM to clarify and streamline broadband network operators' ability to obtain just, reasonable, and nondiscriminatory access to utility poles for the build out of their networks. 43. Rights-of-Way Task Force (Recs. 6.4, 6.6) (CGB, WCB):

To streamline and facilitate broadband providers' access to rights of way, in July 2010 begin work on a rights-of-way task force with state, Tribal, and local policymakers to inventory current practices and policies and recommend fair practices and fees for broadband network operators' access to rights of way. Use recommendations from the task force in a subsequent formal proceeding to seek industrywide comment on collecting and making available more information about rights of way and setting guidelines for rightsof-way access.

When reviewing FCC activity, it is important to keep in mind that the Plan and action agenda are only one segment of the regulatory activity of the FCC. The agency's entire scope of activities can be reviewed at www.fcc.gov.

IV. Recent Federal Legislative Activity Relating to State Tax Authority and Sourcing of Telecommunications

There were several state and local tax proposals before the 111th Congress that relate to recommendations in the Plan. The recommendation on taxation of digital products and services would be affected by provisions of the Main Street Fairness Act. Taxation of telework would be affected by proposed mobile workforce legislation. While not addressed in the Plan, Congress has also discussed extending mobile sourcing legislation to Voice over Internet Protocol telecommunications. These tax proposals are as follows:

Streamlined Sales Tax

H.R. 5660, the Mains Street Fairness Act, would grant federal authority to the Streamlined Sales and Use Tax Agreement (SSUTA) and authorize states to require remote sellers to collect and remit sales and use taxes. The SSUTA includes definitions of digital products (e.g., "digital books" and "ringtones"). However, it does not address digital services, since state sales tax statutes, generally, do not apply sales and use taxes to services. The Main Street Fairness Coalition (www.mainstreetfairness.org) supports this legislation that was introduced in the 110th Congress as S. 34 and H.R. 3396.

Mobile Workforce Legislation

H.R. 2110, the Mobile Workforce State Income Tax Fairness and Simplification Act (H.R. 3359 in the 110th Congress), would limit state taxation of compensation to the state of residence or to the state in which an employee is present for more than 30 days. H.R. 2600, the Telecommuter Tax Fairness Act of 2009, would place limitations on imposition of an income tax on compensation of a nonresident when they are not present in the state. The legislation would prevent a state from deeming an individual to be present if the individual is working at home for convenience; or if such individual's work at home fails any convenience of the employer test or similar test. In response to concerns about taxation of non-resident employees, the MTC Uniformity Committee is currently considering a Model Mobile Workforce Withholding and Individual Income Tax Statute.

Digital Goods Taxation

H.R. 5649, the Digital Goods and Services Tax Fairness Act of 2010, here, would restrict state and local taxation of digital goods and services. The bill would

- Prohibit a state or local jurisdiction from imposing multiple or discriminatory taxes on or with respect to the sale or use of digital goods or services delivered or transferred electronically to a customer.
- Restricts taxation of digital goods and services to the retail sale of such goods and services and by the jurisdiction encompassing a customer's tax address.
- Prohibits the use of existing regulations or administrative rulings relating to the taxation of tangible personal property or other services to impose any tax on the sale or use of digital goods or services.

- Prohibits taxation on or with respect to the sale or use of digital medical, education, or energy management services.
- Provides that if charges for digital goods and services are not separately stated from charges for other goods or services, the charges for digital goods and services may be taxed at the same rate and on the same basis as charges for other goods and services unless the seller can reasonably identify the charges for digital goods and services from its business records.
- Grants jurisdiction to federal district courts to prevent a violation of this Act.
- Expresses the sense of Congress that each state shall take reasonable steps to prevent multiple taxation of digital goods and services where a foreign country has imposed a tax on such goods and services.²
- Voice over Internet Protocol Sourcing

While it is not addressed in the Plan, there has been some attention in Congress to extending the provisions of the Mobile Telecommunications Sourcing Act (P.L. 106-252) to cover Voice over Internet Protocol (VoIP) services.³

V. What Makes Sense? The Plan and Federal Legislation

An important piece of recent state tax history is the inclusion of a state tax savings clause in the Telecommunications Act of 1996. The Senate version of the legislation, the first major overhaul of telecommunications law since the Communications Act of 1934, included FCC jurisdiction over discriminatory state and local taxes; however the House version that limited such action, prevailed in

²Summary is from the Congressional Research Service, as reported on www.thomas.loc.gov.

³On March 31, 2009, the Subcommittee on Commercial and Administrative Law of the Committee on the Judiciary of the U.S. House of Representatives held an issue hearing on "VoIP: Who Has Jurisdiction to Tax it?" See http://judiciary.house.gov/hearings/printers/111th/111-23_48353.PDF.

Conference Committee.⁴ The remainder of this section assesses the relationship of some of the Plan recommendations to current state and local tax policy efforts, including concerns expressed by state and local officials regarding rights of way fees.

Digital Goods Taxation

The recommendations in the Plan on taxation of digital goods are vague, but its comments on the "patchwork of state and local laws and regulations relating to taxation of digital goods and services" mirror the comments often made regarding the complexity of application, for vendors, of state and local sales tax rules to sales of tangible personal property. So the question arises here, is it preferable to set standards for taxation of digital property through a top-down approach of federal mandates or a state-initiated approach that preserves state authority? The "national framework" recommended in the Plan could directly conflict with the approach of the SSUTA.

Broadband Infrastructure and Compensation for use of Public Rights of Way

The release of the Plan was greeted by considerable consternation from local government officials, who believe that the approach to right-of-way fees suggested in the Plan would substantially reduce local government revenues.⁵ Many local

governments base right-of-way fees on the market value of the real property being utilized, as contrasted with the cost approach suggested in the Plan. The approach presented in the Plan would be a major break from the traditional practice of state and local governments in setting fees.⁶ The Plan cites several state-level reforms of rights-ofway fees—these state reforms may receive considerable attention as the debate on rightsof-way fees moves forward.

Taxation of Telework

The telework tax discussion in the Plan focuses on potential double taxation of teleworkers by the base state of their employer and the residence state of the employee, and cites the difficulty of applying the "convenience" of the employer" test for limiting taxation to the state of residence. The draft MTC Model Mobile Workforce Statute—currently under consideration by the MTC—would address this and other mobile worker situations by setting withholding and taxability standards that would apply when the "employer" or location of the service differs from the state of residence of the employee. Under this model, application of the law would be contingent on adoption of the proposal in the non-resident state and the employee's home state. This approach is consistent with laws in several states, which have reciprocal agreements providing a credit for a resident's individual income tax on an amount paid to another state for services performed in that state.

VI. What Role for State Tax Officials?

Implementation of the Broadband Plan—at the regulatory and legislative level—demands the attention of those concerned with preserving state tax authority. States should support expansion of broadband access—through intelligent regulatory policies. However, the removal of barriers to entry does not have to lead to the unnecessary limitation of state tax authority and resulting reduction in the ability of state and local government to support

⁴Both the Senate (S. 104-652) and the House (H.R. 104-458) versions of the Act included Section 253, Removal of Barriers to Entry, that limits state and local requirements that would prohibit the provision of telecommunications service; however, the House version included the state tax savings clause (in Title VI, Section 601 (c)). This section states:

⁽¹⁾ NO IMPLIED EFFECT- This Act and the amendments made by this Act shall not be construed to modify, impair, or supersede Federal, State, or local law unless expressly so provided in such Act or amendments.

Notwithstanding paragraph (1), nothing in this Act or the amendments made by this Act shall be construed to modify, impair, or supersede, or authorize the modification, impairment, or supersession of, any State or local law pertaining to taxation, except as provided in sections 622 and 653(c) of the Communications Act of 1934 and section 602 of this Act.

⁽Section 602 preempts local taxes and fees with respect to direct-to-home satellite service.)

 $^{^{\}rm 5}$ John Buhl, "FCC Plan to Limit Right-of-Way Fees Could Hurt Local Revenues," State Tax Today, March 16, 2010.

⁶ See Frank Shafroth, "Will the FCC Preempt State and Local Tax Policy?" State Tax Today, May 31, 2010.

How FAST IS YOUR BROADBAND CONNECTION? Get an instant review of your broadband speed connection, and help the FCC spot broadband dead zones in the U.S. at http://www.broadband.gov/qualitytest/about/



services that are vital to the information age economy. The attention to National Broadband Plan activities and related legislation by state tax policy makers can help limit unnecessary collateral damage to state and local revenue systems.

Tax Related Recommendations from National Broadband Plan

RECOMMENDATION 4.20:

The federal government should investigate establishing a national framework for digital goods and services taxation.

The National Broadband Plan is focused on increasing beneficial use of the Internet, including e-commerce and new innovative business models. The current patchwork of state and local laws and regulations relating to taxation of digital goods and services (such as ringtones, digital music, etc.) may hinder new investment and business models. Entrepreneurs and small businesses in particular may lack the resources to understand and comply with the various tax regimes. Recognizing that state and local governments pursue varying approaches to raising tax revenues, a national framework for digital goods and services taxation would reduce uncertainty and remove one barrier to online entrepreneurship and investment.

RECOMMENDATION 6.2:

The FCC should implement rules that will lower the cost of the pole attachment "makeready" process. Rearranging existing pole attachments or installing new poles—a process referred to as "make-ready" work—can be a significant source of cost and delay in building broadband networks. FiberNet, a broadband provider that has deployed 3,000 miles of fiber in West Virginia, states that "the most significant obstacle to the deployment of fiber transport is FiberNet's inability to obtain access to pole attachments in a timely manner." Make-ready work frequently involves moving wires or other equipment attached to a pole to ensure proper spacing between equipment and compliance with electric and safety codes. The make-ready process requires not only coordination between the utility that owns the pole and a prospective broadband provider, but also the cooperation of communications firms that have already attached to the pole. Each attaching party is generally responsible for moving its wires and equipment, meaning that multiple visits to the same pole may be required simply to attach a new wire. Reform of this inefficient process presents significant opportunities for savings. FiberNet commented that its makeready charges for several fiber runs in West Virginia averaged \$4,200 per mile and took 182 days to complete, but the company estimates that these costs should instead have averaged \$1,000 per mile. Another provider, Fibertech, states that the make-ready process averages 89 days

in Connecticut and 100 days in New York, where state commissions regulate the process directly. Delays can also result from existing attachers' action (or inaction) to move equipment to accommodate a new attacher, potentially a competitor. As a result, reform must address the obligations of existing attachers as well as the pole owner. An evaluation of best practices at the state and local levels reveals ample opportunities to manage this process more efficiently. Yet, absent regulation, pole owners and existing attachers have few incentives to change their behavior. To lower the cost of the make-ready process and speed it up, the FCC should, through rulemaking:

 Establish a schedule of charges for the most common categories of work (such as engineering assessments and pole construction).
 Codify the requirement that gives attachers the right to use space- and cost-saving techniques such as boxing or extension arms where practical and in a way that is consistent with pole owners' use of those techniques.

>>Allow prospective attachers to use independent, utility-approved and certified contractors to perform all engineering assessments and communications make-ready work, as well as independent surveys, under the joint direction and supervision of the pole owner and the new attacher.

>>Ensure that existing attachers take action within a specified period (such as 30 days) to accommodate a new attacher. This can be accomplished through measures such as mandatory timelines and rules that would allow the pole owner or new attacher to move existing communications attachments if the timeline is not met.

>>Link the payment schedule for make-ready work to the actual

performance of that work, rather than requiring all payment up front. These cost-saving steps can have an immediate impact on driving fiber deeper into networks, which will advance the deployment of both wireline and wireless broadband services.

Recommendation 6.6:

The FCC should establish a joint task force with state, Tribal and local policymakers to craft guidelines for rates, terms and conditions for access to public rights-of-way. Because local, state, Tribal and federal governments control access to important rights-of-way and facilities, a comprehensive broadband infrastructure policy necessarily requires a coordinated effort among all levels of government. There is wide diversity among state and local policies regarding access to and payment for accessing public rights-ofway. Many jurisdictions charge a simple rental fee. Other jurisdictions use other compensation schemes, including perfoot rentals, one-time payments, inkind payments (such as service to public institutions or contributions of fiber to city telecommunications departments) and assessments against general revenues. Some jurisdictions calculate land rental rates based on local real estate "market value" appraisals. Many states have limited the rights-of-way charges that municipalities may impose, either by establishing uniform rates (Michigan) or by limiting fees to administrative costs (Missouri). Other states, including South Carolina, Illinois and Florida, do not allow municipalities to collect rights-of-way fees directly; instead, the state compensates local governments for the use of their rights-of-way with proceeds from stateadministered telecommunications taxes. Broadband service providers often assert that the expense and complexity of obtaining access to public rights-of-way in many jurisdictions increase the cost

and slow the pace of broadband network deployment. Representatives of state and local governments dispute many of these contentions. However, nearly all agree that there can and should be better coordination across jurisdictions on infrastructure issues. Despite past efforts by the National Telecommunications and Information Administration (NTIA) and the National Association of Regulatory Utility Commissioners (NARUC), a coordinated approach to rights-of-way policies has not taken hold. There are limits to state and local policies; Section 253 of the Communications Act prohibits state and local policies that impede the provision of telecommunications services while allowing for rights-of-way management practices that are nondiscriminatory, competitively neutral, fair and reasonable. However, disputes under Section 253 have lingered for years, both before the FCC and in federal district courts. In consultation and partnership with state, local and Tribal authorities, the FCC should develop guidelines for public rights-of-way policies that will ensure that best practices from state and local government are applied nationally. For example, establishing common application information and inspection protocols could lower administrative costs for the industry and governmental agencies alike. Fee structures should be consistent with the national policy of promoting greater broadband deployment. A fee structure based solely upon the market value of the land being used would not typically take into account the benefits that the public as a whole would receive from increased broadband deployment, particularly in unserved and underserved areas. In addition, broadband network construction often involves multiple jurisdictions. The timing of the process and fee calculations by one local government may not take into account the benefits that constituents in neighboring jurisdictions would receive from increased broadband deployment. The cost and social value of broadband cut across political

boundaries; as a result, rights-of-way policies and best practices must reach across those boundaries and be developed with the broader public interest in mind. To help develop this consistent rights-of-way policy, the FCC should convene a joint task force of state, local and Tribal authorities with a mandate to:

>>Investigate and catalog current state and local rights-of-way practices and fee structures, building on NTIA's 2003 compendium and the 2002 NARUC Rights-of-Way Project. >>Identify public rights-of-way and infrastructure policies and fees that are consistent with the national public policy goal of broadband deployment and those that are inconsistent with that goal. >>Identify and articulate rights-ofway construction and maintenance practices that reduce overall capital and maintenance costs for both government and users and that avoid unnecessary delays, actions, costs and inefficiencies related to the construction and maintenance of broadband facilities along public rights-of-way.

>>Recommend appropriate guidelines for what constitutes "competitively neutral,"

"nondiscriminatory" and "fair and reasonable" rights-of-way practices and fees.

>>Recommend a process for the FCC to use to resolve disputes under Section 253. Creating a process should expedite resolution of public rights-of-way disputes in areas either unserved or underserved by broadband. The FCC should request that the task force make its recommendations within six months of the task force's creation. These recommendations should then be considered by the FCC as part of a proceeding that seeks industry-wide comment on these issues.

RECOMMENDATION 8.2: The FCC should create the Connect America Fund (CA F).

The FCC's long range goal should be to replace all of the legacy High-Cost programs with a new program that preserves the connectivity that Americans have today and advances universal broadband in the 21st century. CAF will enable all U.S. households to access a network that is capable of providing both high-quality voice-grade service and broadband that satisfies the National Broadband Availability Target. There are many issues that will need to be addressed in order to fully transition the legacy programs into the new fund. The FCC should create an expedited process, however, to fund broadband infrastructure buildout in unserved areas with the USF savings identified below. As a general roadmap, CAF should adhere to the following principles:

>>CAF should only provide funding in geographic areas where there is no private sector business case to provide broadband and high-quality *voice-grade service.* CAF support levels should be based on what is necessary to induce a private firm to serve an area. Support should be based on the net gap (*i.e.*, forward looking costs less revenues). Those costs would include both capital expenditures and any ongoing costs, including middle-mile costs, required to provide high-speed broadband service that meets the National Broadband Availability Target. Revenues should include all revenues earned from broadbandcapable network infrastructure, including voice, data and video revenues, and take into account the impact of other regulatory reforms that may impact revenue flows, such as ICC, and funding from other sources, such as Recovery Act grants. The FCC should evaluate

eligibility and define support levels on the basis of neutral geographic units such as U.S. Censusbased geographic areas, not the geographic units associated with any particular industry segment. In targeting funding to the areas where there is no private sector business case to offer broadband service, the FCC should consider the role of state high-cost funds in supporting universal service and other Tribal, state, regional and local initiatives to support broadband. A number of states have established state-level programs through their respective public utility commissions to subsidize broadband connections, while other states have implemented other forms of grants and loans to support broadband investment. As the country shifts its efforts to universalize both broadband and voice, the FCC should encourage states to provide funding to support broadband and to modify any laws that might limit such support.

>>There should be at most one subsidized provider of broadband per geographic area. Areas with extremely low population density are typically unprofitable for even a single operator to serve and often face a significant broadband availability gap. Subsidizing duplicate, competing networks in such areas where there is no sustainable business case would impose significant burdens on the USF and, ultimately,on the consumers who contribute to the USF.

>>The eligibility criteria for obtaining support from CAF should be company- and technologyagnostic so long as the service provided meets the specifications set by the FCC. Support should be available to both incumbent and

competitive telephone companies (whether classified today as "rural" or "non-rural"), fixed and mobile wireless providers, satellite providers and other broadband providers, consistent with statutory requirements. Any broadband provider that can meet or exceed the specifications set by the FCC should be eligible to receive support. >>The FCC should identify ways to drive funding to efficient levels, including market-based mechanisms where appropriate, to determine the firms that will receive CAF support and the amount of support they will *receive.* If enough carriers compete for support in a given area and the mechanism is properly designed, the market should help identify the provider that will serve the area at the lowest cost.

>>Recipients of CAF support must be accountable for its use and subject to enforceable timelines for achieving universal access. USF requires ongoing adjustment and re-evaluation to focus on performance-based outcomes. The recipients of funding should be subject to a broadband providerof-last resortobligation. The FCC should establish timelines for extending broadband to unserved areas. It should define operational requirements and make verification of broadband availability a condition for funding. The subsidized providers, should be subject to specific service quality and reporting requirements, including obligations to report on service availability and pricing. Recipients of funding should offer service at rates reasonably comparable to urban rates. The FCC should exercise all its relevant enforcement powers if recipients of support fail to meet FCC specifications.

RECOMMENDATION 8.10:

The FCC should broaden the universal service contribution base.

Today, federal universal service funding comes from assessments on interstate and international end-user revenues from telecommunications services and interconnected VoIP services. Service providers typically pass the cost of these assessments on to their customers. The revenue base for universal service contributions-telecommunications services—has remained flat over the last decade, even though total revenues reported to the FCC by communications firms grew from \$335 billion in 2000 to more than \$430 billion in 2008. Broadband-related revenues are projected to grow steadily over time. Service providers are increasingly offering packages that "bundle" voice and broadband and deliver them over the same infrastructure. Assessing only telecommunications services revenues provides incentives for companies to characterize their offerings as "information services" to reduce contributions to the fund. There is an emerging consensus that the current contribution base should be broadened, though with differing views on how to proceed. Some parties urge the FCC to expand the contribution base to include broadband revenues, while others urge the FCC to assess broadband connections through a hybrid numbers- and connections-based approach. Some parties suggest that the FCC should explore some method of assessing entities that use large amounts of bandwidth. Some suggest that broadband should not be assessed because that would lessen broadband adoption, or that residential broadband should be exempted. As the FCC establishes the CAF, it also should adopt revised contribution methodology rules to ensure that USF remains sustainable over time. Whichever path the FCC ultimately takes, it should take steps to minimize opportunities for

arbitrage as new products and services are developed and remove the need to continuously update regulation to catch up with technology and the market.

RECOMMENDATION 13.6:

Congress should consider eliminating tax and regulatory barriers to telework.

Tax and regulatory policy may prevent some employees from teleworking more regularly. Many teleworkers live in a different state from where their firm is located. This can sometimes result in double taxation issues that end up discouraging telework. Most states tax telecommuters based on the percentage of time worked within that state. However, some states tax the full income of nonresident teleworking employees of companies based in their state unless they are working at home "for the convenience of the employer," a category that telework advocates claim is nearly impossible to prove. Since teleworkers are technically working in their home state as well, this opens them up to potential double taxation. There is pending federal legislation to ban states from taxing nonresidents on work done outside the state. Congress should consider addressing this double taxation issue that is preventing telework from becoming more widespread.

Source: Federal Communications Commission, National Broadband Plan, March, 2010, www.broadband.gov.

MTC Offers Training for State Personnel

The Commission is presenting the following courses in the first half of 2011:

Corporate Income Tax March 14-16, 2011 in Boston, Massachusetts

This session of the course is primarily for auditors, and includes a review of unitary business principles and techniques for audit of multistate businesses.

Statistical Sampling for Sales and Use Tax Audits March 28-31, 2011 in Chicago, Illinois

This course is open to private sector participants, in addition to state and local government personnel.

Nexus School May 2011 in Denver, Colorado (tentative)

This course is designed to give state government personnel an introductory understanding of the law of state jurisdiction to tax (nexus) and practical guidance for nexus audits.

Additional information on MTC training courses, including the current schedule and registration options, can be found at http://www.mtc.gov/ Events.aspx?id=1616 or by contacting Antonio Soto at 202-508-3846 or asoto@mtc.gov.



The Multistate Tax Commission is registered with the National Association of State Boards of Accountancy (NASBA), as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credit. Complaints regarding registered sponsors may be addressed to the National Registry of CPE Sponsors, 150 Fourth Avenue North, Suite 700, Nashville, TN, 37219-2417. Website: www.nasba.org. On July 2, 2010, the Organization for Economic Cooperation and Development (OECD) invited comments from interested parties on its new project regarding transfer pricing aspects of intangible assets. Below is MTC Executive Director, Joe Huddleston's response to the OECD.

Mr. Jeffrey Owens Director, CTPA Organisation for Economic Cooperation and Development 2, rue André Pascal 75775 Paris Cedex 16 France

Dear Mr. Owens:

On July 2, 2010, the Organisation for Economic Cooperation and Development announced that it was considering a new project on the Transfer Pricing Aspects of Intangibles and invited comments from interested parties on: (a) significant issues encountered in transfer pricing of intangibles; (b) the shortfalls, if any, in existing OECD guidance; (c) other areas of transfer pricing of intangibles in which the OECD could do "useful work"; and (d) the format of any work product produced by the OECD.

The Multistate Tax Commission ("the Commission") applauds the on-going efforts of the OECD in addressing this important area of international tax policy and practice and wishes to express its appreciation for the opportunity to offer our comments on the scope and direction of the new project now under consideration by the OECD's Committee on Fiscal Affairs.

The Commission is the administrative agency for the Multistate Tax Compact, an interstate agreement among multiple sub-national jurisdictions in the United States allowing for implementation and administration of the Uniform Division of Income for Tax Purposes Act (UDITPA). The purposes of the Compact are to: (1) facilitate proper determination of state and local tax liability of multistate taxpayers, including equitable apportionment of tax bases and settlement of apportionment disputes, (2) promote uniformity or compatibility in significant components of tax systems, (3) facilitate taxpayer convenience and compliance in the filing of tax returns and in other phases of tax administration, and (4) avoid duplicative taxation.¹

Currently, 19 states and District of Columbia have adopted the Compact by statute; another 27 states are associate or sovereignty members of the Commission and participate in some or all of the Commission's activities, including the Commission's interstate auditing program.²

The Commission's interest in the OECD's project arises from the fact that virtually all states that impose income-based taxes on businesses use U.S. federal taxable income standards as the starting point for defining their tax bases. The states are thus directly affected by any understatement of the federal tax base through improper or inaccurate transfer pricing of transactions with related foreign entities. To fully appreciate the impact of international transferpricing deficiencies on states revenues, a brief explanation of state taxation concepts may be helpful.

The states use the formulary apportionment principles embodied in the Uniform Division of Income for Tax Purposes Act (UDITPA) in order to divide a business's net income among taxing jurisdictions, using easily-quantifiable measures of in-state property, payroll and sales as a proxy for gauging the amount of income generated in each state. This system obviates the need to engage in complex transfer pricing analysis to determine the amount of income generated by operations within each state. A majority of states have also adopted "combined reporting" regimes, which apply the principles of formulary apportionment to all related legal entities engaged in a single interrelated ("unitary") enterprise. In determining the scope of income subject to inclusion on the combined report, most states require or permit taxpayers to exclude the income and apportionment factors of unitary foreign entities. Such reporting systems are referred to as "water's edge" filing, in contrast to world-wide unitary reporting, which applies formulary apportionment principles to all unitary entities, regardless of their place of incorporation. States using the water's edge methodology rely on the federal government to ensure that the amount of U.S.-sourced income earned by businesses operating within their borders is properly reported.

A. Recent Evidence Suggests that Existing Transfer Pricing Enforcement Has Not Prevented Multinational Enterprises (MNE's) With Significant Intangible Property Rights from Shifting Income to Low Tax Jurisdictions, Eroding the U.S. Federal Tax Base.

A recent report by the U.S. Congressional Research Service estimated the annual federal revenue losses from inappropriate income shifting to foreign low-tax jurisdictions as ranging between a low of \$10 billion and a high end of \$60 billion.³ The report cites several studies suggesting that transfer pricing abuses are the second largest source of corporate income tax revenue losses for the U.S. treasury arising from international transactions.⁴ For instance, a 2003 study by Harry Grubert of the U.S. Treasury Department found that

for U.S.-based manufacturing companies, approximately one-half of the income derived from research and development based intangibles is shifted from high-tax to lowtax countries.⁵ The Congressional Research Service also cites the results of the United States' dividend "repatriation holiday" in the 2004 Jobs Creation Act as further evidence that intangible property transfers are not being properly accounted for under current tax laws, allowing income shifting and deferral to low tax jurisdictions. Congress authorized a temporary 85% deduction for dividends repatriated from foreign subsidiaries of U.S. businesses under the 2004 Act. The pharmaceutical, medical, electronic and computer industries repatriated \$157 billion dollars in dividends, almost half of the total amount repatriated through the program for all U.S.-based firms. These industries are uniquely dependent on intellectual property rights such as patents and copyrights for their profitability.

Given the broad consensus among economists and tax experts that income is being improperly shifted into low tax jurisdictions through intangible property transfer pricing abuses, the Commission believes that reform of international tax standards in this area is long overdue. The Commission believes that the OECD is uniquely positioned to provide leadership to the international community in addressing these imbalances.

B. Fine-Tuning Current OECD Transfer Pricing Guidelines for Intangibles May Be Inadequate to Address the Underlying Problem of Inappropriate Income Shifting.

The Commission believes the OECD's current *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* are thorough, thoughtful and comprehensive in addressing the many factors which should be considered in attempting to value intangible property rights transferred among related components of multinational enterprises. The *Transfer Pricing Guidelines* are to be commended for their openness in conceding the difficulty and complexity of the task facing tax administrators in establishing a reasonable range of valuation for intangible property, especially since the value of such property may be inextricably interwoven with the value of tangible property incorporating patents, copyrights, and processes, or the value (goodwill) of the overall business concern.⁶

The Commission appreciates that the OECD remains committed to the use of armslength accounting principles as the most appropriate means of determining the amount of income earned by a MNE within a particular jurisdiction. And the Commission has no reason to question the Transfer Pricing Guideline's conclusion that arms-length accounting principles

"....provide the closest approximation of the workings of the open market in cases where property (such as goods, other types of tangible assets or intangible assets) is transferred or services rendered between associated enterprises, While it may not always be straightforward to apply in practice, it does generally produce appropriate levels of income between members of MNE groups, acceptable to tax administrations."⁷

The Commission suggests, however, that the long-standing academic dispute over whether formulary apportionment or armslength accounting provides a better measure of income generation among related legal entities is misplaced. The Commission suggests that in many circumstances, reliance on arms-length accounting principles alone to address inappropriate income shifting underestimates the practical difficulties facing tax administrators. Tax authorities will often have inadequate knowledge of a taxpayer's business, will lack ready access to comparable uncontrolled pricing information, will have difficulty retaining the cadre of highly skilled auditors, accountants, economists and attorneys necessary to prosecute such cases, and will not have the necessary budget to effectively handle more than a few cases every year. A tax system that relies on sporadic enforcement efforts rewards taxpayers for questionable practices and ultimately undermines the integrity of the system as a

whole. The Commission is concerned that there will always be a significant gap between the economic ideal of determining "appropriate levels of income" through arms-length accounting methods and the reality of underfunded, under-staffed tax agencies attempting to systematically police thousands of transfers between related parties. Those practicalities, rather than any theoretical problem with armslength accounting methodology, may be at the root of the well-documented shift of income to low tax jurisdictions.

Taxpayers also experience difficulties in complying with the arms-length standard of income determination on a jurisdictional basis.⁸ Although McLure's article outlines the difficulty that multistate corporate income taxpayers find in complying with arm's length accounting among U.S. states, his analysis has relevance in the international context as well. First, corporations do not generally engage in geographic separate accounting - accounting for income on a jurisdiction-byjurisdiction basis; they account for income earned throughout the world, regardless of geographic source. Second, because of the economic interdependence among parts of an enterprise operating in different countries, it may be difficult to use geographic separate accounting to isolate the income attributable to each jurisdiction in which it operates.⁹

The Commission believes that the states' experience with arms-length accounting and formulary apportionment systems at the sub-national level suggests that the OECD should not foreclose the use of formulary apportionment methodologies (including combined reporting among related entities) where appropriate. Formulary apportionment has been widely employed in the United States for well over a century as a means of determining the in-state value of business property for integrated multistate businesses. See, e.g., Adams Express Co. v. Ohio, 165 U.S. 194 (1897) (apportioning goodwill of ongoing business concern). Formulary apportionment was later adopted as a means for establishing in-state earnings for purposes of state income tax impositions, especially after the Multistate Tax Compact became effective in

1967. Formulary apportionment is now the universally accepted method of determining the in-state earnings of multistate taxpayers. Given the rapid rise of interstate commerce in the latter half of the 20th century, it is doubtful that the states could effectively administer their corporate income tax systems without the use of formulary apportionment. Although some states continue to rely on arms-length accounting standards for policing transfer prices between separatelyincorporated but related entities, the volume of litigation resulting from valuation disputes has been enormous. The landscape of the state income tax world is littered with tax disputes over income-shifting practices, burdening tax administrators and taxpayers with protracted and expensive litigation yielding highly uncertain results. See, e.g., Sherwin-Williams Co. v. Commissioner of Revenue, 778 N.E. 2d. 504 (Mass 2002) (allowing deduction for royalty payments to Delaware intangible holding company; Syms Corporation v. Commissioner of Revenue, 765 N.E. 2d 758 (Mass. 2002) (disallowing deduction for royalties paid to Delaware intangible holding company); In re Tropicana, New York Tax Appeals Tribunal Nos. 815253 and 815564 (6/1/2000), http://www.nysdta. org/Decisions/815253.dec.htm. (upholding state transfer pricing adjustment); In re Kellwood Company, New York Tax Appeals Tribunal No. 820915 (5/18/2010), http://www. nysdta.org/Determinations/820915.rem.htm (rejecting state challenges to transfer pricing and economic substance). The landscape is similar at the federal level; scores of prolonged tax disputes and reams of regulatory guidance under Internal Revenue Code Section 482 have not prevented widespread income shifting. See, e.g., Intel Corp. v. Commissioner, 100 T.C. 616 (1993);

Today, in the United States, a majority of states have concluded that the task of policing thousands of transactions between thousands of related parties to prevent income shifting is beyond their capabilities. Those states have now adopted combined reporting systems, eliminating the need to undertake any transfer pricing analysis on a domestic basis. The Transfer Pricing Guidelines recognize that there are instances in which the arms-length standard may be extremely difficult to applyspecifically when the property transferred is so unique that the search for comparables is unavailing or when the projections of benefits is too uncertain or speculative.¹⁰ In addition, there are some instances where the integration of operations, tangible and intangible property, and industrial processes is so complete that it is unrealistic to suggest that the source of income generation can be meaningfully isolated in related entities operating in multiple countries. In such situations, formulary apportionment may be the most accurate as well as the most practical means of achieving a fair allocation of income among competing taxing jurisdictions. The Commission accordingly hopes the OECD will study the question of whether formulary apportionment should also be applied to some highly integrated industries operating across national borders.

C. Adoption of a Deemed-Earnings International Tax Standard for Certain Transactions with Subsidiaries Operating in Low Tax Jurisdictions May Reduce Income Shifting.

As another alternative to adjusting armslength pricing guidelines to prevent income shifting, the OECD should study the possibility of adopting a set of recommended rules similar to the Subpart F provisions of the U.S. Internal Revenue Code. Under Subpart F¹¹, income earned by controlled foreign corporations (CFC's) operating in low-tax jurisdictions is included in the U.S, parent's tax base as deemed dividend income, before repatriation, and subject to a deduction if the income is subsequently repatriated in the form of an ordinary foreign dividend. The federal government allows a tax credit for any taxes paid to the foreign jurisdiction, preventing double taxation. These rules are an important backstop to the use of "arms-length" accounting standards and transfer pricing determinations. Unfortunately, the Subpart F rules currently in place in the U.S. have proven

to be susceptible to elaborate and complex tax planning strategies involving multiple international transactions and inconsistent international tax regimes. The Commission believes that international adoption of a comprehensive Subpart F system for avoiding deferred recognition of profits would greatly reduce the ability of MNE's to engage in this type of inappropriate tax planning and would eliminate the need to engage in transfer pricing analysis and litigation in many circumstances.

D. Conclusion

Once again, the Commission wishes to express its gratitude to the OECD for recognizing the problems facing tax jurisdictions and taxpayers in valuing intangible property transfers in highly complex economic systems. As noted scholar Joann Martens-Weiner writes:

"The nature of cross-border intercompany transfers has also changed. Multinational enterprises no longer primarily transfer basic goods for which arm's length prices are readily available. Their internal transfers increasingly involve transfers of difficult –to-value intangible property (patents, copyrights, trademarks, etc.)"¹²

While there are undoubtedly some improvements which can be made to the current Transfer Pricing Guidelines to address particular problems, the Commission believes that the benefits of formulary apportionment systems for equitably sourcing income from intangible property rights should not be understated. As the U.S. Supreme Court wrote many years ago, determining where and how income arose "bears some resemblance to...slicing a shadow." Container Corporation v. Franchise Tax Board, 463 U.S. 159, 193 (1983). The current Transfer Pricing Guidelines certainly apply well-reasoned economic and accounting principles to the task, but from a practical standpoint, other approaches may prove more efficacious in preventing inappropriate income shifting.

Again, thank you for the opportunity to submit comments on this important topic on behalf of the Multistate Tax Commission.

ENDNOTES

¹Multistate Tax Compact, Art. I.

²Compact Members: Alabama, Alaska, Arkansas, California, Colorado, District of Columbia, Hawaii, Idaho, Kansas, Michigan, Minnesota, Missouri, Montana, New Mexico, North Dakota, Oregon, South Dakota, Texas, Utah and Washington. Sovereignty Members: Georgia, Kentucky, Louisiana, Maryland, New Jersey, and West Virginia. Associate Members: Arizona, Connecticut, Florida, Illinois, Iowa, Indiana, Maine, Massachusetts, Mississippi, Nebraska, New Hampshire, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Wisconsin, and Wyoming.

³Jane G. Gravelle, *Tax Havens: International Tax Avoidance and Evasion,* Congressional Research Service, June 4, 2010, available at www.crs.gov. ⁴See, for example, Melissa Redmiles, "The One-Time Dividends-Received Deduction," Internal Revenue Service, Statistics of Income Bulletin, Spring 2008, http://www.irsustreas.gov/pub/irssoi/08codivdeductbul.pdf.

⁵Harry Grubert, "Intangible Income, Intercompany Transactions, Income Shifting, and the Choice of Location," **National Tax Journal**, Volume 56, No.1, Part 2, March 2003, p.221.

⁶OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations, 22July 2010, pp. 197-203.

⁷Id. at 38.

⁸See, e.g., Charles, McLure, "Implementing State Corporate Income Taxes in the Digital Age," **National Tax Journal**, Volume 53, No. 4, Part 3,

December 2000, p. 1291.

⁹See also, Charles E. McLure and Joann Martens-Weiner, "Deciding Whether the European Union Should Adopt Formula Apportionment of Company Income," in **Taxing Capital Income in the European Union: Issues and Options for**

Reform, pp. 243-92. Oxford University Press, 2000. McLure and Weiner discuss the suitability of formulary apportionment for use in the international context within the EU.

¹⁰OECD Transfer Pricing Guidelines, op. cit.; pp. 197, 203

¹¹Subpart F was designed to prevent U.S. citizens and resident individuals and corporations from artificially deferring otherwise taxable income through use of foreign entities. Enacted in 1962, these rules incorporate most of the features of Controlled Foreign Corporations (CFC) rules used in other countries. The rules require a U.S. Shareholder of a CFC to include in its income currently its share of Subpart F income of the CFC and its share of earnings and profits (E&P) of the CFC that are invested in United States property, and further exclude from its income any dividends distributed from such previously taxed income. Subpart F income includes the following types of income (IRC sections 953 and 954):

- Foreign Personal Holding Company Income (FPHCI), including dividends, interest, rents, royalties, and gains from alienation of property that produces or could produce such income.
- Foreign Base Company Sales Income from buying goods from a related party and selling them to anyone or buying goods from anyone and selling them to a related party, where such goods are both made and for use outside the CFC's country of incorporation.
- Foreign Base Company Services Income from performing services for or on behalf of a related person
- Foreign Base Company Oil Related Income from oil activities outside the CFC's country of incorporation.
- Insurance Income from insurance or annuity contracts related to risks outside the CFC's. In addition, a U.S. shareholder must include in its income its share of earnings and profits (E&P) invested in U.S. property. U.S. rules provide that a U.S. shareholder excludes from its income any dividend received which is considered paid from amounts previously taxed under Subpart F.

Corporate U.S. shareholders are entitled to a foreign tax credit for their share of the foreign income taxes paid by a CFC with respect to E&P underlying a Subpart F inclusion. To prevent avoidance of Subpart F, U.S. shareholders of a CFC must recharacterize gain on disposition of the CFC shares as a dividend. In addition, various special rules apply.

¹²Joann Martens-Weiner, *Company Tax Reform in the European Union: Guidance from the United States and Canada on Implementing Formulary Apportionment in the EU*, Springer2006, p. 106

State Corporate Income Tax Bases Over the Current Business Cycle

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Abstract

This article uses the methodology developed by the former U.S. Advisory Commission on Intergovernmental Relations to examine the impact of the recession, which began in December of 2007 and ended in June of 2009, according to the National Bureau of Economic Research (NBER) on the corporate income tax base of the states. While the general economy declined by less than one percent when measured by changes in real per capita gross domestic product (GDP) in 2008, corporate profits before taxes, in current dollars, shrank by more than one-third. Conversely, while real per capita GDP declined by nearly 3 percent in 2009, profits grew by more than 3 percent. State corporate tax bases declined in a fairly uniform manner in 2008; but, generally grew in a non-uniform manner in 2009 despite the relatively small change in corporate profits. To a large extent, the changes in the composition of profits by industry between 2008 and 2009 are responsible for the non-uniform change in state corporate tax base.

I. Introduction

In the Winter 2010 issue of the **Multistate Tax Commission Review** (**MTC Review**), I presented a method to estimate the corporate income tax capacity of each state for the 2001 through 2008 period; and, to use those estimates to illustrate the impact of changes in a state's apportionment formula on state corporate income tax capacity.¹ The methodology in the **MTC Review** article was based on the methodology developed by the former U.S. Advisory Commission on Intergovernmental Relations for its estimates of the tax capacity and tax effort of the states.² In this article, we update the 2007 and 2008 estimates and extend the estimates to 2009.

The purpose of this article is to examine the impact of the recession, which began in December of 2007 and ended in June of 2009, according to the National Bureau of Economic Research (NBER) on the corporate income tax base of the states.³ One manifestation of the business cycle is the impact on output and production. Between 2007 and 2008,

real, per capita Gross Domestic Product (GDP), according to the U.S. Department of Commerce, Bureau of Economic Analysis, declined by approximately 0.8 percent; and by nearly 3.0 percent between 2008 and 2009.⁴ Despite the overall decline in economic activity between 2007 and 2008, 22 states experienced economic growth in 2008. For example, real per capita Gross State Product (GSP) increased by 6.9 percent in North Dakota the largest increase of any state (see **Table 1).** The impact of the recession was much more widespread in 2009 than in 2008. In 2009, only seven states - Alaska, Louisiana, North Dakota, Oklahoma, South Dakota, West Virginia, and Wyoming – was there positive economic change. Only in Alaska, Louisiana, and North Dakota, the rate of economic growth was higher in 2009 than in 2008.

One finding, although not unexpected, is that movements in corporate profits and in the general economy are not synchronized. Between 2007 and 2008, real per capita GDP declined by approximately 0.8 percent while corporate profits, before tax, of domestic

Table 1: Real Per Capita Gross Domestic Product (GDP), by State															
		Real GDP,	Percent Change from												
		005 Dollars		Preceding											
State	2007	2008	2009	2008	2009										
United States	\$43,646	\$43,308	\$42,031	-0.77%	-2.95%										
Alabama	33,649	33,675	32,748	0.08	-2.75										
Alaska	59,156	58,513	59,638	-1.09	1.92										
Arizona	38,703	37,301	35,313	-3.62	-5.33										
Arkansas	32,200	32,241	32,191	0.13	-0.16										
California	49,101	48,610	47,067	-1.00	-3.17										
Colorado	47,398	47,395	46,150	-0.01	-2.63										
Connecticut	60,352	60,640	58,476	0.48	-3.57										
Delaware	64,455	63,844	62,080	-0.95	-2.76										
District of Columbia	146,018	147,601	146,360	1.08	-0.84										
Florida	39,030	37,551	36,065	-3.79	-3.96										
Georgia	39,761	38,363	36,677	-3.52	-4.39										
Hawaii	47,001	46,973	45,980	-0.06	-2.11										
Idaho	34,473	34,001	32,557	-1.37	-4.25										
Illinois	46,365	46,035	44,260	-0.71	-3.86										
Indiana	39,338	39,118	37,495	-0.56	-4.15										
Iowa	42,787	43,951	43,644	2.72	-0.70										
Kansas	41,071	41,420	40,662	0.85	-1.83										
Kentucky	33,623	33,669	32,848	0.14	-2.44										
Louisiana	42,163	41,203	41,836	-2.28	1.54										
Maine	35,380	35,627	35,214	0.70	-1.16										
Maryland	45,603	45,817	45,495	0.47	-0.70										
Massachusetts	51,521	51,778	50,566	0.50	-2.34										
Michigan	36,724	35,897	34,157	-2.25	-4.85										
Minnesota	46,338	46,794	45,392	0.98	-3.00										
Mississippi	29,366	30,015	29,634	2.21	-1.27										
Missouri	37,165	37,433	36,420	0.72	-2.71										
Montana	33,758	33,149	, 32,915	-1.80	-0.71										
Nebraska	43,719	44,215	43,990	1.13	-0.51										
Nevada	47,992	45,942	42,564	-4.27	-7.35										
New Hampshire	41,732	41,682	41,110	-0.12	-1.37										
New Jersey	51,749	51,721	, 50,227	-0.05	-2.89										
New Mexico	35,191	35,207	34,056	0.05	-3.27										
New York	52,624	52,641	50,205	0.03	-4.63										
North Carolina	41,805	40,729	38,847	-2.57	-4.62										
North Dakota	41,208	44,069	45,390	6.94	3.00										
Ohio	38,619	38,322	37,237	-0.77	-2.83										
Oklahoma	35,649	36,667	38,644	2.86	5.39										
Oregon	43,770	43,479	41,949	-0.66	-3.52										
Pennsylvania	40,030	40,216	39,674	0.46	-1.35										
Rhode Island	42,166	41,750	40,996	-0.99	-1.81										
South Carolina	33,545	32,842	31,618	-2.10	-3.73										
South Dakota	41,730	43,235	43,773	3.61	1.24										
Tennessee	37,410	37,127	35,650	-0.76	-3.98										
Texas	44,655	44,003	42,526	-1.46	-3.36										
Utah	38,452	37,807	36,691	-1.68	-2.95										
Vermont	37,180	37,891	37,579	1.91	-0.82										
Virginia	47,629	47,388	46,960	-0.51	-0.90										
Washington	47,448	47,358	46,352	-0.19	-2.12										
West Virginia	29,465	30,112	30,248	2.20	0.45										
Wisconsin	40,324	40,642	39,617	0.79	-2.52										
Wyoming	56,021	58,662	60,527	4.71	3.18										
· · ·	•				5110										
Source: Bureau of Ec	conomic Ana	iysis, U.S. D	epartment	of Commerce	Source: Bureau of Economic Analysis, U.S. Department of Commerce										

industries declined by nearly \$465 billion; or, 34.4 percent (see Table 2). Between 2008 and 2009, when real per capita GDP declined by nearly 3 percent, corporate profits, before tax, of domestic industries increased by \$30 billion – slightly more than 3 percent. Another observation concerning the behavior of corporate profits during this phase of the business cycle is the effect of changes in the composition of corporate profits – the percentage distribution of profits by major industry sector. Between 2007 and 2008, cyclical factors were far more important than changes in the composition of corporate profits. Conversely, between 2008 and 2009, changes in the composition of corporate profits were more important than cyclical changes. The derivation and significance of this finding will be discussed in more detail in subsequent sections.

As mentioned previously, the major focus of this article is to examine the impact of the recession on the measure of apportioned profits in each state; and, to estimate what portion of the total impact was due to cyclical changes in profits and what part was due to changes in the composition of corporate profits. The method used to apportion the domestic corporate profits, before taxes, of fourteen constituent industries, excluding deposits of the Federal Reserve Banks according to the method used to apportion total corporate profits to the states that appeared in the Winter 2010 issue of this Review. A mathematical exposition of the method is presented in the Appendix to this article.

The next section presents estimates of corporate income tax bases of the states and the components of change. The section following the estimates discusses the results and finding. The Summary section will end the article and the Appendix follows the endnotes.

II. Corporate Profits Apportioned to the States

A. Derivation of Apportionment of Corporate Profits to States

			Та	ble 2: Corp	orate Pro	ofits of Do	omestic I	ndustrie	es, Before	Taxes						
											Annual	Change	from Previ	ous Year		
							Corporat	e Profits						Change		Change
							Before						Due to	in	Due to	in
							Base							Composi-	Cyclical	Composi-
							Compos						Changes	tion of	Changes	tion of
							Profit			Actu			Only	Profits	Only	Profits
	2007	2008	2009	2007	2008	2009	2008	2009	2008	2009	2008	2009	20	08		009
		billions)			cent of tot		(billio		(billic		(Perc			(billi		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Industry							(4)*(2)	(5)*(3)	(2)-(1)	(3)-(2)	(7)/(1)	(8)/(2)	(7)-(1)	(9)-(13)	(8)-(2)	(10)-(14)
Corporate profits of																
domestic industries,	** 954 5	+006.0	+				+006.0			+			+++++=	+ 0 0	+	+0.0
before tax Agriculture, forestry,	\$1,351.5	\$886.8	\$917.1	100.0%	100.0%	100.0%	\$886.8	\$917.1	-\$464.7	\$30.3	-34.4%	3.4%	-\$464.7	\$0.0	\$30.3	\$0.0
fishing, and hunting	6.6	2.0	3.0	0.5	0.2	0.3	4.3	2.1	-4.6	1.0	-69.6	50.4	-2.3	-2.3	0.1	0.9
Utilities	50.5	2.0	29.7	3.7	3.2	3.2	33.1	29.5	-22.0	1.0	-43.5	4.1	-17.4	-2.5	1.0	
Mining	56.1	20.5 53.8	29.7	4.1	5.2 6.1	3.2	36.8	29.5 55.6	-22.0	-25.5	-43.5	-47.4	-17.4	-4.6	1.0	-27.3
Construction	67.5	40.7	28.3	5.0	4.6	2.5	44.3	42.1	-2.3	-23.3	-39.6	-47.4		-3.5	1.0	-27.3
Manufacturing	290.4	205.6	135.0	21.5	23.2	14.7	190.5	212.6	-20.0	-70.6	-29.2	-34.3	-23.2	15.1	7.0	
Wholesale trade	115.7	93.9	81.3	8.6	10.6	8.9	75.9	97.1	-21.9	-12.5	-18.9	-13.4	-39.8	17.9	3.2	
Retail trade	126.4	83.0	102.6	9.3	9.4	11.2	82.9	85.9	-43.3	19.5	-34.3	23.5	-43.4	0.1	2.8	
Transportation and	120.4	05.0	102.0	5.5	5.4	11.2	02.5	05.5	45.5	15.5	54.5	25.5	43.4	0.1	2.0	10.7
warehousing	28.4	26.8	25.4	2.1	3.0	2.8	18.6	27.7	-1.6	-1.4	-5.6	-5.3	-9.8	8.2	0.9	-2.3
Information	93.9	75.8	83.5	6.9	8.5	9.1	61.6	78.4	-18.1	7.7	-19.3	10.1	-32.3	14.2	2.6	
Finance, insurance, and						-		-								-
real estate ¹	329.3	109.8	221.4	24.4	12.4	24.1	216.1	113.6	-219.5	111.6	-66.6	101.6	-113.2	-106.2	3.8	107.8
Professional, scientific,																
and technical services ²	81.9	74.4	72.3	6.1	8.4	7.9	53.8	76.9	-7.5	-2.1	-9.2	-2.8	-28.2	20.6	2.5	-4.6
Health care,																
educational services, and																
social assistance	63.7	64.7	81.8	4.7	7.3	8.9	41.8	66.9	1.0	17.1	1.6	26.4	-21.9	22.9	2.2	14.8
Arts, entertainment,													1			
and recreation ³	28.0	17.7	19.1	2.1	2.0	2.1	18.4	18.3	-10.3	1.4	-36.8	7.8	-9.6	-0.7	0.6	0.8
Other services, except																
government	13.2	10.1	10.4	1.0	1.1	1.1	8.7	10.4	-3.1	0.3	-23.8	3.2	-4.5	1.4	0.3	0.0
 Includes management o Includes administrative Includes accommodation 	services and w	aste manag			its of earni	ings by Fe	deral Rese	erve Banl	ks.							

Includes accommodation and food services.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

The measure of state corporate tax capacity used in this paper is an estimate of the National Income and Products Accounts (NIPA) measure of corporate profits before taxes of domestic industries, for each of 14 industry sectors⁵ apportioned to each state by using a variant of the apportionment formula used by many states. The U.S. total corporate profits of each industry sector is apportioned to a state by multiplying the total corporate profits by the sum of the weight of the sales factor by sales of that industry in the state relative to U.S. sales and 1 minus the weight of the sales factor by wages and salaries of that industry in the state divided the U.S. total wages and salaries in that industry. The estimated apportioned earnings of each industry sector are then summed to derive an estimate of total corporate profits in the state (see the Appendix). The panel is comprised of all states plus the District of Columbia and spans 2007, the year that contains the onset of the current recession through 2009, the vear that contains the end of the recession. In addition, the earnings from international trade are disregarded because almost all states limit their jurisdiction to "water's edge." The earnings of Federal Reserve Banks are also

disregarded because states cannot legally impose their taxes on these institutions.

The first three columns of Table 2 show the composition of corporate profits of domestic industries, before taxes (corporate profits) fore 2007, 2008, and 2009 respectively. The next three columns show the percentage distribution of corporate profits by industry. Column (7) is the composition of corporate profits derived by multiplying the percentage distribution of corporate profits of 2007 (column 4) by the total corporate profits of 2008 (\$886.8 billion). Column (8) is the composition of corporate profits derived by multiplying the percentage distribution of corporate profits of 2008 (column 5) by the total corporate profits of 2009 (\$917.1 billion). The actual annual change in corporate profits is derived by simply subtracting corporate profits in 2007 from corporate profits in 2008 (column 9) and the corporate profits in 2008 from the corporate profits of 2009 (column 10).

The cyclical component of change in corporate profits (column 13) is derived by subtracting the 2007 corporate profits (column 1) from the estimated 2008 composition of corporate

profits based on the 2007 percentage distribution of profits (column 7). Similarly, the cyclical change in corporate profits between 2008 and 2009 (column 15) is derived by subtracting the 2008 composition of corporate profits (column 2) from the estimated composition of corporate profits (column 8). Change in corporate profits due to changes in the composition of profits (columns 14 and 16) are the residual change – subtracting the estimated cyclical changes in 2008 and 2009 (columns 13 and 15) from the actual change in corporate profits (columns 9 and 10) respectively.

As shown in Table 2, cyclical changes in corporate profits dominated the total profits change between 2007 and 2008, except for the finance, insurance, and real estate sector. In that sector, the change in profits is due to cyclical changes and changes in the composition of profits almost equally -\$113.2 billion and -\$106.2 billion. Between 2008 and 2009, the opposite is true – with the exception of Arts, entertainment, and recreation; and, Other services except government, the change in corporate profits due to changes in the composition of profits exceeded the cyclical change in profits.

B. Corporate Profits by State

Estimates of corporate profits, by state, for 2007, 2008, and 2009 are contained in **Table 3**. The estimates of state by state corporate profits is basically derived by apportioning U.S. total corporate profits by major industrial sector by multiplying the weight of the sales factor for each state by the proportion of U.S. sales for that industry in the state; and 1 minus the sales factor weight by the salaries and wages earned in that industry in that

			•		Table 3: Estimated Corporate Profits Before Taxes, by State and Composition of Change												
	(Millions)																
	Corporate Profits Before Tax Change fr																
	Based on Co Before Tax, b	omposition o by Industry in Year		Based on Co of Corporat Previous	e Profits in	Total	Due to Cyclical Change Only	Due to change in composi- tion of profits before taxes	Total	Due to Cyclical Change Only	Due to change in composi- tion of profits before taxes						
State	2007	2008	2009	2008	2009		2008			2009							
	(1)	(2)	(3)	(4)	(5)	(6) (2) -(1)	(7) (4) - (1)	(8) (6)-(7)	(9) (3) - (2)	(10) (5) - (2)	(11) (9) - (10)						
All States Alabama Alaska	\$1,351,486 17,653 3,782	\$886,818 12,028 2,524	\$917,100 11,845 2,805	\$886,818 11,643 2,546	\$917,100 12,478 2,786	-\$464,668 -5,625 -1,259	-\$464,668 -6,010 -1,237	\$0 385 -22	\$30,282 -183 281	\$30,282 450 262	-633 19						
Arizona Arkansas California	24,334 10,179 182,977	15,453 6,840 119,271	16,045 7,064 124,499	15,513 6,743 118,558	15,813 7,239 123,533	-8,881 -3,339 -63,706	-8,820 -3,436 -64,419	-60 97 713	592 224 5,228	360 399 4,262	-175						
Colorado Connecticut Delaware	24,306 23,624 5,204	16,200 14,461 3,182	15,842 15,836 3,593	16,267 15,264 3,395	15,598 14,952 3,299	-8,106 -9,163 -2,022	-8,039 -8,360 -1,809	-66 -803 -213	-358 1,375 411	-602 491 118	884						
Districtof Colum Florida	6,595 69,946	4,429 44,726	4,890 48,525	4,211 45,035	4,613 46,207	-2,167 -25,220	-2,385 -24,912	218 -309	461 3,799	184 1,481	276 2,318						
Georgia Hawaii Idaho	39,451 5,011 5,210	25,000 3,249 3,404	25,864 3,527 3,490	24,952 3,220 3,387	25,849 3,400 3,503	-14,451 -1,761 -1,806	-14,499 -1,790 -1,823	48 29 17	864 277 85	849 151 98	127						
Illinois Indiana Iowa	60,631 26,706 13,820	39,809 18,095 9,397	41,277 17,678 9,452	40,013 17,693 9,372	41,159 18,710 9,715	-20,822 -8,611 -4,423	-20,618 -9,013 -4,448	-204 403 26	1,469 -417 54	1,350 614 318	-1,032						
Kansas Kentucky	11,822 15,235	8,093 10,126	7,868 10,086	7,847 9,964	8,378 10,590	-3,729 -5,109	-3,975 -5,271	246 162	-225 -40	285 464	-510 -504						
Louisiana Maine Maryland	19,235 4,637 23,489	12,732 3,069 15,404	12,755 3,178 16,179	12,628 3,084 15,204	13,472 3,173 16,082	-6,502 -1,569 -8,085	-6,607 -1,553 -8,285	104 -16 200	23 110 775	740 104 678	6						
Massachusetts Michigan Minnesota	36,171 38,874 25,481	23,050 24,897 16,589	24,817 25,471 17,186	23,529 24,883 16,809	23,906 25,741 17,127	-13,121 -13,977 -8,893	-12,641 -13,990 -8,672	-480 14 -220	1,767 574 597	856 845 538	-270						
Mississippi Missouri Montana	9,233 23,136	6,077 15,495	6,111 15,746	6,044 15,509	6,237 15,997	-3,157 -7,641	-3,190 -7,627 -994	33 -14	35 251	161 502 84	-126 -251						
Montana Nebraska Nevada New Hampshire	2,989 7,662 11,226 5,848	2,047 5,327 7,132 3,884	2,068 5,454 7,233 3,955	1,996 5,326 7,230 3,834	2,131 5,507 7,205 4,026	-942 -2,334 -4,093 -1,965	-994 -2,336 -3,996 -2,014	52 2 -98 49	21 127 101 71	84 180 73 142	-53 28						

					(Million	15)					
		Corporate	Profits Befo	ore Tax			Cha	nge from P	revious Year		
	Based on Co Before Tax, b	•		Based on Co of Corporate Previous	Profits in	Total	Due to Cyclical Change Only	Due to change in composi- tion of profits before taxes	Total	Due to Cyclical Change Only	Due to change in composi- tion of profits before taxes
State	2007	2008	2009	2008	2009		2008			2009	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
						(2) -(1)	(4) - (1)	(6)-(7)	(3) - (2)	(5) - (2)	(9) - (10)
New Jersey	43,130	27,942	29,832	28,488	28,893	-15,188	-14,641	-547	1,890	952	93
New Mexico	6,378	4,501	4,378	4,418	4,514	-1,877	-1,960	83	-123	13	-13
New York	103,644	66,511	71,202	67,757	68,767	-37,133	-35,887	-1,246	4,691	2,256	2,43
North Carolina	37,957	24,657	24,689	24,602	25,376	-13,300	-13,355	55	32	719	-68
North Dakota	2,565	1,813	1,873	1,774	1,960	-752	-791	39	60	147	-8
Ohio	47,660	31,114	31,109	30,878	32,001	-16,546	-16,781	235	-5	887	-89
Oklahoma	13,752	9,391	9,225	9,297	9,693	-4,361	-4,455	94	-166	302	-46
Oregon	16,594	10,881	11,031	10,847	11,249	-5,713	-5,746	33	150	368	
Pennsylvania	53,397	34,909	36,272	34,955	36,344	-18,488	-18,442	-46	1,363	1,434	
Rhode Island	4,237	2,689	2,884	2,741	2,790	-1,548	-1,495	-52	195	102	
South Carolina	15,628	10,320	9,821	10,258	10,497	-5,308	-5,370	61	-498	178	
South Dakota	2,931	2,041	2,114	2,047	2,135	-891	-884	-7	74	95	
Tennessee	23,246	15,576	15,598	15,287	16,035	-7,670	-7,960	289	22	459	
Texas	115,738	78,813	80,824	78,868	81,509	-36,925	-36,871	-54	2,011	2,695	
Utah	10,311	6,837	6,949	6,790	7,103	-3,474	-3,521	47	112	266	
Vermont	2,375	1,619	1,589	1,551	1,689	-756	-824	67	-29	70	
Virginia	34,537	22,783	24,088	22,577	23,858	-11,754	-11,960	206	1,305	1,074	
Washington	29,314	19,862	20,481	19,488	20,807	-9,452	-9,826	374	619	945	
West Virginia	5,749	4,002	4,049	3,918	4,272	-1,747	-1,831	84	47	271	
Wisconsin	24,615	16,397	16,591	16,358	16,953	-8,217	-8,256	39	194	555	
Wyoming	3,262	2,171	2,162	2,221	2,227	-1,091	-1,041	-50	-9	57	-6

profits before tax by industry shown in column (8) of Table 2.

Source: Table 2 and U.S. Department of Commerce, Bureau of Economic Analysis

state. The results are then summed to obtain estimates of corporate profits for each of the 14 industrial sectors in each state. Total corporate profits in each state are derived by summing the individual industry profits. A more detailed exposition of the methods used to derive these estimates, and the data sources are contained in the Appendix to this article.

Between 2007 and 2008, every state suffered a decline in corporate profits; and, the percentage change was fairly uniform. Delaware suffered the largest decline in corporate profits -- -38.9 percent. The decline in North Dakota, the state that suffered the least decline in corporate profits was 29.3 percent. Between 2008 and 2009, there was much less uniformity in the change in corporate profits. Ten states experienced a decline in corporate profits while the other states experienced an increase in total corporate profits. Delaware enjoyed the largest increase in corporate profits - 12.9

percent and corporate profits in South Carolina declined by nearly 5 percent - the greatest amount for any state.

Columns 4 and 5 present the breakdown the annual change in corporate profits into its components - cyclical change and change that results from change in the composition of profits only, which we treat as a residual, in both dollar terms and percentage terms (Table 4). Annual changes in corporate profits in any state are dependent on the changes in the sales of each industry sector in that state, changes in the salaries and wages in that industry in that state, the apportionment weight, and changes in the U.S. total corporate profits. Columns 7 and 8 present the sum of all individual industry sector changes in each state for 2008; and, columns 11 and 12 present the sum of all individual industry sector changes in each state for 2009.

Between 2007 and 2008, the change in corporate profits is dominated by cyclical change in all states and is fairly uniform across the states. The residual, change that results from change in the composition of profits, is small compared to cyclical changes. Conversely, between 2008 and 2009 total annual corporate profit change among the states was not dominated by either changes in cyclical factors or changes resulting from the composition of profits. Between 2008 and 2009, all states, with the exception of Colorado, experienced a cyclical increase in corporate profits. The cyclical change in profits was -\$602 million (-3.7 percent) while the change in corporate profits due to changes in the overall composition of profits was \$244 million or 1.5 percent. While we have not analyzed the reasons for Colorado's unique breakdown in the change in corporate profits into the cyclical and composition components in great detail, cyclical increase in corporate profits in most industry sectors in 2009 were offset by cyclical declines in in the mining sector (-\$453 million) and the retail trade sector (-\$662 million).

III. Discussion

The results shown in Tables 3 and 4 illustrate how dependent state corporate income tax bases are on changes in the general economy and changes in corporate profits by industry sector. A more detailed examination of changes in corporate profits for each industry sector in each is necessary to completely disaggregate the impact of annual changes in the composition of profits on changes in state corporate income tax bases. Also, this analysis assumed only one general apportionment formula is used in each state. However, some state may use different apportionment formulas for different industry sectors, manufacturing, for example; or, use a method of apportionment that apportions industry sector sales to that state based on some measure of payroll and property costs. No effort was made here to use the apportionment formula used by some states for specific industry sector.

If present trends in state weighting of apportionment factors – greater weight

Before	Taxes, by		-		-	1
		Percent Ch	ange fror	n Previou	ıs Year	
			Due to change in			Due to change in
		Due to Cyclical	composi- tion of profits		Due to Cyclical	compos i-tion of profits
	Total	Change Only	before taxes	Total	Change Only	before taxes
State	TULAI	2008	tuxe5	TULAI	2009	tuxes
	(1)	(2)	(3)	(4)	(5)	(6)
All States	-34.38%	-34.38%	0.00%	3.41%	3.41%	0.00%
Alabama	-31.86	-34.05	2.18	-1.52	3.74	-5.27
Alaska	-33.28	-32.69	-0.58	11.13	10.39	0.74
Arizona	-36.49	-36.25	-0.25	3.83	2.33	1.50
Arkansas	-32.80	-33.76	0.95	3.27	5.83	-2.56
California	-34.82	-35.21	0.39	4.38	3.57	0.81
Colorado	-33.35	-33.08	-0.27	-2.21	-3.72	1.51
Connecticut	-38.79	-35.39	-3.40	9.51	3.40	6.11
Delaware	-38.86	-34.76	-4.10	12.92	3.69	9.22
Districtof Colum	-32.85	-36.16	3.31	10.41	4.17	6.24
Florida Georgia	-36.06 -36.63	-35.62 -36.75	-0.44 0.12	8.49 3.46	3.31 3.40	5.18 0.06
Hawaii	-36.63	-36.75	0.12	8.53	4.63	3.90
Idaho	-34.66	-35.00	0.33	2.51	2.89	-0.38
Illinois	-34.34	-34.01	-0.34	3.69	3.39	0.30
Indiana	-32.24	-33.75	1.51	-2.30	3.40	-5.70
Iowa	-32.00	-32.19	0.19	0.58	3.38	-2.80
Kansas	-31.54	-33.62	2.08	-2.78	3.52	-6.30
Kentucky	-33.53	-34.60	1.07	-0.39	4.58	-4.97
Louisiana	-33.80	-34.35	0.54	0.18	5.81	-5.63
Maine	-33.83	-33.49	-0.34	3.58	3.39	0.19
Maryland	-34.42	-35.27	0.85	5.03	4.40	0.63
Massachusetts	-36.28	-34.95	-1.33	7.67	3.71	3.95
Michigan	-35.95	-35.99	0.04	2.31	3.39	-1.09
Minnesota	-34.90	-34.03	-0.86	3.60	3.25	0.35
Mississippi	-34.19	-34.54	0.36	0.57	2.64	-2.08
Missouri	-33.03 -31.52	-32.97 -33.24	-0.06	1.62	3.24 4.12	-1.62 -3.08
Montana Nebraska	-31.52	-33.24	1.72 0.02	1.04 2.38	3.38	-3.08
Nevada	-36.46	-35.59	-0.87	1.41	1.02	0.39
New Hampshire	-33.59	-34.44	0.85	1.83	3.65	-1.82
New Jersey	-35.22	-33.95	-1.27	6.77	3.41	3.36
New Mexico	-29.43	-30.73	1.31	-2.74	0.29	-3.03
New York	-35.83	-34.63	-1.20	7.05	3.39	3.66
North Carolina	-35.04	-35.18	0.15	0.13	2.92	-2.79
North Dakota	-29.31	-30.84	1.53	3.32	8.10	-4.78
Ohio	-34.72	-35.21	0.49	-0.02	2.85	-2.87
Oklahoma	-31.71	-32.39	0.68	-1.76	3.21	-4.98
Oregon	-34.43	-34.63	0.20	1.38	3.38	-2.01
Pennsylvania	-34.62	-34.54	-0.09	3.90	4.11	-0.20
Rhode Island	-36.54	-35.30	-1.24	7.25	3.78	3.46
South Carolina	-33.97	-34.36	0.39	-4.83	1.72	-6.55
South Dakota	-30.39	-30.16	-0.23	3.61	4.63	-1.02
Tennessee	-33.00	-34.24	1.24	0.14 2.55	2.94 3.42	-2.80
Texas Utah	-31.90 -33.69	-31.86 -34.15	-0.05 0.45	2.55 1.64	3.42	-0.87 -2.26
Vermont	-33.69 -31.84	-34.15	2.84	-1.82	3.90 4.33	-2.26
Virginia	-34.03	-34.63	0.60	5.73	4.55	1.01
Washington	-32.24	-33.52	1.28	3.11	4.76	-1.64
West Virginia	-30.39	-31.85	1.46	1.19	6.76	-5.57
Wisconsin	-33.38	-33.54	0.16	1.18	3.39	-2.20
Wyoming	-33.44	-31.90	-1.54	-0.40	2.61	-3.01
Source: Tables) 3	1. and U.C.	Donarta	ont of C	mmorce	
Source: Tables 2	2, 3, , and 2	+, and 0.S.	Departm	ient of C	unmerce	,

Table 4: Percentage Change in Estimated Corporate Profits

Source: Tables 2, 3, , and 4; and U.S. Department of Commerce, Bureau of Economic Analysis

put on sales factor and market-based sales factor weights use to situs sales of service sector industries, the proportion of the wages and salaries will become less important in apportioning corporate profits by industry sector to each state. No estimate of the impact of changing apportionment weights was made in estimating the impact of the recession on the estimate of changes in the corporate profits in each state.

IV. Summary and Conclusion

In 2008, the corporate income tax base of all states was adversely affected by the recession in a fairly uniform manner – the range of decline in the corporate tax base ranged from -29 percent (ND) to -39 percent (DE) the U.S. average was -34 percent. Conversely, the modest increase in corporate profits between 2008 and 2009 (3.4 percent) resulted in a fairly non-uniform change in corporate profits among the states -- -5 percent in SC to 13 percent in DE. Furthermore, the cyclical impacts were far more important in 2008 than in 2009. In 2009, changes in industry sector composition of profits far outweighed cyclical factors.

Future research on this topic is necessary to estimate how differing apportionment weights used by individual states for various industry sectors affect the results. Similarly, a more detailed breakdown of how the profits of various industry sectors within each behave over the course of the a business cycle in each state would better explain the differential impacts of business cycles on state business income tax bases.

ENDNOTES

¹Elliott Dubin, "Changes in State Corporate Income Tax Apportionment Formulas and Changes in State Corporate Income Tax Bases," *Multistate Tax Commission Review*, Winter 2010, Volume XXI, No. 1, pp. 5-14.

²Marcia Howard, RTS **1991, State Revenue Capacity and Effort**, U.S. Advisory Commission on Intergovernmental Relations, M-187, September 1993.

³http://wwwdev.nber.org/cycles/cyclesmain. html.

⁴http://www.bea.gov/regional/gsp/action.cfm ⁵Agriculture, forestry, fishing, and hunting; mining; utilities; construction; manufacturing; wholesale trade; retail trade; transportation and warehousing; information; finance insurance, real estate, leasing, and management of enterprises; professional and business services; educational services, health care, and social assistance; arts, entertainment, recreation, accommodations, and food services; and other services, except government.

APPENDIX

General Apportionment Formula

$$\Pi_{ijt} = \Pi_{it} \cdot \{ \dot{a}_{jt} (\boldsymbol{S}_{ijt} / \boldsymbol{S}_{it}) + \beta_{it} (L_{ijt} / L_{it}) + \boldsymbol{\gamma}_{it} (P_{ijt} / P_{it}) \}$$

Where:

 Π_{ijt} are the profits of industry sector (i) in state (j) at time (t)

 Π_{it} is the profits of industry sector (i) at time (t)

 \dot{a}_{jt} is the weight of apportionment factor for sales in state (j) at time (t)

 S_{ijt}/S_{it} is the ratio of the sales of industry sector (i) in state (j) at time (t) to total sales of industry sector (i) at time (t)

 β_{it} is the weight of the apportionment factor for payroll in state (j) at time (t)

 L_{ijt}/L_{it} is the ratio of the payroll of industry sector (i) in state (j) at time (t) to total payroll of industry sector (i) at time (t)

 $\gamma_{_{it}}$ is the weight of the apportionment factor for property in state (j) at time (t)

$$\begin{split} & \mathsf{P}_{ijt}/\mathsf{P}_{it} \text{ is the ratio of the property of industry sector (i)} \\ & \text{in state (j) at time (t) to the total property of industry} \\ & \text{sector (i) at time (t)} \\ & \dot{d}_{it} + \beta_{it} + \gamma_{it} = 1 \end{split}$$

However, since we do not have data on the property factor by state, the apportionment formula used here is:

 $\Pi_{ijt} = \Pi_{it} \cdot \{ \dot{a}_{jt} (S_{ijt}/S_{it}) + (1 - \dot{a}_{jt}) (L_{ijt}/L_{it}) \}$

Derivation of Sales by Industry by State, 2001 through 2008

Because corporate sales by destination are unlikely to mirror either payroll or retail sales, neither of these proxies was used to estimate the sales factor in the formula. The Economic Census, published every five years by the U.S. Bureau of the Census, contains data on sales by industry by state; but, these data represent shipments from the state; i.e., sales by state of origin. The apportionment of corporate income is based on sales by state of destination. Estimates of sales by industry by state on a destination basis were derived using a method very similar to the ACIR method found in the September 1993 publication cited previously. As shown below, a proxy for sales by destination was derived through use of Gross State Product by industry by state and annual national input-output tables for 2001-2007 according to the following procedure: Let:

Tabl_{i,c} = the percentage of the dollar value of industry i's output that is commodity c. The distribution of commodity outputs is based on the "Make of Commodities" table (Table 1) in the US input-output tables.

 $\label{eq:table_c_j} \begin{array}{l} \texttt{Tab2}_{c,j} = \texttt{the percentage of the total dollar value of} \\ \texttt{commodity c used as an input in industry j. Where c} \\ \texttt{is not used as an intermediate input, but is purchased} \\ \texttt{by all final users, Gross Domestic Product (GDP) of} \\ \texttt{each state constitutes a 15th industry. The distribution} \\ \texttt{of commodities to industries is based on the ``Use of} \\ \texttt{Commodities'' table (Table 2) in the US input-output} \\ \texttt{tables.} \end{array}$

Then:

14 14 Where $\mathbf{A}_{i,j} = \Sigma \Sigma$ **(Tabl**_{i,c} * **Tab2**_{c,j}) is the percentage of industry i's output purchased by industry j. i=1 c=1

When j is GDP, $\boldsymbol{A}_{i,j}$ is the amount of industry i's output that is sold as final goods.

Now let:

 $\mathbf{GDP}_{\mathbf{j},\mathbf{s}}$ is the percentage of industry j's Gross Domestic Product located in state s. Where industry j is final use expenditures, the cell value represents that state's share of total sales.

Then:

$$Sales_{i,s} = \sum_{j=1}^{14} (A_{i,j} * GDP_{j,s})$$

Where $\textbf{Sales}_{i,s}$ is the share of industry i's output sold in each state s.

Thus, $\mathbf{Sales}_{i,s}$ is used as a proxy for the sales-by-destination factor in the three-factor formula.

Sources:

Corporate Profits by Industry (2001-2009): http://www. bea.gov/national/nipaweb/TableView.asp?SelectedTable= 232&ViewSeries=NO&Java=no&Request3Place=N&3Place =N&FromView=YES&Freq=Year&FirstYear=2001&LastYea r=2007&3Place=N&Update=Update&JavaBox=no

Payroll (2001-2009): http://www.bea.gov/regional/spi/ default.cfm?selTable=SA07N&selSeries=NAICS

Input-Output Tables (2001-2008): http://www.bea.gov/ industry/iotables/table_list.cfm?anon=98817

Gross Domestic Product by Industry (2001-2008): http://www.bea.gov/regional/index.htm#gsp

Calendar of Events

Winter Committee Meetings

March 1-4, 2011 Kansas City, Missouri

44th Annual Conference and Committee Meetings

July 24-28, 2011 Whitefish, Montana

For further details of these and future meetings, please visit our website at *www.mtc.gov*.

HELP KEEP OUR DATABASE UP-TO-DATE

If you would like to be notified of upcoming meetings, hearings, and teleconferences, please send an email to Teresa Nelson at tnelson@mtc.gov. Include your full name, mailing address, telephone, fax and email.

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