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State Finance in Times of Crisis

Brian Galle* & Jonathan Klick†

Abstract

As recent events illustrate, state finances are pro-cyclical: during recessions, state revenues crash, worsening the effects of economic downturns. This problem is well-known, yet persistent. We argue here that, in light of predictable federalism and political economy dynamics, states will be unable to change this situation on their own. Additionally, we note that many possible federal remedies may result in worse problems, such as creating moral hazard that would induce states to take on excessively risky policy, both fiscal and otherwise. Thus, we argue that policy makers should consider so-called “automatic” stabilizers, such as are found in the federal tax system.

We present an argument from micro-economic foundations suggesting that the federal Alternative Minimum Tax has potentially salutary -- and heretofore unrecognized -- effects that counteract pathologies of state budgets over the business cycle. Namely, as incomes grow and the AMT hits more state residents, state spending becomes more expensive in flush times as the federal tax subsidy for state and local taxes is reduced. Conversely, when state fiscal health deteriorates, the federal tax subsidy grows as fewer state residents fall under the AMT, boosting taxpayer support for state spending. This stabilizing mechanism has the potential to overcome problems state politicians face committing to saving during boom times and spending during bust times. We present empirical evidence suggesting that the AMT does indeed provide some degree of fiscal stabilization in accordance with micro-theory. We provide policy suggestions regarding how the AMT could be modified to leverage this stabilization effect.

Calls to “reform” the Alternative Minimum Tax pre-date the recent economic downturn. AMT reform has appeared in many congressional stimulus proposals, but significant cut-backs are unlikely as federal deficits are projected to grow for the foreseeable future. Our argument here implies that any AMT reform effort should consider whether the AMT’s stabilizer function could be replaced by any other viable mechanism.

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I. INTRODUCTION

Economic downturns make for tough fiscal times for state and local governments.¹ State fiscal belt-tightening has the potential to drive up unemployment and drive down consumer demand, further slowing the economy.² As we write during the summer of 2009, we see a steady stream of headlines warning that state budget cuts threaten to delay economic recovery.³ The crisis underscores that any sensible strategy for managing the ups and downs of the business cycle should include some provision for ensuring that state revenues will ease the pain of recessions and slowdowns, rather than compounding it.⁴

In this Article, we argue that states are poorly situated to make such plans for themselves, and that many conventional forms of federal subsidy would risk worsening the problems that states face. However, the path to a well designed subsidy already has been laid in a surprising place: the federal Alternative Minimum Tax.⁵ We investigate empirically the impact of the

¹ Yilin Hou, *Fiscal Reserves and State Own-Source Expenditure in Downturn Years*, 33 PUB. FIN. REV. 117, 123 (2005); David Super, *Rethinking Fiscal Federalism*, 118 HARV. L. REV. 2544, 2609--10 (2005). For a recent empirical demonstration of this point, see Erik Wibbels & Jonathan Rodden, *Fiscal Decentralization and the Business Cycle: An Empirical Study of Eight Federations*, 21 J. ECON. & POL. __ (forthcoming 2010), manuscript at 2.

² Yilin Hou, *Budgeting for Fiscal Stability Over the Business Cycle: A Countercyclical Fiscal Policy and the Multiyear Perspective on Budgeting*, PUB. ADMIN. REV. 730, 733 (Sept/Oct. 2006); Wibbels & Rodden, *supra* note 1, at 2.

³ Michael Cooper, *States Face Difficult Decisions*, NEW YORK TIMES, Feb. 19, 2009, at A17; *Editorial: States in Distress*, NEW YORK TIMES, Aug. 4, 2009, at A22; *State Budgets in Crisis: Happy New Year*, THE ECONOMIST, July 4, 2009, at 74.

⁴ Surprisingly, study of the management of the business cycle, known as “macroeconomic” policy, is almost wholly absent from the legal literature. Jeff Strnad’s essay discusses the general macroeconomic implications of the tax code. Jeff Strnad, *Some Macroeconomic Interactions with Tax Base Choice*, 56 SMU L. REV. 171, 181--99 (2003). Lily Batchelder and her colleagues have analyzed the macroeconomic and other properties of refundable tax credits, but found macroeconomic considerations relatively unimportant. Lily L. Batchelder et al., *Efficiency and Tax Incentives: The Case for Refundable Tax Credits*, 59 STAN. L. REV. 23, 61--65 (2006). David Super considers state stabilization efforts as a part of his larger analysis of fiscal ties between the federal government and the states. Super, *supra* note 1, at 2610--14, 2632--37. And, in an important recent manuscript, Yair Listokin sets out more comprehensively the significance of federal tax policy for national business cycles. Yair Jason Listokin, *Tax Expenditures and Business Cycle Fluctuations*, Yale Law & Economics Research Paper No. 378 (April 3, 2009), available at < http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1372782>.

⁵ T.C. §§ 55--58. For an overview of the AMT’s complex provisions, see JOINT COMMITTEE ON TAXATION, PRESENT LAW AND BACKGROUND RELATING TO THE ALTERNATIVE MINIMUM TAX 1--7 (June 27, 2007).

AMT, and suggest some modest alterations that would make it a more effective stabilizer for unsteady state economies.

The Article makes three key contributions to the literature, as well as some smaller ones. First, we show for the first time empirically that the AMT affects state spending and also demonstrate that this effect is counter-cyclical. Second, we add to a minute legal literature exploring stabilization policy at the state level, as well as considering the impact state policy has on the cycles of national economic health.⁶ And, thirdly, we attempt to remedy the neglect, in the legal literature and elsewhere, of how to design a federal policy that would mitigate the negative business-cycle effects of state budgeting.⁷

Turning to the substance of our argument, the standard goal of macroeconomic policy in general is to be “countercyclical,” moderating both booms and busts in the economy.⁸ The market may not automatically self-correct, and extremes in either direction can lead to unwanted effects, whether it be job loss or excessive inflation.⁹ During downturns, this means that government has a role to play in stimulating the economy, such as through increased spending, tax cuts, or expansionary monetary policy.¹⁰ Traditional microeconomic theory also offers similar proscriptions, counseling that transfers of wealth from richer periods (booms) to poorer periods (busts) increases overall social welfare.¹¹

⁶ Our only antecedent here is Super, *supra* note 4, at 2610--14, 2632--37.

⁷ Again, the only other effort we are aware of is a brief passage in Super, *supra* note 4, at 2650--51, and an unpublished essay by the economist Marianne Vigneault, who studied the stabilization properties of alternative possible versions of Canada’s revenue-sharing system. Marianne Vigneault, *The Role of Intergovernmental Transfers in Regional Stabilization and Equalization 10--15* (unpublished manuscript, Feb. 2002), *available at* <http://www.aucc.ca/_pdf/english/programs/cepra/Final%20Paper%20-%20Literature%20Reviw%20by%20Vigneault.pdf>.

⁸ WILLIAM J. BAUMOL & ALAN S. BLINDER, *ECONOMICS: PRINCIPLES AND POLICY* 88--89 (5th ed. 1991). Macroeconomics is the study of whole economies, while microeconomics is the study of individual and group behavior. *Id.* at 76--77.

⁹ DAVID ROMER, *ADVANCED MACROECONOMICS* 217-322 (2d ed. 2001).

¹⁰ *Id.* at 494--97.

¹¹ We explain this theory in more detail *infra* Part II.

States are in a difficult bind when it comes to stabilization policy, however. Their revenues are tied to the business cycle, so that budgets get tighter just when the need for countercyclical spending increases.¹² Raising taxes to make ends meet is contrary to the usual macroeconomic proscription, and is especially difficult in a modern climate where tax increases drive away productive citizens and businesses. Whereas Congress can largely avoid this dilemma simply by borrowing, states risk driving out citizens with excessive debt, and nearly all state legislatures face legal constraints to maintain a balanced budget. Those legal constraints, moreover, are sensible responses to the incentives of legislatures in prosperous times, who would otherwise likely take on excessive debts.¹³

The result is that state finances tend to contribute to, rather than mitigate, the pain of economic downturns.¹⁴ And in a world where states are so closely economically interdependent, these effects are felt well outside any one state's borders.¹⁵ As recent events illustrate, state budget crises contribute to national economic woes.¹⁶

Accordingly, we argue that the federal government can play some role in stabilizing state budgets, leading us to the question of how best to design such an intervention. Simply shifting some countercyclical programs, such as unemployment insurance, to the federal budget would be somewhat helpful (albeit at some cost to federalism), but would lead to undesirable distortions in

¹² Brian Knight & Arik Levinson, *Fiscal Institutions in U.S. States*, in INSTITUTIONS, POLITICS, AND FISCAL POLICY 167, 176--80 (Rolf R. Strauch & Jurgen von Hagen eds., 2000); Russell S. Sobel & Randall G. Holcombe, *The Impact of State Rainy Day Funds in Easing State Fiscal Crises During the 1990-1991 Recession*, PUB. BUDGETING & FIN. 28, 28 (Fall 1996); Wibbels & Rodden, *supra* note 1, at 16--18, 22; David Wildasin, *State and Local Government Finance in the Current Crisis: Time for Emergency Federal Relief?*, IFIR Working Paper No. 2009-07, at 1, available at <http://www.ifigr.org/publication/ifir_working_papers/IFIR-WP-2009-07.pdf>.

¹³ We detail the preceding points *infra* Part III.

¹⁴ International Monetary Fund, *Decentralization and Macroeconomic Management*, IMF Working Paper No. WP/97/155, at 7 (Nov. 1997); Hou, *supra* note 2, at 733; Wibbels & Rodden, *supra* note 1, at 2--3.

¹⁵ Robert P. Inman, *Transfers and Bailouts: Enforcing Local Fiscal Discipline with Lessons from U.S. Federalism*, in FISCAL DECENTRALIZATION AND THE CHALLENGE OF HARD BUDGET CONSTRAINTS 35, 42--43 (Jonathan Rodden et al. eds., 2003).

¹⁶ Wildasin, *supra* note 12, at 12; see also Tamim Bayoumi & Barry Eichengreen, *Restraining Yourself: The Implications of Fiscal Rules for Economic Stabilization*, 42 STAFF PAPERS -- INT' MONETARY FUND 32, 46 (1995) (“[S]tate budgets played a significant role in macroeconomic stabilization in the 1970s and 1980s....”).

state policymakers' incentives. Discretionary grants to hard-hit states are unappealing, because they may be too slow and targeted more by politics than economic needs. On the other extreme, a steady-state subsidy for state revenues --- say, federal revenue-sharing along the lines of the Canadian model --- contributes to overheating the economy during growth periods, and distorts state budgets upward. The ideal instrument, then, is one that automatically directs federal dollars to a state if and only if its economy is struggling.

The federal tax system already contains a set of instruments that approximate this ideal. The Tax Code grants state taxpayers a deduction for the money they pay to their local government, which, in effect, is a federal matching grant for eligible state levies.¹⁷ The much-reviled Alternative Minimum Tax, as we will both model and support with original empirical evidence, acts to shut off this matching grant when state economies are thriving. In combination, these provisions and others help target federal dollars to struggling states.

In light of the present crisis, we obviously do not claim that this support mechanism functions perfectly. Realistically, no stabilization policy could entirely protect states from a recession of this magnitude, but we acknowledge several current aspects of the AMT that likely reduce its efficacy. Thus, we also suggest several policy tweaks, some at the federal level, some that could simply be adopted by states, that would make better use of the support offered by the Tax Code.

Overall, we find that the literature's neglect of stabilization policy has been unfortunate, because it has led to the entrenchment of several pieces of conventional wisdom we think need reconsideration. Perhaps most prominent is the canard that states should not raise taxes during

¹⁷ T.C. § 164.

downturns, repeated recently during California's 2009 budget crisis.¹⁸ In fact, taking into account federal matching grants, raising tax rates can actually, on net, increase a state's wealth. At the same time, we show that the most effective *political* structure for tax increases may be to tax the middle class.

Part II of the Article offers more background on the rationale for government interventions in the business cycle. Part III explains why states cannot themselves establish effective countercyclical taxing and spending policies. Part IV elaborates on why standard forms of federal subsidy also are suspect. Part V models the potential power of the AMT to serve as a countercyclical federal subsidy, and sets out some empirical support for our basic assumption that AMT liability at the jurisdiction level is rising in state income. Part VI presents the results of our empirical investigation into the stabilizing effects of the AMT. Part VII suggests some policies to improve the AMT's countercyclical effects. We then conclude.

II. MICRO-FOUNDATIONS OF AMT'S STABILIZATION EFFECT

The primary arguments for counter-cyclical fiscal policy can be broadly characterized as social insurance arguments and macroeconomic stimulus arguments. Although our general idea can apply in both domains, we will focus exclusively on the social insurance aspects of counter-cyclical fiscal policy.¹⁹ The value of social insurance, or any insurance for that matter, hinges on

¹⁸ Jim Sanders, *California Legislature: One Month to Battle Over Slew of Bills*, SACRAMENTO BEE, Aug. 16, 2009, at A1. In earlier recessions, governors pushed for needed tax increases, only to be punished by their electorates. Super, *supra* note 1, at 2613 n.267.

¹⁹ There is significant disagreement among macroeconomists about the efficacy of using fiscal policy to stimulate economic growth. There are credible camps supporting the view that stimulus is not generally welfare improving, that fiscal policy is effective but inferior to using monetary policy to stimulate the economy and improve welfare, Christina Romer, *Changes in Business Cycles: Evidence and Explanations*, 13 J. ECON. PERSP. 23, 23--24, 36--37 (1999), and that fiscal policy is the only option to stimulate an economy and improve welfare in a liquidity trap where monetary policy is impotent. Even within the last camp, there is disagreement as to whether spending increases or tax cuts are more effective as stimulus tools. [cites] To avoid these very complicated debates, we focus on the social insurance aspects of counter-cyclical fiscal policy, simply noting that the AMT's stabilization effects could be important in models that allow for fiscal policy to have a stimulus effect.

the notion that individuals experience diminishing marginal utility of income. That is, as an individual consumes additional units of a good, each increment of the good contributes less to the individual's utility than the previous one did.²⁰ An immediate consequence of this diminishing marginal utility of income is that individuals can improve their welfare by foregoing small amounts of income during good times (by paying an insurance premium) in the expectation that they will receive a relatively large transfer during bad times (i.e., when the event that was insured against occurs).²¹

In the social insurance context, the government body taxes individuals in relatively good financial conditions to provide transfers to individuals who have suffered some economic loss.²² These transfers are often referred to as fiscal "smoothing," because they level out the peaks and valleys of lifetime earnings.²³ Social insurance programs may prove to be superior to privately provided insurance if they allow for larger pools in which to diversify the underlying risk, or if there is adverse selection due to information asymmetries about the underlying risk each person faces.²⁴ As a descriptive matter, social insurance is generally provided with respect to income losses resulting from involuntary unemployment²⁵ or more general problems leading to poverty²⁶

Even for those readers more interested in macroeconomics per se, our discussion should still be pertinent, since recipients of social insurance have a high marginal propensity to consume, and hence are important targets of fiscal stimulus. Strnad, *supra* note 4, at 195.

²⁰ Sometimes referred to as the "Law of Diminishing Marginal Utility," this phenomenon can be modeled using a concave utility function which is the standard modeling assumption in economics. See ANDREU MAS-COLELL ET AL., MICROECONOMIC THEORY 185 (1995).

²¹ MAS-COLELL ET AL., *supra* note 20, 187-188.

²² It will be useful to distinguish between social insurance and redistribution. Social insurance is aimed at mitigating temporary downturns in an individual's income, whereas redistribution attempts to level the amount of lifetime resources the individual has access to. Martin Feldstein, *Rethinking Social Insurance*, 95 AM. ECON. REV. 1, 2--3 (2005). However, at a general level, redistribution can be seen as a form of social insurance.

²³ E.g., James Poterba & Jurgen von Hagen, *Introduction*, in FISCAL INSTITUTIONS AND FISCAL PERFORMANCE 1, 5 (James Poterba & Jurgen von Hagen eds., 1999).

²⁴ Feldstein, *supra* note 22, at 4. Cite to adverse selection article; note that social insurance necessarily generates cross subsidization in this context though, under a veil of ignorance, individuals may support such cross-subsidies.

²⁵ Beyond private insurance markets, there is evidence that public provision of unemployment insurance crowds out additional income production in the family and precautionary savings. See Julie Cullen & Jonathan Gruber, *Does Unemployment Insurance Crowd Out Spousal Labor Supply?*, 18 J. LAB. ECON. 546 (2000); Eric M. Engen & Jonathan Gruber, *Unemployment Insurance and Precautionary Saving*, 47 J. MON. ECON. 545 (2001).

to the near exclusion of private insurance. Social insurance programs, generally targeted at the chronically poor or elderly populations, also exist in the health insurance market²⁷ alongside private competitors. More limited social insurance programs include food stamps and subsidized housing.²⁸

Individuals may unanimously “agree” to these social insurance programs in some idealized state behind what Buchanan and Tullock call a state of uncertainty²⁹ or what Rawls dubs the veil of ignorance³⁰ wherein an individual does not know what characteristics or preferences she will be endowed with later. However, once they find themselves in a position where they pay more into these programs than they expect to receive, support may decline. Worse yet, this decrease in support may coincide with instances when the need for the social insurance is greatest, such as times of economic contraction. Absent some strong institutional commitments, politicians may be hesitant to collect taxes from individuals who are relatively well off to help the less well off, especially if the former are more likely to vote than the latter.³¹ Perversely, when the economic condition is at its best, people may be most willing to pay taxes to pay for the social insurance. Technically speaking, social insurance (and public goods more generally) are normal goods, implying that the willingness to pay for them is increasing in income.³²

²⁶ See, e.g., Jonathan Gruber and Daniel M. Hungerman, *Faith-Based Charity and Crowd Out During the Great Depression*, 91 J. PUB. ECON. 1043 (2007).

²⁷ Although there is evidence of crowd out here as well. See David M. Cutler and Jonathan Gruber, *Does Public Insurance Crowd Out Private Insurance*, 111 Q. J. ECON. 391 (1996).

²⁸ 7 U.S.C. § 2015 (food stamps); U.S. Dep’t of Hous. & Urban Dev., HOME and Low Income Housing Tax Credits (LIHTC) (Aug. 30, 2004), available at <http://www.hud.gov/offices/cpd/affordablehousing/training/web/lihtc/>

²⁹ JAMES M. BUCHANAN AND GORDON TULLOCK, *THE CALCULUS OF CONSENT* 77 (1962).

³⁰ JOHN RAWLS, *A THEORY OF JUSTICE* 11 (1971).

³¹ A number of studies find this effect. See, e.g., Richard J. Timpone, *Structure, Behavior, and Voter Turnout in the United States*, 92 AMER. POL. SCI. REV. 145, 149--153 (1998).

³² See, e.g., Daniel Hewitt, *Demand for National Public Goods: Estimates from Surveys*, 23 ECON. INQ. 487 (2007).

If government institutions, in our case state and local government institutions, were disciplined enough to save in the good times and spend in the bad times, they could engage in fiscal smoothing. Advocates of smoothing have championed rainy day funds on these grounds, but they have largely ineffective because relatively few have strong deposit and withdrawal rules.³³ Given the lack of binding institutional commitments and short time horizons on the part of politicians, the more common pattern is for state and local governments to spend more during good times and less during bad times.³⁴

In the following Parts, we analyze in more detail the causes for state failures to provide anywhere near optimal amounts of fiscal smoothing, and evaluate several possible solutions to this problem.

III. Weakness of State Stabilization Tools

In this Part we explore the many failures of state financing in times of economic trouble. State governments have a large influence, for good or ill, on public efforts to smooth incomes over time.³⁵ But, as we have noted, studies have also shown that state spending tends to fall just at those times it would be most needed.³⁶ There are no viable state-level solutions to this problem. States might make up for revenue shortfalls by raising taxes, borrowing, or drawing from existing savings. As we argue in the ensuing subparts, however, these options are normatively unattractive, descriptively unlikely as a political matter, or both.

A. Tax Rate Increases

³³ Gary A. Wagner & Russell S. Sobel, *State Budget Stabilization Fund Adoption: Preparing for the Next Recession or Circumventing Fiscal Restraints?*, 126 PUB. CHOICE 177, 180--85 (2006); Sobel & Holcombe, *supra* note 12, at 28.

³⁴ Wibbels & Rodden, *supra* note 1, at 22 (“Pro-cyclicality is the rule among provinces and states in federations.”).

³⁵ Bayoumi & Eichengreen, *supra* note 16, at 46; Edward M. Gramlich, *Subnational Fiscal Policy*, in PERSPECTIVES ON LOCAL PUBLIC FINANCE AND PUBLIC POLICY 3, 4--5 (John M. Quigley ed., 1987); Arik Levinson, *Balanced Budgets and Business Cycles: Evidence from the States*, 51 NAT’L TAX J. 715, 716 (1998); Wibbels & Rodden, *supra* note 1, at 6, 8--9 (noting that federal efforts to smooth incomes can be “completely undone by the need for provincial governments to raise taxes or cut expenditures because of flagging revenues”).

³⁶ See sources cited *supra* note 14.

One obvious cure for declines in state tax revenues is for the state to increase tax *rates* to make up for the shortfall. At a minimum, if the state sets rates to bring in the same amount of total revenue, it can avoid spending cuts. Of course, this would only be an attractive strategy if the stimulative effect of the state's spending was greater than the drag on the economy caused by the tax. For several reasons, it is likely that tax increases, in the absence of any federal subsidy, will be on net a bad move economically for the state and politically for the state's officials.

First, tax rates should be kept smooth over time in order to minimize welfare losses. In brief, the size of the welfare loss from a tax increases exponentially as the tax rate goes up, so that a tax of 0% one year and 20% the next is much worse than a steady tax of 10% each year.³⁷ If revenue needs increase unexpectedly, the state should borrow, which allows it to spread the cost of meeting the need more evenly over time.³⁸

States are also constrained in their ability to raise taxes for income smoothing by the possibility that individuals and businesses may exit the state in response to tax rate increases. Residents who do not receive social insurance payments may perceive transfers as losses.³⁹ Exit is important because voters often free ride on another's effort to oppose undesirable policy.⁴⁰

³⁷ The normative appeal of rate smoothing derives from the way taxes distort economic behavior. When taxes rise, some productive exchanges do not occur: the equilibrium point shifts to the left on a standard supply/demand curve, leaving a triangular area representing lost welfare gains. MUSGRAVE & MUSGRAVE, *supra* note **Error! Bookmark not defined.**, at 235--36, 279--95. The welfare losses that result can be calculated by the standard geometric formula for the area of a triangle, $1/2bh$, implying that the loss rises in proportion to the square of the size of the distortion. *Id.* at 281.

³⁸ Robert Barro, *On the Determination of the Public Debt*, 87 J. POL. ECON. 940, 940--71 (1979). For instance, instead of hiking rates from 10 to 20% for one year, it might instead borrow, and increase rates to 11% for ten years to pay off the debt. Again, because of the exponential relationship between tax rates and welfare losses, this move would increase the overall welfare of the state.

³⁹ See Torsten Persson & Guido Tabellini, *Federal Fiscal Constitutions: Risk Sharing and Redistribution*, 104 J. POL. ECON. 979, 988 (1996) (assuming that individuals who are less exposed to risk will prefer lower amounts of social insurance); Wibbels & Rodden, *supra* note 1, at 7.

⁴⁰ *E.g.*, Joseph P. Kalt & Mark A. Zupan, *The Apparent Ideological Behavior of Legislators: Testing for Principal-Agent Slack in Political Institutions*, 33 J.L. & ECON. 103, 103--04, 107--08 (1990). Some scholars argue that political conditions in select local governments mitigate this problem. For instance, suburban homeowners in a given jurisdiction may all have relatively similar preferences for the few services their government provides, and their social and geographic proximity may encourage collective action. WILLIAM A. FISCHER, *THE HOMEVOTER HYPOTHESIS* 73--76 (2001). But this is not true of more diverse jurisdictions, such as states, rural counties, suburbs

But because a neighbor's exit does little to preserve the value of one's own home, potential migrants are rather less inclined to free ride than voters.⁴¹ Thus, exit is not subject to the same degree of collective action problems as voting.⁴² States may be able to extract redistributive taxes up to the exit costs of each taxpayer,⁴³ but in many cases states have already made binding commitments to mobile taxpayers not to exact the full exit cost, and those commitments by definition are costly to escape.⁴⁴ The federal government generally does not face these problems, because the costs of exiting the United States are typically prohibitively high.⁴⁵

The exit option also compounds the usual political dilemma of tax rate increases. At the state, as at the national level, there will special-interest group conflict over the tax/spending tradeoff. Beneficiaries of stabilizing transfer payments can form a coherent group to defend and

that welcome many new migrants, or large cities. See Richard Briffault, *Our Localism, Part II: Localism and Legal Theory*, 90 COLUM. L. REV. 346, 400--422 (1990). Even within suburbs, residents may overcome free riding only on issues of special importance to a subset of the whole population, making monitoring haphazard and contingent on the alignment of monitor interests with government performance on that narrow issue. Cf. Jean Tirole, *The Internal Organization of Government*, 46 OXFORD ECON. PAPERS 1, 3--4 (1994) (describing difficulties of monitoring entity that performs variety of services and may succeed at some and fail at others).

⁴¹ See Clayton Gillette, *Can Public Debt Enhance Democracy?*, 50 WM. & MARY L. REV. 937, 965--66 (2008).

⁴² *Id.*

⁴³ See Clayton P. Gillette, *Local Redistribution, Living Wage Ordinances, and Judicial Intervention*, 101 N'WESTERN UNIV. L REV. 1057, 1082--84 (2007); Saul Levmore, *Interstate Exploitation and Judicial Intervention*, 69 VA. L. REV. 563, 571-72, 601 (1983). Note that this implies that states with larger locational surplus -- generally denser-populated and more urban jurisdictions -- will be more capable of stabilization spending.

⁴⁴ Roberta Romano, *Law as a Product: Some Pieces of the Incorporation Puzzle*, 1 J. L. ECON. & ORG. 225, 235-36 (1985).

⁴⁵ In theory states could overcome the exit problem by coordinated action, but both theory and observation suggest that will be rare. If all states face equal need for stabilization spending, and all raise taxes together, the exit dilemma disappears, because no state is more or less of a bargain than it was before the crisis. That is an extreme and implausible scenario, but it may retain a significant grain of truth regionally. See Ravi Kanbur & Michael Keen, *Jeux Sans Frontières: Tax Competition and Tax Coordination When Countries Differ in Size*, 83 AM. ECON. REV. 877, 879--81 (1993). If neighboring states are affected in relatively similar fashion, and relocating out of the affected region is expensive, then only clusters of states need act together, rather than all fifty at once.

Still, most scholars believe that coordinated tax raising will be rare, because the benefits of defection are high. This dynamic produces a prisoner's dilemma in which states must cut taxes to attract mobile taxpayers, even if that strategy loses revenues. Dan T. Coenen, *Business Subsidies and the Dormant Commerce Clause*, 107 YALE L.J. 965, 1025--26 (1998); Kelly Edmiston, *Strategic Apportionment of the State Corporate Income Tax*, 55 NAT'L TAX J. 239, 239--62 (2002). These theories have some empirical support. Robert C. Turner & Mark Cassell, *Racing to the Bottom at Different Speeds? The Impact of Intra-State Competition on Abatement Generosity in Ohio* (unpublished manuscript 2009), available at <http://www.skidmore.edu/~bturner/Racing%20to%20the%20Bottom%20at%20Different%20Speeds%20Turner%20and%20Cassell.pdf>. There is no obvious reason the situation would be different for stabilization spending.

expand their entitlement, just as the small group of wealthy taxpayers may overcome free-rider dynamics to lobby against rate hikes.⁴⁶ What changes at the local level is that mobile taxpayers have the additional lever of the threat of their departure. Exit would not only deprive the official of revenue for her own goals, but also jeopardize her reelection by sending a potential negative signal to the remaining citizens about the quality of her performance.⁴⁷ Thus, taxpayers who can make at least a credible exit threat will likely be disproportionately powerful in resisting local tax increases.⁴⁸ Again, there are many more of those taxpayers at the local than at the national level.

B. Borrowing

An obvious alternative to tax hikes for revenue-starved states is borrowing. Public borrowing can take on a variety of forms, ranging from a straightforward bank loan to the sale of bonds of various kinds.⁴⁹ Borrowing, too, however, may be both normatively undesirable and practically difficult.

1. Exit Pressures on Local Borrowing

On the practical side, just as the possibility of exit constrains state tax levels, so too does it limit states' opportunity to borrow.⁵⁰ Indeed, under some conditions there is no difference between taxes and debt. After all, debts are simply promises to pay, which must be financed with future taxes. For a local resident who is fully aware of the extent of the public debt, expects to be around for the term of the repayment, and has a personal discount rate that matches the

⁴⁶ See Barry R. Weingast et al., *The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics*, 89 J. POL. ECON. 642, 648 (1981).

⁴⁷ See GEOFFREY BRENNAN & JAMES BUCHANAN, *THE POWER TO TAX: ANALYTICAL FOUNDATIONS OF THE FISCAL CONSTITUTION* 178 (1980).

⁴⁸ See William W. Bratton & Joseph A. McCahery, *The New Economics of Jurisdictional Competition: Devolutionary Federalism in a Second-Best World*, 86 GEO. L.J. 201, 264--65 (1997); Clayton P. Gillette, *Can Public Debt Enhance Democracy?*, 50 WM. & MARY L. REV. 937, 966 (2008).

⁴⁹ For an overview of the dynamics of public borrowing, see William W. Bratton & G. Mitu Gulati, *Sovereign Debt Reform and the Best Interest of Creditors*, 57 VAND. L. REV. 1, 8--26 (2004).

⁵⁰ For empirical evidence that states face difficulty borrowing see Douglas Holtz-Eakin et al., *Intertemporal Analysis of State and Local Government Spending: Theory and Tests*, NBER Working Paper No. 4261, at 4 (Jan. 1993); see also Wildasin, *supra* note 12, at 13 (summarizing other studies).

market rate, these future promises to pay should be perfectly equivalent to a current tax obligation.⁵¹ This principle is known to economists as “Ricardian equivalence.”⁵² Assuming, then, that Ricardian equivalence holds, states cannot mitigate exit pressure by financing their expenditures through debt rather than current tax increases.

On the other hand, both theory and evidence suggest that perfect Ricardian equivalence is rare.⁵³ Taxpayers may rationally conclude that they will die or move before current debts are fully paid. If the local economy recovers and then expands, the taxpayers may be wealthier in the future than they are now, making the future payment of tax less painful than it is now when the taxpayers are relatively poorer. The taxpayers may have a higher discount rate than the market rate of interest, so that they value current expenditures more than the discounted present value of the future stream of interest payments. The state government might repudiate its debts, or be bailed out by the federal government. And imperfectly informed taxpayers may not even be aware that the burden of debt service will be equivalent to a current tax increase. Notwithstanding this intuitive critique, empirical studies of whether equivalence exists produce widely divergent results.⁵⁴

Even if Ricardian equivalence is incomplete, future debt can still lead to high exit pressure due to its effect on housing prices.⁵⁵ Because the price of a home reflects the net value of living in it, future tax obligations should depress home values by their proportionate

⁵¹ Robert Barro, *Are Government Bonds Net Wealth?*, J. POL. ECON. 1095, 1095--1117 (1974).

⁵² ROMER, *supra* note 9, at 537; John J. Seater, *Ricardian Equivalence*, 31 J. ECON. LIT. 142, 142 (1993).

⁵³ For discussion of the points in this paragraph, see ROMER, *supra* note 9, at 537--42; Tamim Bayoumi & Paul R. Masson, *Liability-Creating Versus Non-Liability-Creating Fiscal Stabilisation Policies: Ricardian Equivalence, Fiscal Stabilisation, and EMU*, 108 ECON. J. 1026, 1028 (1998); Robert P. Inman, *Public Debts and Fiscal Politics: How to Decide*, 80 AM. ECON. REV. 81, 84 (1990); Seater, *supra* note 52, at 144--56.

⁵⁴ For example, one comprehensive survey claims that equivalence is a close approximation of reality, Seater, *supra* note 52, at 156--84 (reviewing dozens of studies), while another survey claims to find “strong evidence against” equivalence, T.D. Stanley, *New Wine in Old Bottles: A Meta-Analysis of Ricardian Equivalence*, 64 S. ECON. J. 713, 713--14 (1998).

⁵⁵ Clayton P. Gillette, *Direct Democracy and Debt*, 13 J. CONTEMP. LEGAL ISSUES 365, 391 (2004); Inman, *supra* note 53, at 83.

discounted present value, a process known as “capitalization.”⁵⁶ As a result of capitalization, a state’s future loan obligations reduce the present wealth of its residents, even those who would otherwise have heavily discounted the burden of that debt.⁵⁷ Knowing this, residents might flee or threaten to flee a jurisdiction that was considering taking on new debt.⁵⁸

2. Political Economy of Local Debt

Even if Ricardian equivalence and capitalization are both incomplete, the very factors that permit a state to borrow during downturns also may make borrowing at the state level normatively unattractive. Distortions in the political process may result in *excess* borrowing during both bad times and good. On net, the cost of these distortions may well outweigh any benefits that would accrue from unconstrained debt-financed stimulus. In theory, what is needed is a mechanism to ease borrowing in lean times and constrain it at others. As we will sketch shortly, however, it is difficult to design effective legal or institutional limits on state borrowing, let alone limits fine-tuned enough to be turned on or off at the right times.

One well-known set of reasons for excess borrowing is tied to the incentive structure of rational voters. Again, it is rational for some voters to conclude that they will not ultimately be obliged to pay off all of the debt their jurisdiction occurs. Any given voter might die or move before the balance comes fully due.⁵⁹ If capitalization is incomplete, even homeowners can escape the jurisdiction without bearing the costs of the government’s debts, and renters (or those who live free in someone else’s home, such as voting-age children) can likely escape it in any

⁵⁶ Gillette, *supra* note 55, at 391; Inman, *supra* note 53, at 83. For instance, if my ten-unit condo association borrows \$100,000 to replace the roof of my building at a market rate of interest, the loan will reduce the resale price of each unit by about \$10,000. The variation would be due to the possibility that our interest rate was higher or lower than an average rate of return because of credit risk and similar factors.

Empirical evidence suggests that capitalization is usually incomplete, however. Gillette, *supra* note 55, at 392 (summarizing studies).

⁵⁷ Inman, *supra* note 53, at 83.

⁵⁸ See Gillette, *supra* note 55, at 392; Inman, *supra* note 53, at 83--84.

⁵⁹ Bayoumi & Masson, *supra* note 53, at 1028; Inman, *supra* note 53, at 84 n.4.

event.⁶⁰ Thus, there is an inter-temporal fiscal externality, in which present voters do not take fully into account the costs of borrowing on succeeding residents.⁶¹ Similarly, voters may expect that if future debt payments become too onerous their government might simply repudiate or default on its debts.⁶² Repudiation would damage the jurisdiction's credit rating, raising the costs of subsequent borrowing, but these costs again would be relatively far into the future.⁶³

In addition to the inter-temporal externality, state borrowing also involves some inter-jurisdictional externalities. Default by one state can increase credit costs for other similar or neighboring states.⁶⁴ Accordingly, each individual state may take on more debt, and correspondingly more default risk, than would an optimizing social planner. Similarly, states are probably "too big to fail."⁶⁵ The prospect of a state outright defaulting on its debts would be relatively disastrous for residents, neighbors, creditors, and even other counter-parties of the creditors.⁶⁶ Thus, most analysts assume that central governments implicitly guarantee the debts of their local government.⁶⁷ This guarantee leads to moral hazard --- the costs of risky debt are

⁶⁰ Gillette, *supra* note 48, at 959--60; Inman, *supra* note 53, at 84 n.4. We claim that renters do not bear the burden of future debt on the assumption that there is a relationship between property values and rents. Over the long term, when housing costs rise, so do rents. Joshua Gallin, *The Long-Run Relationship Between House Prices and Rents*, 36 REAL ESTATE ECON. 635, 636 (2008). So lower home values should result in lower rents, which means that public debt actually benefits renters.

⁶¹ Gillette, *supra* note 48, at 961; Inman, *supra* note 53, at 84.

⁶² Gillette, *supra* note 48, at 971.

⁶³ Gillette, *supra* note 48, at 971.

⁶⁴ Gillette, *supra* note 48, at 976--77; Ehtisham Ahmad et al., *Subnational Public Financial Management: Institutions and Macroeconomic Considerations*, IMF Working Paper No. 05/108, at 13 (June 2005).

⁶⁵ David E. Wildasin, *Externalities and Bailouts: Hard and Soft Budget Constraints in Intergovernmental Fiscal Relations*, World Bank Research Working Papers No. 1843, at 21 (Aug. 1997), available at <<http://ideas.repec.org/p/wbk/wbrwps/1843.html>>.

⁶⁶ Robert P. Inman, *Transfers and Bailouts: Enforcing Local Fiscal Discipline with Lessons from U.S. Federalism*, in FISCAL DECENTRALIZATION AND THE CHALLENGE OF HARD BUDGET CONSTRAINTS 35, 42--43 (Jonathan Rodden et al. eds., 2003).

⁶⁷ E.g., Wallace E. Oates, *On the Theory and Practice of Fiscal Decentralization*, in INSTITUTIONAL FOUNDATIONS OF PUBLIC FINANCE; ECONOMIC AND LEGAL PERSPECTIVES 165, 176 (Alan J. Auerbach & Daniel Shaviro eds., 2008); Jonathan Rodden, *The Dilemma of Fiscal Federalism: Grants and Fiscal Performance Around the World*, 46 AM. J. POLI. SCI. 670, 671 (2002); Andres Velasco, *Debts and Deficits with Fragmented Fiscal Policymaking*, 76 J. PUB. ECON. 105, 107 (2000). For U.S. bailout examples, see Inman, *supra* note 67, at 59--61.

shifted from the state to the central government, with the result that the state takes on more debt than it would if it bore all the likely costs.⁶⁸

Many commentators also believe that, in addition to these rational reasons for citizens to agree to too much debt, there are also irrational factors that contribute to excess public indebtedness.⁶⁹ Econometric studies so far can neither confirm nor refute the hypothesis that borrowing increases the size of government.⁷⁰ A number of studies have shown, though, that *personal* borrowing patterns are consistent with a story in which individuals incur greater borrowing costs in the present than they would prefer later.⁷¹ Since your authors disagree on the policy implications of putatively irrational behavior,⁷² we will proceed here on the assumption that voters are rational.

Whatever the ultimate behavior of individual voters, there are also reasons to think that public officials might have their own incentives to increase debt above the optimal level. All officials have a limited time horizon in office. If the official wants to win reelection to extend that time, or ring up “rents” from interest groups while she holds power, then the value to her of enacting programs now will be much greater than the cost of paying for those programs after she

⁶⁸ Rodden, *supra* note 67, at 671--72; Velasco, *supra* note 67, at 107; see Ahmad et al., *supra* note 64, at 13.

⁶⁹ BRENNAN & BUCHANAN, *supra* note 47, at 24--32, 40; Susanne Lohmann & Deborah M. Weiss, *Hidden Taxes and Representative Government: The Political Economy of the Ramsey Rule*, 30 PUB. FIN. REV. 579, 579--611 (2002).

⁷⁰ Wallace E. Oates, *On the Nature and Measurement of Fiscal Illusion: A Survey*, in TAXATION AND FISCAL FEDERALISM: ESSAYS IN HONOR OF RUSSELL MATTHEWS 65, 65--66 (1988); Brian E. Dollery & Andrew C. Worthington, *The Empirical Analysis of Fiscal Illusion*, 10 J. ECON. SURVEYS 261, 293--94 (1996).

⁷¹ Paul S. Calem & Loretta J. Mester, *Consumer Behavior and the Stickiness of Credit-Card Interest Rates*, 85 AM. ECON. REV. 1327, 1327 (1995); David Laibson et al., *A Debt Puzzle*, in KNOWLEDGE, INFORMATION, AND EXPECTATIONS IN MODERN MACROECONOMICS: IN HONOR OF EDMUND S. PHELPS 228, 228--29 (Phillippe Aghion et al. eds., 2003); Sumit Agarwal et al., *The Age of Reason: Financial Decisions Over the Lifecycle* 38 (Feb. 11, 2008) (unpublished manuscript, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=973790).

⁷² Compare Jonathan Klick & Gregory Mitchell, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, 90 MINN. L. REV. 1620, 1626 (2006), with Brian Galle, *Federal Fairness to State Taxpayers: Irrationality, Unfunded Mandates, and the “SALT” Deduction*, 106 MICH. L. REV. 805, 818--23 (2008).

is out of office.⁷³ Besley and Case, for example, find that officials in their last term of a term-limited office enact fiscal policies that are farther from their constituent preferences than at other times --- suggesting that when officials know they will not serve much longer, they are less attentive to the future costs of their decisions.⁷⁴

While federal officials also face these kinds of pressures, the dynamic is especially acute at the state and local level. In a world where there is less than full Ricardian equivalence, each jurisdiction faces competitive pressure to deliver services now at a better price than its competitors. In another Besley and Case study, for instance, the authors find that voters appear to evaluate their officials' performance in part by comparing their own tax burden to those of similar neighbors.⁷⁵ One way for local officials to compete successfully is to shift the tax cost of providing current services into the future. If Ricardian equivalence does not hold, voters might deem the official who uses debt to finance government to be outperforming the neighboring officials who raise taxes.⁷⁶

It is also possible this strategy would be sensible even in a world with perfect Ricardian equivalence, an outcome we call the "race to leverage". The idea is that, by borrowing heavily in period one, a jurisdiction is able to spend money on amenities to attract mobile business and wealthy migrants. By period two, this influx of capital has caused the economy to grow,

⁷³ Richard Briffault, *Foreword: The Disfavored Constitution: State Fiscal Limits and State Constitutional Law*, 34 RUTGERS L.J. 907, 917 (2003); Clayton Gillette, *Fiscal Federalism and the Use of Municipal Bond Proceeds*, 58 N.Y.U. L. REV. 1030, 1062--63 (1983); Inman, *supra* note 53, at 82.

⁷⁴ Timothy Besley & Anne Case, *Political Institutions and Policy Choices: Evidence from the United States*, 41 J. ECON. LIT. 7, 54--56 (2003); *see also* James M. Poterba, *State Responses to Budget Crises: The Effects of Budgetary Institutions and Politics*, 102 J. POL. ECON. 799, 818 (1994) (finding the proximity to next election affected governor's choice of how to balance budget). Creditors are also a potential source of restraint on borrowing, Gillette, *supra* note 73, at 942, but the goals of creditors rarely match those of constituents, and many creditors have only weak incentives to monitor local governments. *Id.* at 972, 978; *see* International Monetary Fund, *supra* note 14, at 10 (arguing that officials are insensitive to credit market discipline).

⁷⁵ Timothy Besley & Anne Case, *Incumbent Behavior: Vote-Seeking, Tax-Setting, and Yardstick Competition*, 85 AM. ECON. REV. 25, 30 (1995). *But see* Gillette, *supra* note 48, at 958--59 (arguing that government services are too difficult to compare for inter-jurisdictional competition to be meaningful).

⁷⁶ *See* Ahmad et al., *supra* note 64, at 12.

allowing the tax base to expand enough to more than compensate for the added debt burden incurred in period one. By hypothesis, migrants are able to anticipate this growth, and so in period one they are willing to enter and take on the future debt burden, because they know that on net they will actually be getting more for less.⁷⁷

3. Legal Limits on Local Debt

Given the political dynamics we have just described, it is unsurprising that many states have sharply limited their own capacity to take on indebtedness, some with important consequences for state stabilization capability. Nearly all states have a constitutional or statutory requirement for an annual “balanced budget,” although the meaning of that requirement varies widely.⁷⁸ Other jurisdictions require super-majority legislative approval of new debt, impose caps on the total amount of new or total borrowing, or require voter approval of some kinds of debt issues.⁷⁹ Few if any of these limits contain any facial exception for borrowing in times of great need.⁸⁰ Thus, whatever one’s view of the normative desirability of borrowing, it is evident that the threat of excessive indebtedness has given rise to a legal system in which states are apparently constrained in their ability to borrow at any time, including times when it is urgently needed.⁸¹

As a practical matter, however, few of these limits are as constrictive as they appear. State courts routinely allow their governments to sidestep fiscal limits.⁸² For instance, courts have blessed arrangements where a state creates a separate “authority,” nominally independent from the state, which then is able to borrow without limit and use the revenues for state

⁷⁷ Public officials within a jurisdiction may also race one another to borrow for their projects, because future assets are a common pool. See Velasco, *supra* note 67, at 108.

⁷⁸ Knight & Levinson, *supra* note 12, at 169--70 Tbl.1; Briffault, *supra* note 73, at 909.

⁷⁹ Briffault, *supra* note 73, at 915.

⁸⁰ See James M. Poterba, *Budget Institutions and Fiscal Policy in the United States*, 86 AM. ECON. REV. 395, 396 (1996); Levinson, *supra* note 35, at 717.

⁸¹ See Briffault, *supra* note 73, at 917--18, 948.

⁸² Briffault, *supra* note 73, at 909, 918--25.

purposes.⁸³ Similarly, bonds secured by a stream of revenue from a particular project, such as a new toll road, are usually not counted against state borrowing caps.⁸⁴

Nonetheless, empirical evidence suggests that the limits are far from meaningless. In particular, several studies show that states with tighter borrowing limits are less effective at stabilizing their economies.⁸⁵ Further, other evidence shows that the end-around mechanisms states use are, though effective, also expensive, raising the state's cost of borrowing.⁸⁶

Overall, then, borrowing appears to be at best a highly imperfect solution to state fiscal crises. Exit pressures limit state capacity to borrow, and the threat of voter indifference and political opportunism has led to legal mechanisms that choke off borrowing further. While we might hope that judicial interpretations of legal restraints would be less constraining in tough economic times, it is not clear that judges will be skilled at recognizing those times, or articulating principled legal rules for distinguishing “good” borrowing from bad.

C. Rainy Day Funds

Savings serve as a possible crisis-funding alternative to tax increases and borrowing.⁸⁷ States can save simply by carrying a budget surplus from one year to another, or alternatively by dedicating money out of current revenues to a fund for use only in future fiscal emergencies,

⁸³ Briffault, *supra* note 73, at 919--22.

⁸⁴ Briffault, *supra* note 73, at 918--19.

⁸⁵ Bayoumi & Eichengreen, *supra* note 16, at 33, 40--41, 46; James Poterba, *Do Budget Rules Work?*, in *FISCAL POLICY: LESSONS FROM ECONOMIC RESEARCH* 53, 75--77 (Alan Auerbach ed., 1997). *But see* Robert Krol & Shirley Svorny, *Budget Rules and State Business Cycles*, 35 *PUB. FIN. REV.* 530, 541 (2007). Krol and Svorny reach contrary results by relying on a different definition of what constitutes a strict budget constraint. They employ an index devised by GAO lawyers, and eschew the state official self-reporting that was the basis for other studies. *Id.* at 532. They do not verify GAO's work. *Id.* We find state self-reporting far more persuasive, because officials will probably know the reality of their own budget constraints. Research assistants working at GAO may easily have read what appears in a statute like a strict state rule as strict, when in reality it has been judicially undermined or is easily circumvented.

⁸⁶ Briffault, *supra* note 73, at 926; James M. Poterba, *Balanced Budget Rules and Fiscal Policy: Evidence from the States*, 48 *NAT'L TAX J.* 329, 334--35 (1995); *see* Poterba, *supra* note 74, at 804--12.

⁸⁷ Sobel & Holcombe, *supra* note 12, at 28.

sometimes known as “rainy day funds.”⁸⁸ Saving is fiscally equivalent to borrowing, but with the temporal arrow reversed.⁸⁹ In borrowing, the state transfers money from itself during a later good time to a current bad time; savings moves money from the present good time to the time of some future crisis.

Despite their similarities to borrowing, rainy day funds escape many of the problems that plague local debt. Rainy day funds should, if anything, attract migrants and investment, rather than driving them out, because they imply that future tax burdens will be lower than other equivalent jurisdictions with no savings. Similarly, a large fund ought to increase home values. Although we have not seen any scholarly analysis of the signaling effect of rainy day funds, in theory they should function as precisely the opposite of exit: they send a signal of fiscal health to inside and outside monitors of the jurisdiction’s officials. Thus, they can serve elected officials in much the way payment of dividends serves firm managers, as a costly (and therefore credible) signal of good individual performance.⁹⁰

Thus, it is unsurprising that other commentators overwhelmingly endorse rainy day funds as the best solution to state fiscal crises.⁹¹ Empirical evidence supports this consensus, with several studies finding that state obligations to contribute money to dedicated funds protect states against later fiscal shocks.⁹² Simple budget surpluses and rainy day funds with no obligation to contribute are considerably less effective.⁹³

⁸⁸ Sobel & Holcombe, *supra* note 12, at 29.

⁸⁹ See Hou, *supra* note 1, at 123.

⁹⁰ See Merton Miller & Kevin Rock, *Dividends Policy Under Asymmetric Information*, 40 J. FIN. 1031, 1031--51 (1985); Michal Barzua, *Lemon Signaling in Cross-Listing 5--6* (unpublished manuscript, Oct. 1, 2007), available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1022282>. The reason that the rainy-day fund is a costly signal is because the current official is giving up use of the money for her own preferred projects.

⁹¹ Sobel & Holcombe, *supra* note 12, at 28, 30; Super, *supra* note 1, at 2643.

⁹² Hou, *supra* note 1, at 130; Levinson, *supra* note 35, at 726--27; Sobel & Holcombe, *supra* note 12, at 37.

⁹³ Hou, *supra* note 1, at 130--31; Sobel & Holcombe, *supra* note 12, at 37--38.

Unfortunately, many of the dynamics that threaten to cause runaway borrowing also tend to undermine the usefulness of rainy day funds. Data show that few states save nearly enough money to protect themselves against later downturns.⁹⁴ The reasons are much the same as those we have already sketched. All of the relevant actors, from individual voters to elected officials, have strong incentives to prefer current over deferred spending. Any coalition that is currently in power in a politically competitive state will be reluctant to transfer resources from itself to a subsequent, and potentially competing, coalition.⁹⁵ And economic stability is a public good, so that we can predict that there rarely will be a coherent political constituency in favor of stability for its own sake.⁹⁶

Although we have predicted that establishing rainy day funds could be a positive signal for public officials, that tactic is probably dominated by tax cuts. Just as with establishing a fund, enacting a tax cut is a costly signal of success for the official. She gives up resources that were under her own control, with the possible implication being that her management has been so efficient that additional funds are unneeded. Alternately, the act of giving up control over the funds could imply that the official is not self-serving but instead is looking out for the interests of constituents. Unlike a rainy day fund, however, the tax cut returns money to the immediate use of the voter. A rainy day fund is indistinguishable from a tax cut under perfect Ricardian equivalence, but as we have discussed that is rarely observed in practice. Thus, the political rewards to the politician will almost always be greater for enacting a tax cut than for establishing a rainy day fund.

⁹⁴ Sobel & Holcombe, *supra* note 12, at 33; Super, *supra* note 1, at 2611.

⁹⁵ Lars P. Feld & Gebhard Kirschgässner, *Does Direct Democracy Reduce Public Debt? Evidence from Swiss Municipalities*, 109 PUB. CHOICE 347, 350 (2001); Super, *supra* note 1, at 2611.

⁹⁶ *Cf.* Gillette, *supra* note 48, at 955 (making this point about misuse of public funds).

Accordingly, there are no effective mechanisms that would allow states to provide efficient levels of social insurance. Taxes and borrowing are constrained by exit and normatively undesirable in any event. And absent some set of outside incentives, rainy day funds will likely be rarity at the state level.

IV. Federal Interventions

So far we have shown that income smoothing is an important function of government, but that state governments cannot likely provide it efficiently. That suggests an important role for the federal government in social insurance. However, as we argue in this Part, many problems also bedevil any federal efforts at income smoothing. Direct federal provision of social insurance is contrary to many of the tenets of federalism, and would create moral hazard on the part of state policy makers. And matching grants or other fiscal transfers to states run the risk of being either too generous, and so distorting state decisions, or too slow and bureaucratic to respond to a rapidly-changing economy.

A. Federalize Social Insurance

If states cannot effectively smooth incomes, the federal government might.⁹⁷ There is already an extensive and generally inconclusive literature on the role of the federal government in redistributing wealth.⁹⁸ While centralized redistribution mitigates some problems, it also may sacrifice other federalism values.⁹⁹ For example, one set of federal policy makers cannot easily capture all social preferences for redistribution; redistribution at the local level allows individuals

⁹⁷ See Super, *supra* note 1, at 2636, 2648--49 (suggesting larger federal role in social insurance).

⁹⁸ For an overview, see George R. Zodrow, *Reflections on the Economic Theory of Local Tax Incentives*, 28 ST. TAX NOTES 891, 893--94 (2003).

⁹⁹ Wallace E. Oates, *Fiscal Competition and European Union: Contrasting Perspectives*, 31 REGIONAL SCI. & URB. ECON. 133, 133--43 (2001); John Douglas Wilson & David E. Wildasin, *Capital Tax Competition: Bane or Boon?*, 88 J. PUB. ECON. 1065, 1088 (2004); George R. Zodrow, *Tax Competition and Tax Coordination in the European Union*, 10 INT'L TAX & PUB. FIN. 651, 651--66 (2003).

to sort themselves according to their preferences.¹⁰⁰ Recasting this familiar debate in the context of social insurance leads us to two additional arguments.

First, an underappreciated problem with federal provision of social insurance is that it induces moral hazard at the state policy-making level.¹⁰¹ Where insurance is provided federally, states would be able to externalize most of the downside risk of their regulation.¹⁰² Anytime a decision seriously impacted the state's economy, the state would receive money from the common pool of federal funds. Since the state receives all of the benefit but pays little of the cost of establishing the common pool, it actually has incentives to draw down the pool before others can do the same, leading it to take ever riskier policies.¹⁰³ The interconnectedness of state economies would make this increased recklessness a particular hazard for the national economy.¹⁰⁴

¹⁰⁰ MUSGRAVE & MUSGRAVE, *supra* note , at 451; Mariano Tommasi & Frederico Weinschelbaum, *Centralization vs. Decentralization: A Principal-Agent Analysis*, 9 J. PUB. ECON. THEORY 369, 378, 380 (2007). We think this story is more persuasive as to social insurance than for redistribution generally. There is little direct evidence individuals choose where to live based on their preference for redistribution. However, risk preferences, and hence preferences for insurance, are correlated strongly with wealth. Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569, 603–04 (1984). There is strong evidence that individuals are geographically segregated by wealth. CHARLES M. HAAR, *SUBURBS UNDER SIEGE: RACE, SPACE AND AUDACIOUS JUDGES* 5 (1996); U.S. CENSUS BUREAU, *RACIAL AND ETHNIC RESIDENTIAL SEGREGATION IN THE UNITED STATES: 1980–2000*, at 59 (2002).

¹⁰¹ Torsten Persson & Guido Tabellini, *Federal Fiscal Constitutions: Risk Sharing and Moral Hazard*, 64 *ECONOMETRICA* 623, 629--35 (1996); *cf.* Pablo Sanguinetti & Mariano Tommasi, *Intergovernmental Transfers and Fiscal Behavior: Insurance Versus Aggregate Discipline*, 62 J. INT'L ECON. 149, 153 (2004) (noting that federal guarantees induce fiscal recklessness by local governments)). We note that the possibility of moral hazard assumes asymmetric information between the central and regional governments: that is, if the federal government had perfect information about local finances and policies, it could set a subsidy rule that would eliminate opportunities for self-serving behavior by local officials. But, of course, that is essentially impossible. Ben Lockwood, *Inter-regional Insurance*, 72 J. PUB. ECON. 1, 2 (1999).

¹⁰² See Oates, *supra* note 67, at 176--77; Rodden, *supra* note 67, at 672.

¹⁰³ Sanguinetti & Tommasi, *supra* note 101, at 150--51. As Persson and Tabellini note, this incentive can be mitigated by offering additional subsidies to local governments to invest in risk-reducing activity, but this requires that the federal government be able to verify that these risk-reducing grants are used as intended. Persson & Tabellini, *supra* note 101, at 642--43. This seems a bleak possibility to us, because the difficulty of verifying local conditions is exactly what leads to moral hazard in the first place. See Timothy J. Goodspeed & Andrew Haughwout, *On the Optimal Design of Disaster Insurance in a Federation*, CESifo Working Paper No. 1888, at 14--19, available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=959998> (Jan. 2007) (arguing that federal government cannot observe state precautionary efforts closely enough to set correct subsidy amount, and cannot commit politically to withholding aid from areas that fail to invest in disaster prevention).

¹⁰⁴ Oates, *supra* note 67, at 176--77.

Some macroeconomists also argue that Ricardian equivalence would undercut federal stabilization efforts.¹⁰⁵ Again, Ricardian equivalence describes the situation where taxpayers treat the discounted present value of debt service payments as indistinguishable from a current tax. Under full equivalence, federal stimulus financed by debt might be largely ineffective, because taxpayers respond by reducing their spending to account for the need to pay off the debt.¹⁰⁶ This lower consumer demand offsets the expansionary effects of the increased government demand.¹⁰⁷

On balance federalizing social insurance is therefore unappealing. The tradeoffs between centralized and decentralized redistribution are theoretically uncertain. But social insurance has some additional, clear-cut problems when offered at the national level.

B. Subsidies and Tax Exporting

Although there are hybrid regimes short of full federalization that solve some of the problems we have just surveyed, these regimes also create new problems. In the first, well-known, hybrid, the federal government would provide only partial financing for state budgets, as through a matching grant program.¹⁰⁸ A second hybrid not previously recognized in the literature for its stabilization potential is tax exporting.

At first glance matching or other partial federal-financing programs seem promising. Under a matching system, states bear some of the costs of risky policy, reducing moral hazard.¹⁰⁹

¹⁰⁵ Bayoumi & Masson, *supra* note 53, at 1027; *see* ROMER, *supra* note 9, at 537 (noting this effect for government generally).

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ For an introduction to federal grant programs, see THOMAS R. DYE, AMERICAN FEDERALISM: COMPETITION AMONG GOVERNMENTS 99--115 (1990).

¹⁰⁹ See Lockwood, *supra* note 101, at 14 (finding that optimal stabilization grant under asymmetric information provides only partial insurance); *cf.* WILLARD G. MANNING & M. SUSAN MARQUIS, RAND CORPORATION, HEALTH INSURANCE: THE TRADEOFF BETWEEN RISK POOLING AND MORAL HAZARD 31 (1989) (arguing that partial personal liability of insured will counterbalance moral hazard of health insurance policies); Mark S. Feldstein, *The Welfare Loss of Excess Health Insurance*, 81 J. POL. ECON. 251 (1973) (same).

Co-financing may also reduce Ricardian equivalence. In a downturn with regional variation, federal borrowing on behalf of affected states in effect allows the harder-hit regions to shift some of the cost of repayment to others.¹¹⁰ Thus, taxpayers in these worst-off areas experience higher government demand without an accompanying drop in consumer demand.¹¹¹ Matching grants also offer the possibility of traditional federalism benefits, such as superior information on the part of local officials.¹¹²

States may also have a self-help route to the same result. In this second hybrid, hard-hit states simply export their tax burden to other states.¹¹³ For example, a state that primarily imports its retail goods might raise its sales tax. Assuming at least a portion of the tax is borne by the shareholders and employees of integrated retail firms with outside owners, the sales tax will allow the state to raise revenue without reducing the buying power of its citizens to the extent an income tax might.¹¹⁴ More straightforwardly, a state like Delaware can hike its tolls. As a result, exporting allows a state to diversify its revenues against negative shocks to its own economy. The tax-exporting phenomenon is very familiar in the literature, but we believe we are the first to observe that it represents a partial solution to the Ricardian equivalence problem.

We are not patting ourselves on the backs too heartily, though, because tax exporting is probably a poor stabilization tool. The stabilization effects of tax exporting will be fairly haphazard, with costs flowing randomly to states with economic ties to the exporter.¹¹⁵ And

¹¹⁰ Bayoumi & Masson, *supra* note 53, at 1027.

¹¹¹ *Id.* at 1030.

¹¹² See Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267, 313 (1998).

¹¹³ Robert Tannenwald, *Fiscal Disparity Among the States Revisited*, NEW ENG. ECON. REV., Jul-Aug. 1999, at 3, 4.

¹¹⁴ Stephen H. Pollock, *Mechanisms for Exporting the State Sales Tax Burden in the Absence of Federal Deductibility*, 44 NAT'L TAX J. 297, 299 (1991). For consideration whether the economic incidence of taxes can actually be shifted across borders, see Charles E. McClure, Jr., *Tax Exporting and the Commerce Clause*, in FISCAL FEDERALISM AND THE TAXATION OF NATURAL RESOURCES 169, 171--83 (Charles E. McClure, Jr. & Peter Mieszkowski eds., 1983).

¹¹⁵ *Cf.* Levinson, *supra* note 35, at 724 (describing unintentional cross-border effects of fiscal stimulus efforts).

exporting states have no incentive to protect their trading partners from the negative effects of the exported tax.¹¹⁶ Thus, it is likely that in some instances exporting may result in transfers in the wrong direction --- moving money from the hardest-hit states to one that is not suffering as badly from a downturn.

Ultimately, however, neither approach is likely to be successful because both strategies threaten to distort state policy. It is a familiar point that both federal subsidies and tax exporting give rise to fiscal externalities.¹¹⁷ Since the taxing jurisdiction does not bear the full cost of its policies, it does not take into account the full extent of its costs to others, including potential cyclical effects.¹¹⁸ For instance, a state may be relatively indifferent to the possibility that the cost of bailing it out of a regional crisis could increase the federal government's own costs of borrowing, or even the chances of a national downturn, as its citizens would bear only a small fraction of the costs of either outcome.¹¹⁹ More generally, economists argue that federal supports raise state expenditures above the level their citizens would have chosen in an undistorted political market,¹²⁰ although one of us has argued in turn that theory is ambiguous about whether this upward distortion will be outweighed by downward pressure from tax competition.¹²¹

Subsidies also are wasteful if they cannot be turned off. Matching grants reduce federal funds available for other projects. State officials have little incentive to turn down matching

¹¹⁶ See Daniel Shaviro, *An Economic and Political Look at Federalism in Taxation*, 90 MICH. L. REV. 895, 957--58 (1992).

¹¹⁷ Oates, *supra* note 67, at 175; Thomas Aronsson & Magnus Wikstrom, *Optimal Taxation and Risk-Sharing Arrangements in an Economic Federation*, 55 OXFORD ECON. PAPERS 104, 105 (2003); Gillette, *supra* note 73, at 1055--56, 1059; Michael Smart, *Taxation and Deadweight Loss in a System of Intergovernmental Transfers*, 31 CAN. J. ECON. 189, 206 (1998).

¹¹⁸ Ahmad et al., *supra* note 64, at 12.

¹¹⁹ Sanguinetti & Tommasi, *supra* note 101, at 167.

¹²⁰ 2 DEP'T OF TREASURY, TAX REFORM FOR FAIRNESS, SIMPLICITY, AND ECONOMIC GROWTH 63--64 (1984); Gillette, *supra* note 73, at 1055--56, 1059; Edward M. Gramlich, *Federalism and Federal Deficit Reduction*, 40 NAT'L TAX J. 299, 305 (1987).

¹²¹ Brian Galle, *Federal Grants, State Decisions*, 88 BOSTON UNIV. L. REV. 875, 931--34 (2008).

funds in order to make them available for a more efficient project elsewhere.¹²² Additionally, since matching grants by definition require state expenditures, fiscally strapped states may actually draw less funds.¹²³ As a result of these factors, partial financing can actually transfer money from states where the economy is struggling to those where it is succeeding.

Finally, outside subsidies may have undesirable stabilization effects when states' economies are expanding.¹²⁴ Stabilization policy aims not only to soften the impact of recessions but also to maintain growth at sustainable levels without excess inflation.¹²⁵ Thus, subsidies for state spending might lead to some inflationary pressure in boom times.

Making federal fiscal supports temporary or discretionary solves some of these problems, but, maddeningly, creates yet others. Macroeconomists argue that the delays and political costs that attend enacting discretionary programs greatly reduce the effectiveness of any resulting expenditure.¹²⁶ Perhaps the most important aspect of counter-cyclical spending is its timing, and discretionary programs mean that the timing of funds will depend on politics, not economic necessity.¹²⁷ Thus, experts claim that "automatic" stabilizers are much preferable to grant programs.¹²⁸ For example, Christina Romer found historical evidence that automatic stabilizers were considerably more effective than discretionary policies.¹²⁹ Consider the 2009 \$787 billion stimulus package. The stimulus required time and vast political capital to enact, with the result

¹²² See Weingast et al., *supra* note 46, at 656.

¹²³ Hou, *supra* note 1, at 123; Super, *supra* note 1, at 2587--88. This problem can't be circumvented by using block grants. Block grants reduce the need for state contributions, but that means there will also be moral hazard. Super, *supra* note 1, at 2589--90.

¹²⁴ Super, *supra* note 1, at 2610.

¹²⁵ ROMER, *supra* note 9, at 594--97.

¹²⁶ Strnad, *supra* note 4, at 179--80; John Taylor, "The Lack of An Empirical Rationale for the Revival of Discretionary Fiscal Policy," at 8-10 (2009), available at <http://www.aeaweb.org/annual_mtg_papers/2009/retrieve.php?pdfid=387>; Vigneault, *supra* note 7, at 14; Wildasin, *supra* note 12, at 9.

¹²⁷ Strnad, *supra* note 4, at 180; Super, *supra* note 1, at 2608; Vigneault, *supra* note 7, at 14.

¹²⁸ Strnad, *supra* note 4, at 180.

¹²⁹ Romer, *supra* note 19, at 37.

that it was enacted together with many different flavors of pork.¹³⁰ We enjoy barbecue as much -- nay, more --- than the next professor, but automatic stabilizers are faster and more efficient.

It might be argued that social insurance subsidy criteria could be written ex ante to kick in only in subsequent crises, eliminating the need for later legislative action. But to avoid the problems of continuing subsidies, the legislature would have to write binding criteria to distinguish stimulus from other spending, presumably to be administered by court, agency, or both. Thus, grant funds will not flow in a recession until the administrator signs off, greatly slowing the expenditure of funds and offering opportunities for political rents for the administrator.¹³¹ Alternately, if the criteria are easy to meet, then the moral hazard problem returns.

What is needed, then, is federal fiscal support for states that turns off automatically in good times, but stays on in downturns when the need for stimulus may outweigh the costs of policy distortions. Is it possible to design a state fiscal support that only operates when states need the money, keeping in mind that complex formulae that must be ruled on by bureaucrats are emphatically *not* automatic? It is indeed, as we shall now explain.

V. The Alternative Minimum Tax as Automatic Stabilizer

In the last two Parts we showed that in the absence of outside support state budgets are likely to reinforce downturns in the business cycle. However, we also argued that continued

¹³⁰ See David Leonhardt, *A Stimulus With Merit, And Misses*, N.Y. TIMES, Jan. 28, 2009, at B1. For discussion of the political economy factors leading to pork in omnibus spending bills, see Weingast et al., *supra* note 46, at 644--51.

¹³¹ Wibbels and Rodden find some data to suggest that central government officials may also deliberately reduce their support for states during downturns in order to avoid bearing the political cost of revenue shortfalls. Wibbels & Rodden, *supra* note 1, at 10; cf. Jonathan R. Macey, *Federal Deference to Local Regulators and the Economic Theory of Regulation: Toward a Public-Choice Explanation of Federalism*, 76 VA. L. REV. 265, 284--90 (1990) (suggesting that federal government delegates power to lower tiers in order to avoid costly political decisions).

Some commentators have suggested that grant programs based on formulae, such as a state's unemployment rate, can function as automatic stabilizers. Super, *supra* note 1, at 2650--51. We favor more traditional stabilizers, on the view that in practice these automatic formulae are also subject to lobbying, interpretation, and inexact targeting. See International Monetary Fund, *supra* note 14, at 11 (noting that formulae may encourage gaming and manipulation of measurement criteria). However, we do not mean to suggest that the two are mutually incompatible.

federal subsidies risked distorting state political decisions, as well as exaggerating the growth side of the cycle. Ideally, then, we would have a subsidy design in which funds are curtailed automatically when recessions end. Given the political economy and other practical problems limiting the ability of state and local politicians to commit to countercyclical taxation and spending policies, an automatic stabilizer that is largely outside of the control of state and local politicians or their constituents would be very attractive. These mechanisms would generate counter-cyclical effects without any proactive decisions being made on the part of political actors.¹³²

Surprisingly, the federal Alternative Minimum Tax (“AMT”) already performs this function, although it has not yet been perfectly attuned for use as an automatic stabilizer. In one respect it should not be totally surprising that the AMT is a major stabilization player. Economists have recognized that the federal income tax is a form of automatic stabilizer at the national level, because its progressive structure results in tax rate reductions as income declines.¹³³ In his important recent draft, Yair Listokin predicts that many so-called “tax expenditures” reduce the efficacy of this stabilization effect.¹³⁴ Tax expenditures allow the taxpayer to reduce her income when she engages in certain expenditures, such as purchasing a home. Because the net value of these expenditures falls when the taxpayer’s income and marginal rate decline, tax expenditures have the procyclical effect of reducing demand when incomes fall, and vice-versa. Finally, Listokin notes that “phaseouts,” such as the AMT, may

¹³² Alan J. Auerbach & Daniel Feenberg, *The Significance of Federal Taxes as Automatic Stabilizers*, 14 J. ECON. PERSP., Summer 2000, at 37.

¹³³ *Id.*; Strnad, *supra* note 4, at 180.

¹³⁴ Listokin, *supra* note 4, at 10--22.

mitigate this procyclical effect by turning off the tax expenditure's incentive power when income rises above a certain level.¹³⁵

This analysis can be extended to encompass the effects of federal tax provisions on state budgets. We will argue in this Part that federal tax rules have substantial positive impact not only on state economies but also on each state's ability to raise revenue. As we will explain, the AMT acts to "turn off" the effect of these tax rules as taxpayer income rises. In effect, then, federal tax law provides states with a subsidy, but the AMT causes that subsidy to diminish when state economies are performing well. We will first explain the basic tax rules that provide for this result, and then offer empirical evidence that our theory is correct.

A. Tax Mechanics of the AMT

First, what is the AMT? It is "alternative" only in the sense that sinking is the alternative to floating; taxpayers are dragged into its reaches, rather than opting in. In essence, the AMT is a parallel tax code. Taxpayers must compute their liability under both the AMT and the rest of the Tax Code and pay whichever sum is higher.¹³⁶ In general, the AMT has a broader base but slightly less progressive rates.¹³⁷ By broader base we mean that many items that reduce tax under the standard income tax do not affect AMT liability --- the AMT disallows a number of the standard tax system's deductions and credits.

1. General Features of AMT

While marginal rates vary under the standard system from ten to thirty-five percent, the AMT has two rates, twenty-six and twenty-eight percent.¹³⁸ Both systems also phase out certain

¹³⁵ *Id.* at 18--20.

¹³⁶ JOINT COMMITTEE, *supra* note 5, at 2.

¹³⁷ JOINT COMMITTEE, *supra* note 5, at 19.

¹³⁸ JOINT COMMITTEE, *supra* note 5, at 2.

exclusions so that at very high incomes effective rates may be higher.¹³⁹ Under the standard income tax, individual taxpayers pay no tax until they earn about \$10,000, because of the combination of the personal exemption and standard deduction.¹⁴⁰ Under the AMT, there is no standard deduction, but the personal exemption is very large, so that an individual paid no tax (in 2009) until she earned about \$46,700.¹⁴¹ This exclusion amount is not indexed for inflation, which is why more and more people have become subject to AMT liability over the years.¹⁴² The exclusion amount for married couples filing jointly is less than double the individual exclusion, so families are more likely to pay AMT.¹⁴³

Typically, taxpayers become subject to AMT because their taxable income under the standard income tax was reduced by deductions that are not available under the AMT.¹⁴⁴ For instance, suppose a single taxpayer Galle with gross income \$100,000. Galle first computes his liability under the standard income tax. If he does not “itemize,” and simply claims the standard deduction, he reduces his income by \$8,950 for the personal exemption and standard deduction, leaving \$91,050. Different portions of this money are taxed at different rates, because of the Tax Code’s progressive rate structure. Ultimately, Galle will owe about \$19,479 in tax, an average rate of roughly 21%. He now checks his AMT liability. Under the AMT, he would have taxable income of only \$53,300 after the personal exemption. Twenty-six percent of \$53,300 is only \$13,858. This is, of course, smaller than his standard income tax liability, so he owes no AMT.

Consider now Klick, who instead of taking the standard deduction and personal exemption, claims exemption for numerous children and itemizes his deductions, reducing his

¹³⁹ JOINT COMMITTEE, *supra* note 5, at 21.

¹⁴⁰ T.C. § 63(c)(2), 151 (2009).

¹⁴¹ Tax Policy Center, *AMT Parameters 1993-2009*, <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=539>.

¹⁴² JOINT COMMITTEE, *supra* note 5, at 7.

¹⁴³ Tax Policy Center, *supra* note 141.

¹⁴⁴ See JOINT COMMITTEE, *supra* note 5, at 7.

\$100,000 gross income to \$51,000 taxable income.¹⁴⁵ Klick's tax liability under the standard system is about \$9,088. The AMT does not permit exemption for additional dependents; suppose Klick's itemized deductions, too, are not permitted under the AMT. In that case, his AMT liability is \$13,858. Since that is the higher amount, he pays it. Thus, we would say that Klick is "subject" to the AMT; the AMT increases his tax by about \$4,000.

Because of the large exclusion amount, the likelihood of being subject to AMT liability likely increases with income, at least at low and moderate income levels.¹⁴⁶ That is, no matter how many child exemptions he claimed, if Klick's gross income were less than \$46,700, AMT could not have affected him, because AMT liability for everyone earning less than \$46,700 is zero. And AMT liability for those earning \$46,701 is only twenty-six cents. So the likelihood of becoming "subject" to the AMT is the result of a combination of increasing income and increasing use of deductions and exemptions prohibited by AMT. This connection between AMT and income turns out to be crucial to our argument, as we develop more fully in Part V.A.2.

Another implication of this structure is that the AMT makes useless a number of deductions and exclusions available under the Code. Suppose that one of Klick's itemized deductions were accelerated depreciation on business equipment, which he purchased precisely because he believed it would reduce his taxable income. However, because of AMT, Klick paid more in tax than he expected. In our example, AMT liability was only higher by \$4,000, so Klick lost about \$4,000 worth of the value of his depreciation deduction. In other cases AMT may be much higher than standard income tax liability, so that effectively the taxpayer receives

¹⁴⁵ Our example assumes (counterfactually) that Klick is unmarried.

¹⁴⁶ JOINT COMMITTEE, *supra* note 5, at 20.

none of the economic benefit of her deductions. We refer to that scenario as one in which the AMT “turns off” the deductions whose benefits were lost.

Not all the deductions available under the standard income tax are unavailable under the AMT. Many important adjustments, such as the costs of operating a for-profit business, interest expenses related to a purchase-money mortgage on a primary residence, and the exclusion for insurance premiums paid by an employer all reduce both AMT income as well as standard taxable income.¹⁴⁷ Several other major adjustments to income are unavailable under the AMT, as we now elaborate.

2. State and Local Taxes

For many years by far the most important item disallowed by the AMT was the deduction for taxes paid to state and local governments (“SALT”), section 164 of the Tax Code.¹⁴⁸ The SALT deduction has become somewhat less dominant as incomes have crept up above the AMT’s personal exemption amount, owing to the fact that large state tax bills are usually the product of large incomes.¹⁴⁹ Still, disallowance of the SALT deduction continues to account for just under half of all the AMT’s revenues.¹⁵⁰

The AMT’s effects on the SALT deduction account for much of the AMT’s power as an automatic state-revenue stabilizer. The SALT deduction acts like a federal matching grant for certain state tax revenues.¹⁵¹ For every dollar a taxpayer pays her state and local governments in

¹⁴⁷ T.C. §§ 56 (limiting certain other tax preferences under AMT); 162(a) (trade or business expenses); 163(h) (home mortgage interest); 106(a) (employer-provided health insurance premiums).

¹⁴⁸ Greg Leiserson & Jeffrey Rohaly, Urban/Brookings Tax Policy Center, *The Individual Alternative Minimum Tax: Historical Data and Projections* 6 (June 2008), available at <http://www.urban.org/UploadedPDF/411703_individual_amt.pdf>.

¹⁴⁹ JOINT COMMITTEE, *supra* note 5, at 17. That is, because the AMT now affects households with lower incomes than it once did, deductions and exemptions that are more common in low-income households have gained in significance.

¹⁵⁰ See JOINT COMMITTEE, *supra* note 5, at 18 Tbl.3.

¹⁵¹ See Charles E. McClure, Jr. & George R. Zodrow, *Treasury I and the Tax Reform Act of 1986: The Economics and Politics of Tax Reform*, 1 ECON. PERSP. 37, 55 (1987).

income and property taxes, she reduces her federal tax bill by one dollar times her marginal federal rate.¹⁵² So, for a taxpayer in the top federal bracket, each dollar of state income tax reduces federal tax by \$0.35. Taxpayers in states without an income tax may also elect to deduct their total annual sales and use taxes paid.¹⁵³

Thus, the SALT deduction functions as a subsidy for state and local governments.¹⁵⁴ First, it induces a substitution effect in favor of state and local taxation.¹⁵⁵ A local taxpayer facing the choice between savings, private consumption, and consumption of government services (i.e., higher taxes) should prefer government services because a dollar's worth of government services costs her only \$.65, while a dollar's worth of savings or private consumption costs \$1. The deduction also likely increases demand for local government through an income effect. Assuming local government services are a so-called "normal" good, in which demand rises as income rises, the taxpayer's higher after-federal-tax wealth should produce a greater demand for local government services. And, consistent with these theories, empirical studies have documented that deductibility has an upward influence on deductible state and local tax levels, although there is some question whether overall rates increase, or instead if taxes are simply shifted from deductible to non-deductible forms.¹⁵⁶

¹⁵² Kirk J. Stark, *Fiscal Federalism and Tax Progressivity: Should the Federal Income Tax Encourage State Redistribution?*, 51 UCLA L. REV. 1389, 1414 (2004).

¹⁵³ T.C. § 164(b)(5). A use tax is a mirror-image of the sales tax, but is imposed on the out-of-state purchase of goods. Walter Hellerstein, *Jurisdiction to Tax Income and Consumption in the New Economy*, 38 GA. L. REV. 1, 19-21 (2003). For an interesting analysis of the complex interaction between the sales tax election and other choices, see Herwig Schlunk, *Why Every State Should Have an Income Tax (and Retail Sales Tax, Too)*, 78 MISS. L.J. 637, 677-81 (2009).

¹⁵⁴ In making this claim, we do not intend also to take a position on whether the SALT deduction can be justified as a matter of the normative definition of the ideal tax base. For further discussion of that issue, see Brian Galle, *Federal Fairness to State Taxpayers: Irrationality, Unfunded Mandates, and the "SALT" Deduction*, 106 MICH. L. REV. 805 (2008).

¹⁵⁵ Lawrence B. Lindsey, *Federal Deductibility of State and Local Taxes: A Test of Public Choice by Representative Government*, in FISCAL FEDERALISM: QUANTITATIVE STUDIES 137, 169 (Harvey Rosen ed., 1988).

¹⁵⁶ Studies finding higher revenues from deductible categories include Douglas Holtz-Eakin & Harvey Rosen, *Federal Deductibility and Local Property Tax Rates*, 27 J. URB. ECON. 269, 271 (1990), Edward Gramlich, *The Deductibility of State and Local Taxes*, 38 NAT'L TAX J. 447 (1985), and those surveyed in Bruce Bartlett, *The Case*

The AMT modifies the SALT subsidy by reducing the size of the grant for economically thriving jurisdictions. As incomes in a state rise, more and more of the state's taxpayers will exceed the AMT's personal exemption threshold, so that the AMT will "turn off" some or all of their SALT deduction. Conversely, as incomes fall, the AMT's effects will diminish, turning the SALT subsidy back on. We examine empirically whether the AMT in fact is related to income in Part V.B.

This variable, countercyclical subsidy has at least two distinct stabilization effects for states. First, it mitigates most of the constraints states normally face in maintaining or increasing tax rates during downturns. Recall that descriptively, states cannot raise rates because of tax competition with other states. The deduction, when it is effective, mitigates this exit pressure (or the credible threat of it) by diminishing the after-tax cost of any given state's own states. On the normative side, states should attempt to smooth rates over time.¹⁵⁷ The AMT/SALT

for Eliminating Deductibility of State and Local Taxes, 28 TAX NOTES 1121, 1122--23 (1985). Those pressing the tax-base-shifting argument, albeit without any empirical evidence, include George R. Zodrow, *Eliminating State and Local Tax Deductibility: A General Equilibrium Model of Revenue Effects*, in FISCAL FEDERALISM: QUANTITATIVE STUDIES 177 (Harvey S. Rosen ed., 1988); Martin S. Feldstein & Gilbert E. Metcalf, *The Effect of Federal Tax Deductibility on State and Local Taxes and Spending*, 95 J. POL. ECON. 710 (1987). The AMT was not empirically significant during this period. See Leiserson & Rohaly, *supra* note 148, at 9 Tbl.2 (showing that total number of taxpayers nationwide subject to AMT was 430,000 in 1985 and 200,00 in 1990, compared to 29 million today).

A subsequent study purported to find evidence that deductibility led states simply to shift tax bases without also increasing overall tax revenues. Paul N. Courant & Edward M. Gramlich, *The Impact of the Tax Reform Act of 1986 on State and Local Behavior*, in DO TAXES MATTER? THE IMPACT OF THE TAX REFORM ACT OF 1986, at 243, 244--63 (Joel Slemrod ed., 1990). Kaplow, reviewing the various data, calls the evidence for the shifting theory "conflicting." Louis Kaplow, *Fiscal Federalism and the Deductibility of State and Local Taxes Under the Federal Income Tax*, 82 VA. L. REV. 413, 487 & n.206 (1996).

The Courant & Gramlich study is unconvincing evidence that deductibility cannot increase revenues because it focused exclusively on sales taxes, which raise special problems. Courant & Gramlich studied the effect of the 1986 repeal of deductibility of sales taxes. Courant & Gramlich, *supra*, at 244. Their result is not generalizable to other forms of tax, because sales taxes present unique opportunities for states to export their tax burden. Gilbert E. Metcalf, *Deductibility and Optimal State and Local Fiscal Policy*, 39 ECON. LETTERS 217, 221 (1992); Pollock, *supra* note 114, at 299. Loss of deductibility might well present a much more serious blow to state revenues for other forms of tax.

As we explain in the Conclusion, our results here tend to support the view that federal deductibility makes a significant difference for state budgets.

¹⁵⁷ See *supra* text accompanying notes xx--xx.

combination allows states to achieve similar effective net-of-federal-tax rates during crises and other times, as we illustrate here with figure one.¹⁵⁸

	Section 164 “Off”	Section 164 “On”
Gross Income	\$900	\$900
State Income Tax Rate	11%	16.5%
State Income Tax Amount	\$100	\$150
Reduction in Federal Tax (assume marginal rate 33%)	\$0	\$ 50
State Tax Net of Fed. Tax	\$100	\$100
Effective State Income Tax Rate	11%	11%

Although the state raises tax rates during a downturn, the AMT turns on section 164, resulting in no net change in effective state income tax rates.

Fig. 1

The second effect of the AMT/SALT combination is to allow a careful state to increase taxes without reducing consumers’ marginal propensity to spend on other consumer goods. Again, countercyclical federal subsidies act as inter-jurisdictional transfers, increasing the wealth of a region affected by a downturn. If the state absorbs no more than this transfer amount in increased taxes, consumer spending will be unaffected. This can be illustrated by Figure two. Alternately, even if the state does not increase its tax revenues or its spending, there will be some stimulative effect from the SALT deduction, because the state’s citizens will be the beneficiaries of transfers from less-affected parts of the country, raising their wealth available for consumption.

	Section 164 “Off”	Section 164 “On”
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¹⁵⁸ The figure simplifies reality somewhat. In actuality, only some taxpayers will benefit from section 164 even in severe downturns, so that effective rates for those earners will increase if the jurisdiction raises rates across the board. Normatively, then, the jurisdiction in crisis should aim to limit tax rate increases for those who remain subject to the AMT, unless those earners exhibit little elasticity in their response to a higher rate. As a practical matter, however, it will likely be difficult to change rates selectively only for those spared the AMT, which is one reason we write that the AMT/SALT pairing only mitigates state tax constraints.

Gross Income	\$900	\$900
State Tax Amount	\$100	\$150
Federal Tax Amount (assume marginal rate 33%)	\$300	\$250 (\$300 - (\$150*.33))
Total Tax Paid	\$400	\$400
Net After-Tax Income	\$500	\$500

Although the state increases its tax revenues during downturn, the AMT turns on section 164, resulting in no net change in the average taxpayer's after-tax income available for consumption.

Fig. 2

Formally, in the case where state and local tax costs are deductible from the federal income tax, a representative voter's demand curve for the social insurance program (i) is given by $Q_i = f(t_i(1 - \alpha t_f), I, p_x)$ where t_i represents the per capita tax cost of each unit of the program, t_f represents the average federal tax rate faced by the individual and α represents the fraction of state and local tax expenditures that is deductible on the federal tax return, I is the individual's income, and p_x is the price of a composite private consumption good. In this case, the federal government absorbs some of the individual's tax cost for the social insurance program. By the law of demand, because α lies in the unit interval, as the fraction of deductibility increases, the individual demands more of the social insurance program.

To see how the AMT works as an automatic stabilizer in this framework, note that because social insurance programs are normal goods, when the individual's income I increases, so does his demand for the program. However, given that the application of the AMT is positively related to income, α will decline with income until it reaches zero in the limit. These two effects of changing income will have opposite effects on the quantity of the social insurance program demanded. Thus, in times of economic growth, while the person's income effect will induce him to demand more of the program, the price effect will induce him to demand less, as the AMT phases out the federal subsidy. In times of recession, as incomes drop, the income

effect will induce a lower demand, while the price effect will induce a higher demand because the AMT phaseout revives the federal subsidy. Thus, as a theoretical matter the AMT is countercyclical, dampening demand swings caused by changes in income.

In sum, the AMT modifies the SALT deduction so that it better matches the ideal federal fiscal subsidy. The AMT concentrates federal subsidies in states where income is falling, diminishing any distortive or inflationary effects of the subsidy at other times. We will examine empirical evidence for this proposition in Parts V.B. and VI.

3. Other provisions

In addition to the SALT deduction, the AMT also turns off a number of other adjustments available under the standard income tax. Few of these other provisions have any empirical significance.¹⁵⁹ We therefore focus here on the two we view as most important of this motley remainder. The first, the exemption for additional dependents, is a large component of the AMT but has little direct effect on state finances.¹⁶⁰ The second, the deductibility of home equity interest, involves a small number of AMT taxpayers but has a more direct connection to states' fiscal health.¹⁶¹

Just under half of all taxpayers who pay AMT do so because it disallows their dependent exemptions.¹⁶² Under the standard income tax, parents of dependent children and caretakers for adults with disabilities can reduce their taxable income by roughly \$3,500 per dependent.¹⁶³ This

¹⁵⁹ Tax Policy Center, Urban Institute & Brookings Institution, *AMT Preference Items 2002, 2004-2006*, <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=468>. For a complete listing and explanation of each provision, see JOINT COMMITTEE, *supra* note 5, at 2--4.

¹⁶⁰ See JOINT COMMITTEE, *supra* note 5, at 18 Tbl.3.

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ T.C. § 151(d)(1), (4) (setting amount at \$2,000 in 1989 dollars, adjusted for inflation).

adjustment is not available under the AMT, with the result that families with many children and income above the AMT personal exemption amount are likely to face AMT liability.¹⁶⁴

The dependent exemption's impact on state business cycles is fairly muted. As with the SALT deduction, the AMT will tend to channel more federal money to a region through the exemption when average earnings fall. This increased wealth will strengthen consumption and, if government services are normal goods, there would be an income effect, somewhat increasing support for local taxing and spending.

What is less clear is why a policy planner would choose to target those funds specifically to large families. Perhaps families with many dependents have a higher marginal propensity to consume. That is, they will save less of the stimulus, increasing its effectiveness. But one could imagine arguments to the contrary (college savings...) and we are unaware of evidence one way or the other.

Deductions for home equity loans are a less common source of AMT liability, but translate more directly into stabilization policy. The standard income tax allows borrowers to deduct the costs of interest on up to \$100,000 worth of loans secured by, but not used to purchase, a residence --- in other words, on home equity loans.¹⁶⁵ The AMT retains a deduction for "purchase money" debt, but turns off the home equity loans deduction.¹⁶⁶ Fewer than 1.6% of AMT taxpayers lost a home equity deduction.¹⁶⁷

Subsidies for home equity loans are stimulative in two ways. First, the home equity loan is essentially negative savings --- it changes accumulated net worth (positive equity) into cash,

¹⁶⁴ Leonard E. Burman, *The Alternative Minimum Tax: Assault on the Middle Class*, MILKEN INSTITUTE REVIEW, Fourth Q. 2007, at 12, 14, available at <http://www.urban.org/UploadedPDF/1001113_Burman_AMT.pdf>.

¹⁶⁵ T.C. § 163(h)(3)(C).

¹⁶⁶ T.C. § 56(b)(1)(C).

¹⁶⁷ However, the total dollar value of the lost deduction in 2007 was more than \$13 billion. Leonard Burman et al., *How Big Are Total Individual Income Tax Expenditures, and Who Benefits from Them?*, 98 AM. ECON. REV. 79, 81 Tbl.1 (2008).

which presumably is to be used for immediate consumption. This is a classic countercyclical effect: When falling incomes turn on the home equity deduction, homeowners become more inclined to spend, and vice-versa.¹⁶⁸ Although diminished wealth might reduce an owner's marginal propensity to consume, the home-equity subsidy creates a substitution effect, making consumption cheaper relative to other choices.

States may also benefit from the home-equity deduction through higher property taxes. Tax benefits that may be claimed only by homeowners increase the value of owning over renting. Thus, the tax benefit should “capitalize,” or be reflected in the sale price of homes.¹⁶⁹ If (as is generally true) property taxes are based on appraised value, this increase in value will also increase property tax revenues.¹⁷⁰ The AMT likely reduces the degree of capitalization by making it uncertain whether a buyer will be able to obtain the tax benefits of a home equity loan. At a guess, we would predict that this uncertainty would be higher during times when many taxpayers are subject to AMT, making the deduction somewhat countercyclical. But we freely concede that is pure speculation.

So far, we have set out a general theory of the countercyclical effects of the AMT. In the next subpart, we will attempt to quantify more precisely the significance of these effects.

B. AMT Liability is Increasing in Income at the Jurisdictional Level

Our argument here depends on the assumption that AMT liability in a jurisdiction rises together with income. This is an intuitive point at low income levels. However, the standard tax

¹⁶⁸ See Listokin, *supra* note 4, at 16.

¹⁶⁹ See Wallace E. Oates, *The Effects of Property Taxes and Local Public Spending on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis*, 77 J. POL. ECON. 957, 966--67 (1969).

¹⁷⁰ Julie Roin, *The Consequences of Undoing the Federal Income Tax*, 70 U. CHI. L. REV. 319, 331 (2003).

system imposes a 35% maximum rate, while the AMT tops out at 28%.¹⁷¹ Thus, it is theoretically ambiguous whether jurisdictions with higher average incomes experience greater AMT liability.¹⁷² Accordingly, we present here empirical evidence that AMT liability is increasing in income at the jurisdictional level.

Using IRS SOI data from 2004-2007¹⁷³, we plot the relationship between state per capita GDP and the fraction of income tax filers who paid a positive AMT on their federal return in Figure 3. The data include observations for all 50 states. In addition to the scatterplot, we provide a linear best fit line through the data as well as its 95 percent confidence interval.

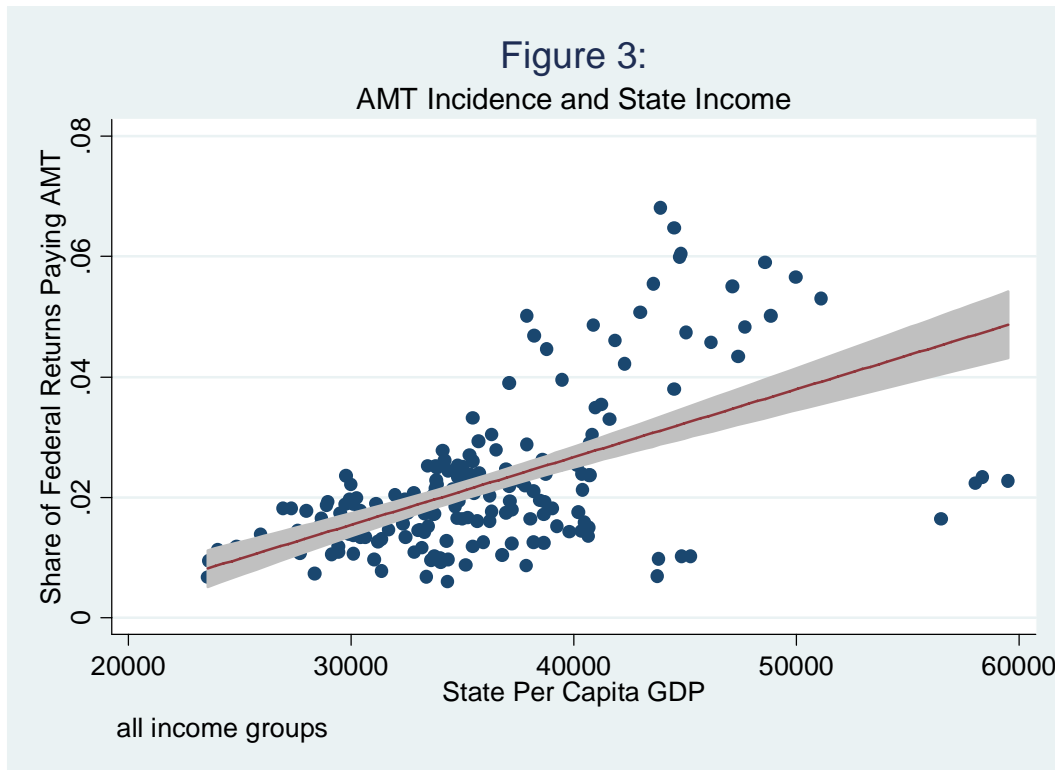


Figure 3 shows a statistically significant positive relationship between AMT incidence and state per capita income. Further, this relationship endures at each point of the income distribution.

¹⁷¹ JOINT COMMITTEE, *supra* note 5, at 12

¹⁷² *See id.*

¹⁷³ Public SOI data only include the AMT data beginning in 2004.

Figure 4 provides the same graph using data only for the returns of those individuals making more than \$50,000 in a year.

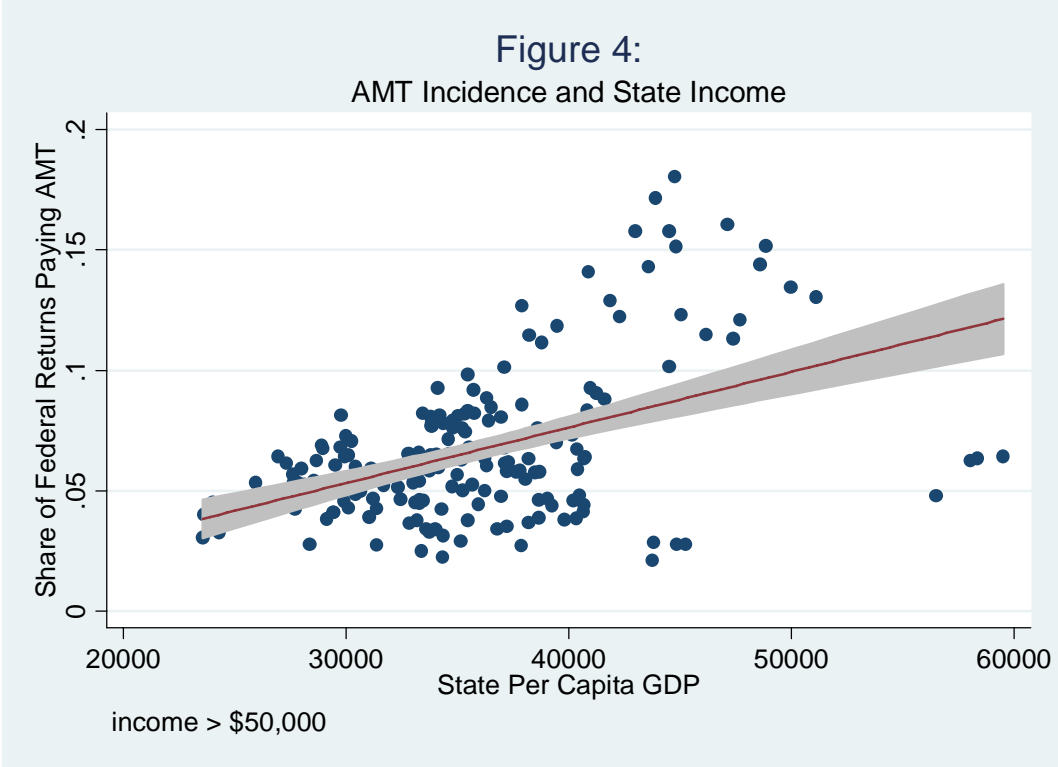


Figure 5 further restricts attention to returns of individuals making more than \$75,000.

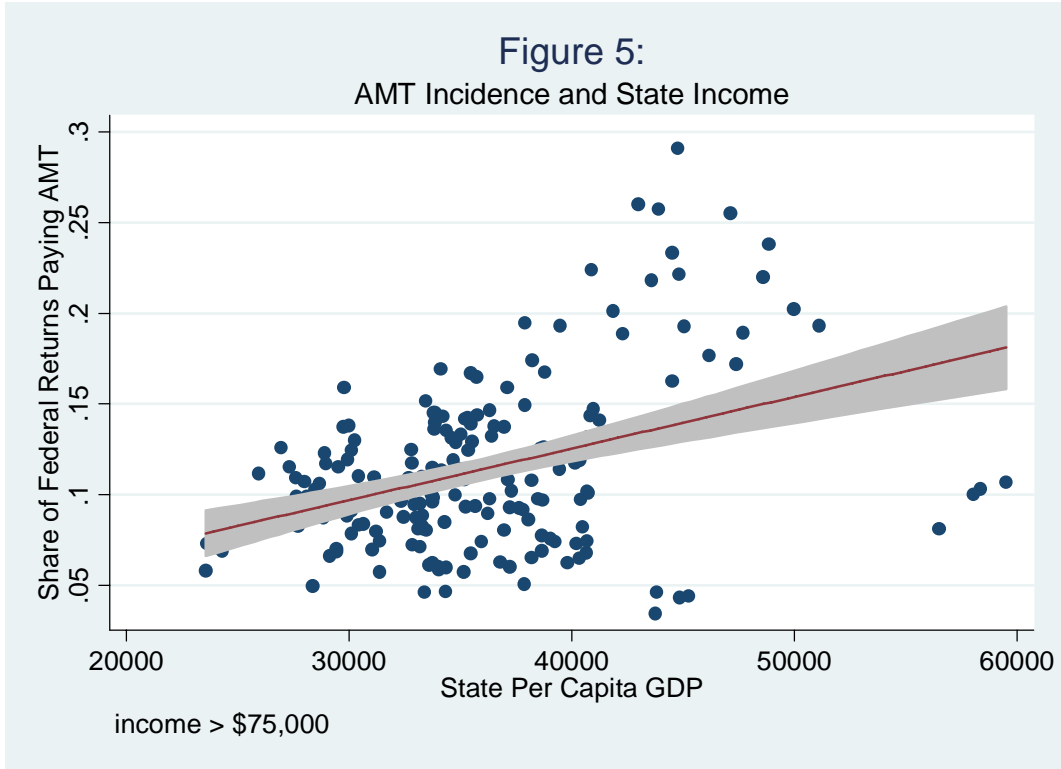
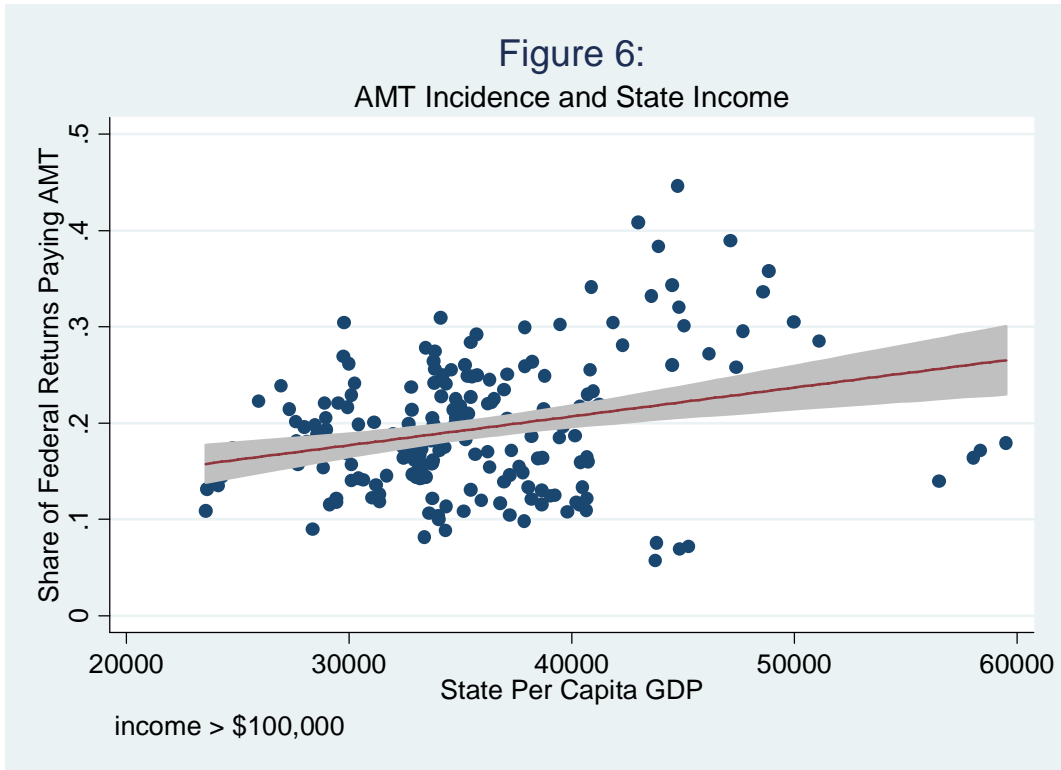
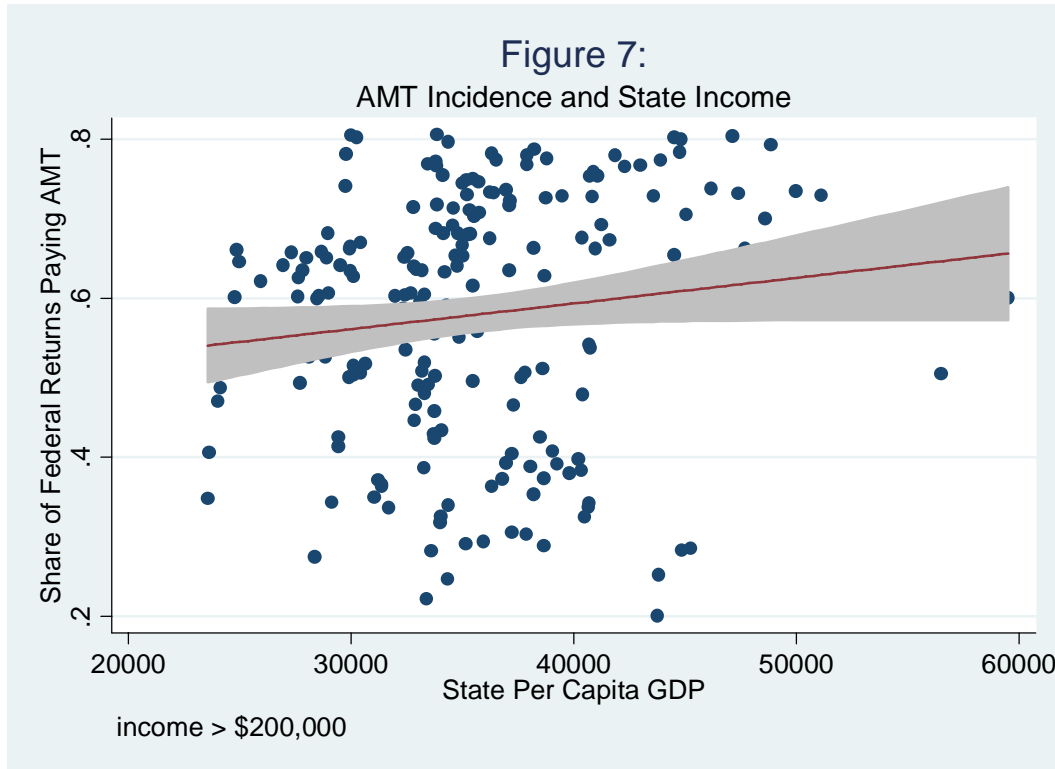


Figure 6 examines returns of individuals earning more than \$100,000.



Lastly, Figure 7 provides the graph for those with incomes greater than \$200,000 (the last income group for which the IRS provides AMT breakdowns).



Within each income category, the fraction of returns with a positive AMT amount is increasing in per capita state GDP, providing strong support for the assumption that the AMT is likely to affect a larger fraction of state residents during economic boom times in the state than during economic downturns.

VI. Empirical Evidence Of Stabilization Effect

If the AMT works as an automatic fiscal stabilizer, we should find that public spending on social insurance programs at the state level decreases as the fraction of state taxpayers falling under the AMT increases, conditional on state income. As implied above, state spending in these areas is a normal good, thus we should find that as income goes up, spending goes up as well. Further, as a greater fraction of individuals is covered by the AMT, the price of that public spending increases for them. This price increase, all other things equal, should lead these

individuals to reduce their support for the spending. If state politicians are sensitive to voter interests, this should lead to a decline in spending.

A. State Spending

To examine these predictions empirically, we collected data on state per capita spending in four common social insurance categories: welfare spending, education spending, spending on hospitals, and spending on other public health programs.¹⁷⁴ Because our AMT coverage data is only available beginning in 2004, our sample covers the period 2004-2007. Because four years of data provides a relatively small sample, we expect that our estimates will be relatively imprecise, limiting our ability to make strong inferences. That is, the large standard errors likely to be associated with our estimated coefficients suggest we will have low power, making it harder for us to reject the hypothesis that there is no relationship between AMT coverage and state spending.¹⁷⁵

To account for any effects of inflation on state spending, we use the consumer price index to deflate all expenditure and income amounts to a constant price level.¹⁷⁶ Because our outcome variables are per capita spending, to provide estimates that are representative of average effects across the nation, we perform weighted least squares using state population as the weight in each regression.¹⁷⁷

We provide descriptive statistics (again, weighted by population) in Table 1.

Table 1

¹⁷⁴ These data come from the U.S. Census Bureau, Governments Division, Survey of State Government Finances, available at <http://www.census.gov/govs/www/state.html>. We view education as social insurance because, among other reasons, retraining (for adults) and investing in a child's future income are both household responses to the loss of employment for one of its current earners.

¹⁷⁵ For a discussion of the relationship between sample size and statistical power, see MICHAEL O. FINKELSTEIN AND BRUCE LEVIN, *STATISTICS FOR LAWYERS* 182 (2d ed. 2001).

¹⁷⁶ CPI data are available here: <http://www.bls.gov/cpi/data.htm>. 1982-1984 prices provide the base year for price comparisons.

¹⁷⁷ See JOSHUA ANGRIST AND JÖRN-STEFFEN PISCHKE, *MOSTLY HARMLESS ECONOMETRICS* 92 (2009).

Descriptive Statistics

Variable	Description	Mean	St. Dev.	Source
Spending	Real State Government Spending Per Capita on Education, Welfare, Hospitals, and Public Health	1,590	313	Census
Education Spending	Real State Government Spending Per Capita on Education	798	146	Census
Welfare Spending	Real State Government Spending Per Capita on Welfare	629	185	Census
Hospital Spending	Real State Government Spending Per Capita on Hospitals	75	43	Census
Health Spending	Real State Government Spending Per Capita on Public Health	88	41	Census
AMT Share	% of Federal Returns Paying AMT > 0	0.027	0.015	IRS
AMT Share 50k+	% of Federal Returns Paying AMT > 0 for Filers with Incomes > \$50,000	0.081	0.038	IRS
AMT Share 75k+	% of Federal Returns Paying AMT > 0 for Filers with Incomes > \$75,000	0.134	0.057	IRS
AMT Share 100k+	% of Federal Returns Paying AMT > 0 for Filers with Incomes > \$100,000	0.220	0.082	IRS
AMT Share 200k+	% of Federal Returns Paying AMT > 0 for Filers with Incomes > \$200,000	0.601	0.160	IRS
Income	Real State Per Capita GDP	18,661	2,669	BEA

Note: Sample covers 2004-2007; all variables weighted by state population.

Our empirical specification includes our AMT coverage variable and the state income variable as discussed above. Also, to isolate the effect of AMT coverage, we include dummy variables for each state. These so-called state fixed effects allow for heterogeneity across states

in their baseline level of spending. For idiosyncratic reasons, such as cultural differences or other path dependencies, some states may naturally spend more on social insurance programs than others. The state fixed effects allow us to control for these differences which is important if the differences are not random with respect to the AMT coverage variable. We also include dummy variables for each year to allow for the possibility that spending may be systematically higher (or lower) in a given year across all states. Reasons for this may include national macro economic changes or policy changes at the federal level that induce a change in spending everywhere.

As a technical matter, we allow for clustering of standard errors at the state level. Doing so allows for dependence among observations within a state over time. Specifically, because there is likely some inertia in state spending programs as well as in the fraction of individuals who pay the AMT each year within a state, the observations from, for example, Pennsylvania in 2004 and 2005 are unlikely to be statistically independent. If there is positive dependence (e.g., if higher state spending in one year likely leads to relatively high state spending in the next), failure to allow for clustering will understate the true standard errors of the relevant coefficients. On the other hand, if there is negative dependence (e.g., if high spending in one year is offset by lower spending in the next), the true standard errors of the relevant coefficients will be overstated.¹⁷⁸ Along the same lines, there may be dependence across observations within a given year. Such dependence could be the result of changes in federal policy that affect spending in all states in a way that is not completely accounted for by year fixed effects. Similarly, changes in the tax code or macroeconomic changes may affect the coverage of the AMT across all states in

¹⁷⁸ For a discussion of this problem, see Marianne Bertrand et al., *How Much Should We Trust Differences-in-Differences Estimates?*, 119 Q. J. ECON. 249 (2004).

a way not fully controlled for in the regression itself. To allow for these effects, we also provide standard errors that account for multi-way clustering.¹⁷⁹

Our first analysis looks at real (i.e., deflated) state per capita spending across education, welfare, hospitals, and public health in the aggregate. We first examine total AMT coverage. However, there is reason to believe that not everyone accurately predicts whether the AMT will be binding on them.¹⁸⁰ This implies that errors in expectations will affect whether an individual supports spending or not. Our hypothesis is that higher income people will be better able to predict that they will be affected by the AMT.¹⁸¹ To examine this, we provide five different measures of AMT coverage: 1) the fraction of all federal returns paying a positive AMT amount; 2) the fraction of all federal returns paying a positive AMT amount for individuals with incomes above \$50,000; 3) the fraction of all federal returns paying a positive AMT amount for individuals with incomes above \$75,000; 4) the fraction of all federal returns paying a positive AMT amount for individuals with incomes above \$100,000; and 5) the fraction of all federal returns paying a positive AMT amount for individuals with incomes above \$200,000. Our expectation is that we will observe greater precision of any AMT effect in the higher income ranges. Regression results are provided in Table 2.

Table 2
 AMT Coverage and Total State Spending Per Capita
 (Standard Errors Clustered at the State Level in Parentheses)
 [Standard Errors Multi-Way Clustered at the State and Year Level in Brackets]

AMT Share	-776 (4097) [7162]
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¹⁷⁹ These problems and their solution are discussed in A. Colin Cameron, Jonah B. Gelbach, and Douglas L. Miller, *Robust Inference with Multi-way Clustering*, J. BUS. ECON. STAT. (forthcoming).

¹⁸⁰ See *infra* text accompanying notes 184--196.

¹⁸¹ Additionally, at very low income levels AMT payers pay little in state tax, *see supra* note 149, and therefore the AMT is unlikely to affect their views of state tax levels.

AMT Share 50k+		-1667 (1120) [1568]			
AMT Share 75k+			-1403 (629)** [687]**		
AMT Share 100k+				-1023 (387)** [329]***	
AMT Share 200k+					-805 (308)** [246]***
Income	0.030 (0.019) [0.013]	0.023 (0.020) [0.013]*	0.019 (0.020) [0.013]	0.016 (0.019) [0.013]	0.012 (0.019) [0.015]

Note: Sample covers 2004-2007. All regressions are estimated with population weights. All regressions include state and year fixed effects.

***p < 0.01; **p < 0.05; *p < 0.10 (against a two sided test of the null hypothesis of no effect).

As shown in Table 2, in every case we find a negative relationship between AMT coverage and total per capita state spending. The effect is statistically significant once the AMT share variable is calculated for filers with incomes of \$75,000 or above, and, as expected, the precision of the estimates improves as the AMT share is calculated for higher income filers. We also find evidence that state spending on social insurance programs does appear to be a normal good, with positive per capita GDP coefficients, but the effect is not statistically significant. This is most likely due to the lack of precision that comes with our limited sample that only covers four years.

In terms of the practical size of the effects we estimate, if the fraction of AMT coverage among filers earning more than \$50,000 increased by a standard deviation, our results imply that total real per capita state spending would decline by about 4 percent. The comparable effect of

an increase in the fraction of AMT filers with incomes above \$200,000 is an 8 percent decline in per capita spending.¹⁸² The exact magnitude of these figures is less interesting, however, than the fact that the practical size of the effect we have identified is non-trivial from a policy perspective.

In Table 3, we examine the effect of AMT coverage on real state per capita spending on education.

Table 3
 AMT Coverage and State Education Spending Per Capita
 (Standard Errors Clustered at the State Level in Parentheses)
 [Standard Errors Multi-Way Clustered at the State and Year Level in Brackets]

AMT Share	-30				
	(1786)				
	[2320]				
AMT Share 50k+		-310			
		(627)			
		[591]			
AMT Share 75k+			-299		
			(383)		
			[308]		
AMT Share 100k+				-229	
				(238)	
				[185]	
AMT Share 200k+					-301
					(227)
					[184]
Income	0.015	0.014	0.013	0.012	0.008
	(0.009)*	(0.009)	(0.009)	(0.009)	(0.008)
	[0.008]**	[0.008]*	[0.008]	[0.008]	[0.009]

Note: Sample covers 2004-2007. All regressions are estimated with population weights. All

¹⁸² It is interesting to note that while one might assume that some of this effect will be countered by the income effect which implies that as more individuals fall under the AMT, incomes are rising leading to increased support for public spending. While this is possible, because the income effect is based on real income, while the AMT is not indexed for inflation, this counteracting income effect need not be present.

regressions include state and year fixed effects.

***p < 0.01; **p < 0.05; *p < 0.10 (against a two sided test of the null hypothesis of no effect).

Although we continue to find a negative effect of AMT coverage on state per capita education spending, our results are imprecise, and only the result associated with AMT filers with incomes above \$200,000 is even close to being statistically significant at the 10 percent level. We also continue to find that education spending's relationship with state per capita income is positive.

In table 4, we look at welfare spending.

Table 4
 AMT Coverage and State Welfare Spending Per Capita
 (Standard Errors Clustered at the State Level in Parentheses)
 [Standard Errors Multi-Way Clustered at the State and Year Level in Brackets]

AMT Share	739				
	(2760)				
	[4478]				
AMT Share 50k+		-572			
		(786)			
		[1005]			
AMT Share 75k+			-574		
			(461)		
			[478]		
AMT Share 100k+				-448	
				(290)	
				[252]*	
AMT Share 200k+					-112
					(204)
					[151]
Income	0.001	-0.003	-0.005	-0.007	-0.003
	(0.013)	(0.013)	(0.013)	(0.013)	(0.015)
	[0.008]	[0.008]	[0.009]	[0.009]	[0.011]

Note: Sample covers 2004-2007. All regressions are estimated with population weights. All regressions include state and year fixed effects.

***p < 0.01; **p < 0.05; *p < 0.10 (against a two sided test of the null hypothesis of no effect).

For per capita welfare spending, we find support for the negative effect of AMT coverage on spending except when we look at AMT filers of all income levels, including those earning less than \$50,000. The precision of the results is quite low, leading us to find that the result is statistically significant only when we focus on AMT filers making above \$100,000 (at the 10 percent level).

Next we examine real state per capita spending on hospitals in Table 5.

Table 5
 AMT Coverage and State Hospital Spending Per Capita
 (Standard Errors Clustered at the State Level in Parentheses)
 [Standard Errors Multi-Way Clustered at the State and Year Level in Brackets]

AMT Share	-860 (543) [293]***				
AMT Share 50k+		-352 (228) [137]***			
AMT Share 75k+			-218 (145) [75]***		
AMT Share 100k+				-134 (92) [46]***	
AMT Share 200k+					-115 (80) [65]*
Income	0.002 (0.002) [0.002]	0.001 (0.002) [0.002]	0.001 (0.002) [0.002]	0.001 (0.003) [0.002]	0.000 (0.003) [0.002]

Note: Sample covers 2004-2007. All regressions are estimated with population weights. All regressions include state and year fixed effects.

***p < 0.01; **p < 0.05; *p < 0.10 (against a two sided test of the null hypothesis of no effect).

For real per capita state spending on hospitals, we find strong support for our hypothesis. The relationship between spending and AMT coverage is uniformly negative and is statistically significant when multi-way dependence across within states and within years is accounted for. Our results suggest that if the fraction of income tax filers with incomes above \$50,000 that had to pay the AMT were to increase by one standard deviation, real state per capita hospital spending would decline by almost 18 percent. If a similar calculation is done for changes in AMT coverage among those earning more than \$200,000, the corresponding decline in hospital spending is almost 25 percent. These results again suggest that this AMT subsidy effect is substantial.

In Table 6, we cover real state per capita public health spending.

Table 6
 AMT Coverage and State Public Health Spending Per Capita
 (Standard Errors Clustered at the State Level in Parentheses)
 [Standard Errors Multi-Way Clustered at the State and Year Level in Brackets]

AMT Share	-625 (1215) [1149]		
AMT Share 50k+	-432 (383) [351]		
AMT Share 75k+		-313 (187)* [166]*	
AMT Share 100k+			-212 (93)** [87]**
AMT Share 200k+			-277 (120)** [78]***

Income	0.012 (0.010) [0.007]*	0.011 (0.010) [0.007]	0.010 (0.010) [0.007]	0.010 (0.009) [0.006]	0.006 (0.006) [0.003]*
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Note: Sample covers 2004-2007. All regressions are estimated with population weights. All regressions include state and year fixed effects.

***p < 0.01; **p < 0.05; *p < 0.10 (against a two sided test of the null hypothesis of no effect).

Real state per capita spending on public health also supports our hypothesis. The relationship between AMT coverage and public health spending is uniformly negative, and it is statistically significant once attention is restricted to AMT filers earning more than \$75,000 annually. Our results imply that real state per capita public health spending would decline by almost 19 percent if the share of filers covered by the AMT making more than \$50,000 were to increase by one standard deviation. Restricting attention to those making more than \$200,000, the expected decline is around 50 percent.

Despite the fact that data limitations generate significant precision problems, we find robust support for our hypothesis that as AMT coverage increases, state spending on social insurance programs declines conditional on state per capita income. This evidence is consistent with our claim that the AMT acts as a fiscal stabilizer.

B. Local Spending

Our general argument applies to local government spending in addition to state government spending. Unfortunately, data availability constraints force us to restrict attention to the period 2004-2006 for any local expenditure analysis. Further, it is generally the case that local expenditure figures will be noisier than state figures. With this in mind, we expect that local expenditure analyses will be significantly less precise and should be viewed descriptively.

Local government expenditure data for the same spending categories are available from the U.S. Census Bureau.¹⁸³ Table 7 provides descriptive statistics for local spending in the areas of education, welfare, hospitals, and public health.

Table 7
Descriptive Statistics for Local Government Spending

Variable	Description	Mean	St. Dev.	Source
Spending	Real Local Government Spending Per Capita on Education, Welfare, Hospitals, and Public Health	1,114	255	Census
Education Spending	Real Local Government Spending Per Capita on Education	863	160	Census
Welfare Spending	Real Local Government Spending Per Capita on Welfare	74	82	Census
Hospital Spending	Real Local Government Spending Per Capita on Hospitals	106	73	Census
Health Spending	Real Local Government Spending Per Capita on Public Health	61	45	Census

Note: Sample covers 2004-2006; all variables weighted by state population.

In Table 8, we provide estimates of the effect of AMT coverage on total real per capita local government spending.

Table 8
AMT Coverage and Local Spending Per Capita
(Standard Errors Clustered at the State Level in Parentheses)
[Standard Errors Multi-Way Clustered at the State and Year Level in Brackets]

AMT Share	-16 (3427) [2639]
-----------	-------------------------

¹⁸³ <http://www.census.gov/govs/www/estimate.html>

AMT Share 50k+		-197 (1274) [915]			
AMT Share 75k+			-163 (793) [559]		
AMT Share 100k+				-101 (480) [340]	
AMT Share 200k+					-84 (254) [276]
Income	0.041 (0.023)* [0.021]**	0.041 (0.021)* [0.019]**	0.040 (0.021)* [0.018]**	0.040 (0.020)* [0.018]**	0.039 (0.020)* [0.018]**

Note: Sample covers 2004-2006. All regressions are estimated with population weights. All regressions include state and year fixed effects.

***p < 0.01; **p < 0.05; *p < 0.10 (against a two sided test of the null hypothesis of no effect).

As expected, we again find uniformly negative relationships between real local government spending per capita, but data limitations lead to very low precision. Interestingly, the relative effects estimated here are only about 20 percent as large as those estimated for state spending. Although we do not report results by category for local spending, we find that the difference between the state and local results is driven by the education and welfare categories where very little relationship between spending and AMT coverage is observed, whereas the coefficients for local hospital and public health spending are comparable to those observed in the state spending data.

Although not as strong as the state spending results, these local spending estimates are also largely supportive of our hypothesis that the AMT changes the price of local government spending as it is perceived by taxpayers, especially those with higher incomes, and this translates

to observable changes in local spending patterns in social insurance categories. This suggests that the AMT does function as an automatic fiscal stabilizer, inducing more local government spending during economic downturns and limiting it during times of economic growth.

VII. Tweaking State and Federal Tax to Improve Stability

So far we have set out the theoretical appeal of the AMT as an automatic stabilizer for state budgets. It cannot have escaped the reader's attention, though, that notwithstanding our theory, states continue to experience financial crises. Our data imply that these crises have been milder as a result of the AMT. We acknowledge, however, that there are at least two important practical obstacles limiting the full efficacy of the AMT's stabilization function. For one thing, taxpayers must actually be aware that their deduction has been restored in order for any preferences for higher taxes to register at the ballot box. And taxpayers may anticipate that their earnings will soon rise, so that they may believe that any relief from AMT will be short-lived. In this Part we explore these points in more detail, and set out a handful of policy options for mitigating them.

A. Problems Translating Federal Subsidies to State Revenues

It could be argued that the AMT is not truly an automatic stabilizer for state budgets because it does not directly increase state revenues. Instead, as federal tax deductions for state taxes paid reduce the price of local spending relative to other available uses of taxpayers' personal funds, voters are more willing to vote for tax rate increases, or to give political support to officials who increase tax rates.¹⁸⁴

1. Voter Ignorance of AMT Liability

¹⁸⁴ Kaplow, *supra* note 156, at 486--87.

One such translational problem may be that voters may not take federal deductibility into account in forming their opinions about local tax policy.¹⁸⁵ Taxpayers who did not take a deduction in a prior year because of the AMT may be unaware that the deduction will become available when the AMT no longer applies. Others may simply be uncertain whether they will be subject to AMT until they (or their preparer) calculates both standard and AMT liability the following April 15.¹⁸⁶ Even those who can easily do the tax computation themselves may be unsure of their earnings between the time of a relevant political decision and the end of the tax year. Yet other taxpayers may simply fail to take available information into account.¹⁸⁷ For instance, in laboratory studies, subjects had difficulty integrating in their heads the combined effects of two overlapping tax systems.¹⁸⁸ It is unclear to what extent these laboratory studies capture real-world behavior.¹⁸⁹

Of course, officials can always simply attempt to educate voters when proposing tax increases, but counter-intuitively, many ordinary efforts to inform voters about the effects of the AMT have the potential to *reduce* overall political support. Educational efforts may increase support for taxes among some voters,¹⁹⁰ but should also increase lobbying efforts by those opposed to tax. To understand why, consider a world in which voters have complete information about one another's finances. Voters ordinarily free ride on one another's lobbying efforts, so

¹⁸⁵ See Statement of Leonard E. Burman Before the United States Senate Committee on Finance 12 (June 27, 2007); Kaplow, *supra* note 156, at 487.

¹⁸⁶ Linda M. Beale, *Congress Fiddles While Middle America Burns: Amending the AMT (and Regular Tax)*, 6 FLA. TAX REV. 811, 824--25 (2004); Leonard E. Burman et al., *The AMT: Projections and Problems*, TAX NOTES 105, 115--16 (July 7, 2003).

¹⁸⁷ See Deborah Schenk, *The Political Economy of Tax Reform: The Case for Retaining the AMT* 35 (unpublished manuscript, 2006), available at <<http://www2.law.columbia.edu/taxcolloquium>>.

¹⁸⁸ Edward J. McCaffery & Jonathan Baron, *The Political Psychology of Redistribution*, 52 UCLA L. REV. 1745, 1765--68, 1773--80 (2005).

¹⁸⁹ Brian Galle, *Hidden Taxes*, 87 WASH. UNIV. L. REV. 1, 26 (2009).

¹⁹⁰ See Gillette, *supra* note 48, at 958 (arguing that political free riding diminishes when costs of acquiring information decline).

that only extreme outliers, such as the super-rich, will themselves lobby.¹⁹¹ However, in a downturn, some voters will drop out of the AMT and become more supportive of tax increases. This means that rich voters still subject to AMT cannot free ride on the efforts of the dropouts. Accordingly, if rich voters are aware of how many others are no longer subject to AMT, they can calibrate their own lobbying efforts upwards to make up for the shortfall.¹⁹² As a result, in the presence of the AMT the SALT deduction would not increase overall political support for tax increases.¹⁹³

In the real world voters do not have full information about one another, but that knowledge deficit in turn limits the efficacy of efforts to inform voters about the SALT deduction. If wealthy voters cannot observe the extent to which others in their jurisdiction can claim the SALT deduction (and would prefer higher local tax rates), they do not know that they should ratchet up their own lobbying efforts.¹⁹⁴ However, when public officials undertake widely observable efforts to inform voters about the effects of the SALT deduction, they also provide information to wealthy voters. The fact that the officials are bothering with education efforts implies that the officials have private information about the existence of SALT-eligible

¹⁹¹ MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* 21–22, 31, 35 (1971); Gillette, *supra* note 55, at 389. Of course, in many cases this story will be much more complex. *See id.*

¹⁹² Cf. Alexander Volokh, *Privatization and the Law and Economics of Political Advocacy*, 60 *STAN. L. REV.* 1197, 1207--15 (2008) (modeling argument that removing like-minded political actor will increase others' lobbying efforts).

¹⁹³ We note that this result is dependent on the existence of the AMT, which prevents some taxpayers ever from receiving the benefit of § 164. In the absence of the AMT, the SALT deduction would actually be more politically appealing to wealthier taxpayers, because the dollar value of a deduction increases as marginal tax rates increase.

¹⁹⁴ In many circumstances, these kinds of information deficits can be overcome by policy entrepreneurs. Entrepreneurs invest their own effort at gathering and sharing information, in exchange for rents and political support for their own cause from the beneficiaries. *See* Richard Wagner, *Pressure Groups and Political Entrepreneurs: A Review Article*, 1 *PUB. CHOICE* 161, 161--70 (1966) (reviewing MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION* (1965)); Christopher Schroeder, *Rational Choice Versus Republican Moment---Explanations for Environmental Laws, 1969--1973*, 9 *DUKE ENV'T L. & POL'Y F.* 29, 49--56 (1998).

The entrepreneur story is implausible in our scenario because most of the important information is privately held by other taxpayers, and perhaps by government insiders. Indeed, those who hold this information have incentives to keep it secret. Galle, *supra* note 189, at 37 & n.171. Entrepreneur claims about hidden taxes may also have fairly low credibility. *Id.* at 33--34.

voters in the jurisdiction. And the scope and effectiveness of the education campaign can be a surrogate source of information about increased support for tax hikes: the wealthy voters can calibrate their own increased lobbying to match the education campaign. Thus, on net efforts to educate voters about their own SALT eligibility may simply increase opposition to tax rate increases among ineligible segments of the body politic.

General educative efforts are also likely ineffective where the problem is the voter's uncertainty about whether she will have AMT liability. Most taxpayers file their returns for a given year in March or April of the following year.¹⁹⁵ Over ten million more obtain extensions and file even later.¹⁹⁶ As a result, at the time of a proposed tax increase, a voter may be uncertain what her income will be between the vote and the end of the year, and thus unsure about the effects of the AMT. This problem may be mitigated somewhat if the tax increase is supported by officials who need not stand for election until after the next income tax filing season. But there are no data to tell us whether voters will remember to evaluate their official based on the net-of-federal-tax cost of any tax increases, or instead will remember only their anger at the time of the tax rate increase itself.

2. Voter Ignorance Also Affects Exit

AMT effects play out a bit differently for exit constraints on state tax-setting. Recall that in addition to voter opposition, the threat of taxpayer exit in response to tax hikes is also a significant source of downward pressure on state and local tax rates. Indeed, some commentators argue that, because of free riding, voting is relatively unimportant, and that exit (or the credible threat of exit) is the most meaningful constraint on local officials.¹⁹⁷

¹⁹⁵ INTERNAL REVENUE SERVICE, STATISTICS OF INCOME 2009.

¹⁹⁶ *Id.*

¹⁹⁷ *See* sources cited *supra* note 40.

When taxpayers drop out of AMT liability, exit should decrease. The SALT deduction makes exit less attractive at the margin, because it narrows the taxpayer's perceived gap between the cost of living in a jurisdiction and the benefits received from that choice.¹⁹⁸ If this gap dwindles to below the costs of exit, the taxpayer will not move. Thus, as more taxpayers in a jurisdiction gain the benefits of the SALT deduction, their inclination to relocate will drop. The same is true, to a rather lesser degree, of the home equity deduction. As taxpayers drop out of AMT, and regain access to the home equity deduction, it becomes relatively more attractive for them to remain in their present home than to move to a new one with no built-up equity.

Again, however, these effects are subject to taxpayers' awareness of the effect of the SALT deduction. Once more, efforts to educate the public might also trigger increased lobbying efforts by those who do not benefit. If exit constraints strongly dominate any lobbying effects, then state education efforts might free officials to raise tax rates. But whether that is true is not clearly predicted by theory and has not been measured empirically.

3. Taxpayers Anticipate Later Tax Increases

A final problem that arises under either voting or exit is the possibility that taxpayers will anticipate future AMT liability. If the SALT deduction is available only because the taxpayer's income has fallen due to a temporary condition, such as unemployment or underemployment, then the taxpayer may expect (or at least hope) that in the future income will rise again. In that case, the taxpayer may ignore the present lower effective tax rate and vote according to her expected, higher, future rate.¹⁹⁹ Movers may not relocate until the higher effective rate actually

¹⁹⁸ Brian Galle, *A Republic of the Mind: Cognitive Biases, Fiscal Federalism, and Section 164 of the Tax Code*, 82 IND. L.J. 673, 696--98 (2007); cf. Gillette, *supra* note 73, at 1068 (arguing that federal subsidies for localities distort locational choice).

¹⁹⁹ JOINT COMMITTEE, *supra* note 5, at 22.

kicks in, but if the jurisdiction and its officials want to avoid a later exodus, they must themselves anticipate the results of the AMT.

An obvious fix to the anticipation problem is to make countercyclical tax increases temporary, but this fix may not be fully effective. For one thing, it is not clear that officials can credibly commit themselves to roll back rates or let temporary tax hikes expire.²⁰⁰ Again, the problem is that the political cost of failing to lower rates will fall on future officials, while the gains of meeting the budget crisis are realized immediately. In addition, there is a status quo bias in legislation: it is harder to enact change than defend existing legislation.²⁰¹ That will tend to make it difficult to adjust rates downward again.²⁰² While rate increases that automatically expire do not face that difficulty, they present the different one that they may expire before the state's fiscal hardship is over.

4. Residual Benefits of AMT

Having said all of this, we should note that the AMT offers some stabilization benefits irrespective of whether federal subsidies translate to higher tax rates. At a minimum, lower federal taxes for regions suffering from a downturn means higher after-tax wealth for those regions. In effect, the AMT targets tax cuts to regions where economic stimulus is needed. In addition to this income effect, the deductibility of sales taxes and home-equity loans creates substitution effects in favor of spending --- assuming, at least, that consumers believe they will not be subject to AMT for the year in which they make their purchase.

²⁰⁰ See Elizabeth Garrett, *Accounting for the Federal Budget and its Reform*, 41 HARV. J. ON LEG. 187, 195--96 (2004); Rebecca M. Kysar, *The Sun Also Rises: The Political Economy of Sunset Provisions in the Tax Code*, 40 GA. L. REV. 335, 359--70 (2006).

²⁰¹ See Jacob Gersen & Eric Posner, *Timing Rules and Legal Institutions*, 121 HARV. L. REV. 543, 561 (2007).

²⁰² Cf. JAMES M. BRENNAN & GORDON TULLOCK, *THE CALCULUS OF CONSENT* 283--95 (1963) (arguing that political dynamics allow incumbents to ratchet tax payments upwards).

Federal subsidies also offer some support for state revenues even if tax rates do not increase. If retail sales increase, then retail sales revenues do, too. And capitalization of the net-of-tax cost of the local tax burden may increase home values, adding to property tax proceeds.

B. Some Policy Possibilities

So far we have argued that the AMT already produces a modest stabilization effect. In this subpart we suggest some fairly simple (if in some cases counter-intuitive) ways in which states themselves can make better use of federal subsidies during downturns, and some tweaks to federal law that would further improve the AMT's stabilizer function.

1. Tax the Middle Class

The first tool states can adopt for themselves is to target their tax rate increases to individuals who are unlikely to have AMT liability. Remember that the central political problem for states is that wealthy AMT-payers are likely to increase their own lobbying efforts in response to evidence that other citizens are willing to pay higher taxes. But this problem only arises if the same tax rates are applied to both AMT-payers and those who receive federal subsidy. If rates are increased only for subsidy recipients, the AMT-payers have no reason to lobby.²⁰³ Indeed, they are likely to be happy to receive some additional government services for free.

Precise targeting of the state's tax increase may be difficult, but proxies are readily available. In theory a state income tax could well include a discount for those who pay federal AMT. The worry here would be that the existence of this special discount would be far less salient politically than the general rate increase, leading some AMT-payers nonetheless to oppose the rate hike. As a second-best, though, the state could simply calculate the income

²⁰³ The opposite strategy of taxing only the wealthy faces an uphill battle, because in that case free riding among wealthy voters is even lower than in the AMT scenario.

threshold for most local AMT payers, and limit its rate increase to those below that threshold. Similarly, though there is no obvious way to limit property tax rates for those who pay AMT, a substitute (admittedly, inexact) would be to increase rates only on homes below a certain value.

Sales taxes present a thornier targeting problem, but that probably doesn't matter. Sales taxes can be crudely calibrated to fall *less* heavily on the poor by adjusting which items are subject to tax, as by taxing only luxuries or exempting bare necessities.²⁰⁴ But it is difficult to conceive of how to do the opposite: there are few meaningfully large categories of items that are purchased only by low- and middle-income persons and not the wealthy.²⁰⁵ However, the wealthy pay a relatively low portion of their incomes in sales taxes.²⁰⁶ Thus, the failure to exempt AMT-payers from higher sales tax rates probably would not significantly increase political opposition to the increase.

We acknowledge that of course this approach of exempting the wealthy from higher rates looks to be squarely contrary to most accounts of distributive justice and fair progressivity in the tax system.²⁰⁷ That appearance is somewhat misleading, though. First, state rates net of federal tax may change only slightly, as we have explained.²⁰⁸ Second, countercyclical expenditures disproportionately benefit lower-income residents.²⁰⁹ Taking into account both taxing and spending the targeted rate increases and associated higher spending may be net beneficial to the state's poorest, and not as negative for the middle class as a first glance would suggest.²¹⁰

²⁰⁴ Steven A. Bank, *Origins of a Flat Tax*, 73 DENV. UNIV. L. REV. 329, 336--37 (1996).

²⁰⁵ The exception is "junk" food. See Jonah B. Gelbach, Jonathan Klick, & Thomas Stratman, Cheap Donuts and Expensive Broccoli: The Effect of Relative Prices on Obesity (unpublished manuscript, Mar. 21, 2007), available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=976484>.

²⁰⁶ David Shakow & Reed Shuldiner, *A Comprehensive Wealth Tax*, 53 TAX L. REV. 499, 506--07 (2000).

²⁰⁷ See JOSEPH M. DODGE, *THE LOGIC OF TAX* 88 (1989).

²⁰⁸ See *supra* text accompanying notes 158--159.

²⁰⁹ Batchelder et al., *supra* note 4, at 58.

²¹⁰ An important disclaimer here is that federal tax reductions in April of Year Two may not fully compensate a taxpayer for her higher state-tax expenses in Year One, even if the two are of equal present discounted value.

Finally, states could mitigate the regressivity of any targeting policy by also exempting very low-income taxpayers, granting property-tax exemptions for landlords of low-income housing, and avoiding sales tax hikes on essentials such as food and medicine.

2. Exploit the Natural Salience of Filing Season

Next, both state and federal law could build on the public's increased awareness of the tax system around April 15 each year. We have hypothesized that voters' failure to connect higher state taxes with lower federal taxes might limit the efficacy of the SALT deduction. By enacting increases around April 15, when most taxpayers are filing their federal tax return, states could help voters to keep federal effects in mind when they form opinions about the state proposal. One recent study of tax incentives, for example, found that federal deductions are much more effective in changing consumer behavior around April 15 than other times of year.²¹¹

This approach is superior to a more general education campaign, because it is unlikely to induce higher lobbying efforts by AMT payers. The timing of a tax increase proposal reveals little of officials' information about the number of voters who will receive the SALT deduction. And AMT payers cannot substitute for that information with the intensity of the education campaign.

On the federal side, Congress might transplant a procedure already used for contributions to individual retirement accounts, and enact a statute permitting sales tax incurred between January 1 and April 15 of Year Two to be deductible from the taxpayer's Year One tax return.²¹²

Timing effects matter, and may be especially important for households that do not budget rationally or are highly liquidity constrained. We plan to address these forms of timing mismatches in future work.

²¹¹ Kelly Sims Gallagher & Erich Muehlegger, *Giving Green to Get Green: Incentives and Consumer Adoption of Hybrid Vehicle Technology* 22–24, 28 (Harvard Kennedy Sch. of Gov't, Working Paper No. RWP08-009, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1083716. It is not clear, however, that the study in fact establishes that there is a salience effect during tax filing season. See Galle, *supra* note 189, at 18--19.

²¹² T.C. § 219(f)(3); see RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE* 130 (rev. ed. 2009) (suggesting that retroactive deductibility of IRA contributions allows tax code to serve as helpful reminder to taxpayers to save for retirement).

Under current law, only taxes paid during the applicable tax year are deductible.²¹³ The problem, as we have shown, is that consumers may not know until the following April whether the sales taxes they pay will end up being deductible, which greatly reduces the value of the deduction as an incentive to consume. If sales tax were retroactively deductible, consumers would be able to be certain they were not subject to AMT before making major purchases.²¹⁴

3. Guarantee Deductibility

Turning to the problem of anticipated future AMT liability, we have argued that states cannot likely make credible pledges to reduce taxes when crises pass, so federal intervention is needed. The difficulty, again, is that deductibility may not make a present tax increase more appealing if the taxpayer expects that her income will soon increase, making her subject to AMT and eliminating the deduction. Our proposed solution, then, is to make tax increases AMT-protected. That is, Congress could guarantee that a deduction that benefits a taxpayer this year will still benefit her next year, or potentially years after that.

In essence, the way this would work is that the Tax Code would allow a taxpayer who benefitted from the SALT deduction in a prior tax year to reduce her AMT income by the amount of state and local tax attributable to a recent tax rate increase. So, to illustrate, suppose a taxpayer who was not subject to AMT in Year One. Also in Year One, Residence State increases its income tax by 2%, from 3% to 5%. In Year Two, when our taxpayer calculates her

²¹³ T.C. § 164(a).

²¹⁴ One technical point perhaps worth mentioning about this proposal is that we would recommend making retroactive deductions slightly disfavored relative to taxes incurred during the tax year. For example, we would reduce the amount of retroactive deductions by about one-third of the annual risk-free rate of return, to account for the time value of the taxpayer's holding onto her money between December of Year One and April of Year Two. The reason is that we would want fully-informed taxpayers to be indifferent between purchasing sooner rather than later: we would not want retroactive deductibility to be a reason for consumers to delay consumption. The reduction would also mitigate the federal revenue lost by accelerating some deductions.

tentative AMT liability, she can deduct two-fifths of her state income taxes from her AMT income.

Whether this protection would last only one year, or would be extended to future years as well, should depend on empirical research into the extent to which taxpayers anticipate future AMT liability when they respond to the SALT deduction. However, we would be inclined to limit protection to a relatively short time. The longer the guarantee extends, the more it resembles an undifferentiated federal subsidy for state taxes. We have argued that the AMT is appealing precisely because it is not such a subsidy.

The implementation of this proposal would also help to educate taxpayers about the SALT deduction. In order to compute their AMT liability, taxpayers would need to know their state tax rates, as well as any recent changes in state rates. Thus, we would require states to provide their taxpayers with this information in a short form, much like the Form 1099 notices taxpayers routinely receive from their banks, scholarship providers, and investment brokers.²¹⁵ States could take the opportunity to indicate not only their nominal marginal rates, but also the average effective tax rate net of federal deductibility.

4. Target State Education Efforts

Finally, a relatively small-bore but potentially effective technique for increasing the political effectiveness of SALT deductions would be for states to aim their educational efforts only to likely SALT beneficiaries. In this way, again, AMT payers could not easily observe the scope of educational efforts and would not be prompted to increase their own lobbying effort. For example, states could include explanations of the SALT deduction in the materials it provides to applicants for unemployment insurance or other new social insurance benefits applicants. These

²¹⁵ *E.g.*, T.C. § 6049 (requiring payors of interest to file information return with IRS and furnish payment information to payee).

individuals are the most likely to have low or declining incomes that might signify disappearing AMT liability. Similarly, if property tax rates will increase only for homes below a certain value, the jurisdiction could provide advance notice of a proposed rate increase to those homes together with SALT and AMT education.

VIII. Conclusion

The AMT is, we admit, an unlikely place to find a solution to the problem of state finance in times of crisis.²¹⁶ We have argued, though, that each of the more obvious candidates has serious flaws. States cannot tax, borrow, or save enough to meet their residents' needs for social insurance. Other federal supports lead to moral hazard, are wasteful, or are too poorly timed to be effective. Thus automatic stabilizers assume an important role in smoothing incomes. And, as we have shown empirically, the AMT is a powerful automatic stabilizer.

Accordingly, we would resist efforts to repeal or "patch" the AMT.²¹⁷ Instead, we suggest that greater attention to the details of the AMT, and the tax lawmaking process that surrounds it, can greatly improve state responsiveness to recessions. We have noted some preliminary possibilities here, but no doubt others could add to our list.

Even for those who reject our arguments about the usefulness of the AMT as automatic stabilizer, our empirics themselves are worth some attention. We have demonstrated that the existence of the AMT very likely curtails state spending in several important categories. For those who would prefer to see greater state support for education, health, and aid to the poor irrespective of the business cycle, we offer evidence that the AMT should be repealed.

²¹⁶ See Paul Kane, *Democrats Finishing Up Stimulus Proposal*, WASHINGTON POST, Jan. 15, 2009, at A4 ("I'm not aware of the AMT having any stimulative effects.") (quoting U.S. Rep. Jim Cooper).

²¹⁷ Among repeal proponents are the leading tax-lawyer organizations, along with many former high-ranking tax officials. Allen Kenney, *Former Commissioners Say It's Time to Scrap AMT*, 103 TAX NOTES 1466 (June 21, 2004); Tax Sec. ABA et al., *Tax Simplification Recommendations from ABA, AICPA, and TEI*, 2000 TAX NOTES TODAY 39-82 (Feb. 25, 2000). One of the few in agreement with us on the future of the AMT is Deborah Schenk, who describes it tepidly as "a plausible tenth-best solution." Schenk, *supra* note 187, at 2.

Our data are also relevant to other academic debates. For example, we provide evidence in favor of Professor Listokin's general model of the tax code as automatic stabilizer. Our data also suggest that the deductibility of state and local taxes positively affects state spending, a point of controversy among several prominent economists.²¹⁸ Finally, we contribute to the literature on tax salience by showing that higher-income taxpayers are more likely to anticipate their own future AMT liability and translate that knowledge into political action.

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²¹⁸ For description of the controversy and summary of the existing data, see *supra* note 156.