

RECESSIONS AND THE SOCIAL SAFETY NET: THE ALTERNATIVE MINIMUM TAX AS A COUNTERCYCLICAL FISCAL STABILIZER

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As recent events illustrate, state finances are procyclical: 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 by creating moral hazard that would induce states to take on excessively risky policy, both fiscal and otherwise. Thus, we argue that policymakers should consider so-called “automatic” stabilizers, such as are found in the federal tax system, and we offer original empirical evidence that these stabilizers can have significant fiscal impact.

Our evidence focuses on the federal alternative minimum tax (AMT). We present an argument from microeconomic foundations suggesting that the AMT has potentially salutary—and heretofore unrecognized—effects that counteract pathologies of state budgets over the business cycle. AMT liability increases with income, and acts to eliminate federal tax subsidies for state revenue raising. Thus in flush times, when a state’s income grows so that the AMT hits more state residents, state spending becomes more expensive 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 microeconomic theory. We

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also provide policy suggestions regarding how the AMT could be modified to leverage this stabilization effect.

Calls to “reform” the AMT predate the recent economic downturn. AMT reform has appeared in many congressional stimulus proposals, but significant cutbacks 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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INTRODUCTION

Economic downturns make for tough fiscal times for state and local governments. State fiscal belt-tightening has the potential to drive up unemploy-

ment and drive down consumer demand, further slowing the economy.¹ Throughout the recent recession, a steady stream of headlines warned that state budget cuts threatened to delay economic recovery.² 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.³

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 (AMT).⁴ We investigate empirically the impact of the 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 that this effect is countercyclical. Second, we add to a minute legal literature exploring stabilization policy at the state level and consider the impact state policy has on the cycles of national economic health.⁵

1. See Yilin Hou, *Fiscal Reserves and State Own-Source Expenditure in Downturn Years*, 33 PUB. FIN. REV. 117, 123 (2005); David A. Super, *Rethinking Fiscal Federalism*, 118 HARV. L. REV. 2544, 2609-10 (2005). For a recent empirical demonstration of this point, see Jonathan Rodden & Erik Wibbels, *Fiscal Decentralization and the Business Cycle: An Empirical Study of Seven Federations*, 22 ECON. & POL. 37 (2010).

2. See, e.g., Michael Cooper, *States Face Tough Decisions*, N.Y. TIMES, Feb. 19, 2009, at A17; *State Budgets in Crisis: Happy New Year*, ECONOMIST, July 4, 2009, at 74; Editorial, *States in Distress*, N.Y. TIMES, Aug. 4, 2009, at A22.

3. Surprisingly, study of the management of the business cycle, known as macroeconomic policy, is almost wholly absent from the legal tax literature. Jeff Strnad's essay discusses the general macroeconomic implications of the tax code. See 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. See 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. See Super, *supra* note 1, at 2610-14. And, in an important recent manuscript, Yair Listokin sets out more comprehensively the significance of federal tax policy for national business cycles. See Yair Listokin, *Tax Expenditures and Business Cycle Fluctuations* (Yale Law Sch. John M. Olin Ctr. for Studies in Law, Econ., & Pub. Policy, Research Paper No. 378, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1372782.

4. 26 U.S.C. §§ 55-58 (2006). For an overview of the AMT's complex provisions, see STAFF OF THE JOINT COMM. ON TAXATION, JCX-38-07, PRESENT LAW AND BACKGROUND RELATING TO THE ALTERNATIVE MINIMUM TAX 1-6 (2007), available at <http://www.jct.gov/x-38-07.pdf>.

5. Our only direct antecedent here is Super, *supra* note 1, at 2610-14, 2632-37. David Gamage also nicely captures many aspects of states' problems when facing economic hardship, and our analysis follows but expands on his. See David Gamage, *Preventing State Budget Crises: Managing the Fiscal Volatility Problem*, 98 CALIF. L. REV. 749 (2010).

And, third, 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.⁶

Turning to the substance of our argument, the standard goal of macroeconomic policy in general is to be “countercyclical,” stabilizing the economy by moderating both booms and busts.⁷ Extremes in either direction can lead to unwanted effects, whether they be job loss or excessive inflation.⁸ During downturns, this means that government may have a role to play in stimulating the economy, such as through increased spending, tax cuts, or expansionary monetary policy.⁹ Traditional microeconomic theory also offers similar prescriptions, counseling that transfers of wealth from richer periods (booms) to poorer periods (busts) increase overall social welfare.¹⁰

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.¹¹ Raising taxes to make ends meet is contrary to the usual macroeconomic recommendations 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, which would otherwise likely take on excessive debts.¹²

6. Again, the only other effort we are aware of is a brief passage in Super, *supra* note 1, 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. See Marianne Vigneault, The Role of Intergovernmental Transfers in Regional Stabilization and Equalization 10-15 (Feb. 2002) (unpublished manuscript), available at <http://www.aucc.ca/pdf/english/programs/cepra/Final%20Paper%20-%20Literature%20Reviw%20-by%20Vigneault.pdf>. Gamage considers a similar but conceptually distinct point: how best to distribute the risk of cyclical changes in the tax system across the population. See Gamage, *supra* note 5, at 772-91.

7. See 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.

8. See *id.* at 88; DAVID ROMER, *ADVANCED MACROECONOMICS* 217-59 (2d ed. 2001).

9. See ROMER, *supra* note 8, at 494-97.

10. We explain this theory in more detail in Part I.

11. See Brian Knight & Arik Levinson, *Fiscal Institutions in U.S. States*, in *INSTITUTIONS, POLITICS AND FISCAL POLICY* 167, 176-80 (Rolf R. Strauch & Jürgen von Hagen eds., 2000); Rodden & Wibbels, *supra* note 1, at 37; 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.*, Fall 1996, at 28; David E. Wildasin, *State and Local Government Finance in the Current Crisis: Time for Emergency Federal Relief?* 1 (Inst. for Federalism & Intergovernmental Relations, Working Paper No. 2009-07, 2009), available at http://www.ifigr.org/publication/ifir_working_papers/IFIR-WP-2009-07.pdf.

12. We detail the preceding points in Part II.

The result is that state finances tend to contribute to, rather than mitigate, the pain of economic downturns.¹³ And in a world where states are so closely economically interdependent, these effects are felt well outside any one state's borders.¹⁴ As recent events illustrate, state budget crises contribute to national economic woes.¹⁵

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 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.¹⁶

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—the state and local tax (SALT) deduction—which, in effect, is a federal matching grant for eligible state levies.¹⁷ The much-reviled AMT, 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 and some that could

13. See Hou, *supra* note 1, at 733 (discussing the procyclicality of state budgeting rules); Rodden & Wibbels, *supra* note 1, at 37; Teressa Ter-Minassian, *Decentralization and Macroeconomic Management* 7 (Int'l Monetary Fund, Working Paper No. WP/97/155, 1997), available at <http://www.imf.org/external/pubs/ft/wp/wp97155.pdf>.

14. See 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, 45-47 (Jonathan Rodden et al. eds., 2003) (discussing the extraterritorial effects of local fiscal failures).

15. See Wildasin, *supra* note 11, at 12. Past events demonstrate this relationship as well. See Tamim Bayoumi & Barry Eichengreen, *Restraining Yourself: The Implications of Fiscal Rules for Economic Stabilization*, 42 IMF STAFF PAPERS 32, 46 (1995) (“[S]tate budgets played a significant role in macroeconomic stabilization in the 1970s and 1980s . . .”).

16. We explain these arguments in depth in Part III.

17. 26 U.S.C. § 164 (2006).

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 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 I of the Article offers more background on the rationale for government interventions in the business cycle. Part II explains why states cannot themselves establish effective countercyclical taxing and spending policies. Part III elaborates on why standard forms of federal subsidy also are suspect. Part IV 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 jurisdictional level rises with state income. Part V presents the results of our empirical investigation into the stabilizing effects of the AMT. Part VI suggests some policies to improve the AMT's countercyclical effects. We then conclude.

I. MICRO-FOUNDATIONS OF THE AMT'S STABILIZATION EFFECT

The primary arguments for countercyclical 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 countercyclical fiscal policy.¹⁹

18. See, e.g., Jim Sanders, *California Legislature: 1 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. See 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. Some macroeconomists support the view that stimulus is not generally welfare improving. See, e.g., Valerie A. Ramey, *Identifying Government Spending Shocks: It's All in the Timing* (Nat'l Bureau of Econ. Research, Working Paper No. 15464, 2009), available at <http://www.nber.org/papers/w15464> (placing the government spending multiplier, the ratio of resulting consumption per dollar of government spending, somewhere between 0.6 and 1.1). Some macroeconomists also claim that fiscal policy is effective but inferior to using monetary policy to stimulate the economy and improve welfare. E.g., Christina Romer, *Changes in Business Cycles: Evidence and Explanations*, J. ECON. PERSP., Spring 1999, at 23, 36. Other macroeconomists claim that fiscal policy is the only feasible option to stimulate an economy and improve welfare in a liquidity trap where monetary policy is impotent. See, e.g., Lawrence Christiano et al., *When Is the Government Spending Multiplier Large? 1-2* (Nat'l Bureau of Econ. Research, Working Paper No. 15394, 2009), available at <http://www.nber.org/papers/w15394.pdf>. Even within the last camp, there is disagreement as to whether spending increases or tax cuts are more effective

The value of social insurance, or any insurance for that matter, hinges on 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) with the expectation that they will receive a relatively large transfer during bad times (when the event that was insured against occurs).²¹

In the social insurance context, the government body taxes individuals in relatively good financial condition 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 insur-

as stimulus tools. Compare Gauti B. Eggertsson, *What Fiscal Policy Is Effective at Zero Interest Rates?* 2 (Fed. Reserve Bank of N.Y., Staff Report No. 402, 2009), available at http://www.ny.frb.org/research/staff_reports/sr402.pdf (concluding that cuts in labor/payroll taxes lead to deflationary pressures, which worsen economic conditions), with Mark Bils & Pete Klenow, *Further Discussion of Temporary Payroll Tax Cut During Recession(s)* 4 (Dec. 12, 2008) (unpublished manuscript), available at http://klenow.com/Discussion_of_Payroll_Tax_Cut.pdf (reporting that under their model there are very large gains from cutting payroll taxes). To avoid these very complicated debates, we focus on the social insurance aspects of countercyclical fiscal policy, and we simply note that the AMT's stabilization effects could be important in models that allow for fiscal policy to have a stimulus effect.

Even for those readers more interested in macroeconomics per se, our discussion should still be pertinent; since recipients of social insurance may have a higher marginal propensity to consume, they may be important targets of fiscal stimulus. See Strnad, *supra* note 3, 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). The assumption that marginal utility is diminishing across the entire population is probably not completely accurate, but it is greatly simplifying. See Joseph Bankman & Thomas Griffith, *Social Welfare and the Rate Structure: A New Look at Progressive Taxation*, 75 CALIF. L. REV. 1905, 1947 (1987); Richard A. Musgrave, *ET, OT, and SBT*, 6 J. PUB. ECON. 3, 8-9, 14 (1976).

21. See MAS-COLELL ET AL., *supra* note 20, at 187-88.

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. See 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. See *id.* at 2.

23. See, e.g., James M. Poterba & Jürgen von Hagen, *Introduction to FISCAL INSTITUTIONS AND FISCAL PERFORMANCE* 1, 5 (James M. Poterba & Jürgen von Hagen eds., 1999).

24. See Feldstein, *supra* note 22, at 4. Note that social insurance necessarily generates

ance is generally provided with respect to income losses resulting from involuntary unemployment²⁵ or more general problems leading to poverty²⁶ 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 market alongside private competitors.²⁷ More limited social insurance programs include food stamps and subsidized housing.²⁸

While fiscal smoothing would be especially desirable during downturns, politics may frustrate that preference. 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 with which she will later be endowed. 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 social insurance. Technically speaking, social insurance (like public goods more generally) is a normal good, implying that the willingness to pay for it increases with income.³²

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

cross-subsidization in this context, though under a Rawlsian 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 precautionary savings and additional income production in the family. See Julie Berry 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. MONETARY ECON. 545 (2001).

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

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

28. See 7 U.S.C. §§ 2011-2036 (2006) (Supplemental Nutrition Assistance Program); *HOME and Low Income Housing Tax Credits (LIHTC)*, U.S. DEP’T HOUSING & URB. DEV. (June 2, 2010), <http://www.hud.gov/offices/cpd/affordablehousing/training/web/lihtc>.

29. JAMES M. BUCHANAN & GORDON TULLOCK, *THE CALCULUS OF CONSENT* 78 (1965).

30. JOHN RAWLS, *A THEORY OF JUSTICE* 136 (1971).

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

32. See, e.g., Daniel Hewitt, *Demand for National Public Goods: Estimates from Surveys*, 23 ECON. INQUIRY 487, 503 (1985).

times, they could engage in fiscal smoothing. Advocates of smoothing have championed rainy day funds on these grounds, but those efforts have been 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 of the failure of states to provide anywhere near optimal amounts of fiscal smoothing and evaluate several possible solutions to this problem.

II. 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

One obvious cure for declines in state tax revenues is for the state to increase tax *rates* to make up for the shortfall.³⁷ 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

33. Sobel & Holcombe, *supra* note 11, at 44; 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).

34. Rodden & Wibbels, *supra* note 1, at 56 ("Procyclicality is the rule among provinces and states in federations.").

35. Bayoumi & Eichengreen, *supra* note 15, 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); Rodden & Wibbels, *supra* note 1, at 42-43 (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 13.

37. Of course, this would only be an attractive strategy if the stimulative effect of the state's spending were greater than the drag on the economy caused by the tax.

much worse than a steady tax of 10% each year.³⁸ If revenue needs increase unexpectedly, the state should borrow, which allows it to spread the cost of meeting those needs more evenly over time.³⁹

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.⁴⁰ Because of free riding, this discontent might not significantly affect voting behavior.⁴¹ With exit, by contrast, it is difficult for one resident to free ride on another's effort to oppose undesirable policy; a neighbor's exit does little to preserve the value of one's own home.⁴² Thus, exit is not subject to the same degree of collective action problems as voting, so that mobile residents unhappy with social insurance payments may well flee the state.⁴³ States may be able to extract redistributive tax-

38. 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. RICHARD A. MUSGRAVE & PEGGY B. MUSGRAVE, *PUBLIC FINANCE IN THEORY AND PRACTICE* 235-36, 279-95 (5th ed. 1989). The welfare losses that result can be calculated by the standard geometric formula for the area of a triangle, $(1/2)bh$, implying that the loss rises in proportion to the square of the size of the distortion. *Id.* at 281.

39. See Robert J. Barro, *On the Determination of the Public Debt*, 87 J. POL. ECON. 940, 943-45 (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.

40. 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); Rodden & Wibbels, *supra* note 1, at 42 (arguing that an automatic interpersonal social insurance program would disproportionately favor individuals affected by regional shocks).

41. See, 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. See WILLIAM A. FISCHER, *THE HOMEVOTER HYPOTHESIS* 73-76 (2001). But this is not true of more diverse jurisdictions, such as states, rural counties, suburbs that welcome many new migrants, or large cities. See Richard Briffault, *Our Localism: Part II—Localism and Legal Theory*, 90 COLUM. L. REV. 346, 400-22 (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 the difficulties of monitoring an entity that performs variety of services and may succeed at some and fail at others).

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

43. See *id.* It is well established empirically that taxes affect the location of capital investment. E.g., Michael P. Devereux & Rachel Griffith, *Taxes and the Location of Production: Evidence from a Panel of US Multinationals*, 68 J. PUB. ECON. 335, 335, 351-58

es up to the exit costs of each taxpayer,⁴⁴ 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.⁴⁵ The federal government generally does not face these problems, because the costs of exiting the United States are typically prohibitively high.⁴⁶

The exit option also compounds the familiar difficulty of overcoming resistance to taxation by those who do not presently need social insurance payouts. At the state level, as at the national level, there will be conflict among special

(1998); Joseph M. Phillips & Ernest P. Goss, *The Effect of State and Local Taxes on Economic Development: A Meta-Analysis*, 62 S. ECON. J. 320, 320, 323-29 (1995). Evidence that taxes also affect personal choices is less overwhelming, but still substantial. *E.g.*, Richard J. Cebula, *Internal Migration Determinants: Recent Evidence*, 11 INT'L ADVANCES ECON. RES. 267, 272 (2005) (reporting that the cost of living affects migration patterns); Peter John et al., *Residential Mobility in London: A Micro-Level Test of the Behavioural Assumptions of the Tiebout Model*, 25 BRIT. J. POL. SCI. 379, 379 (1995) ("Taxes and services are found to be important factors in the moving decision . . ."); Hui Shan, *Property Taxes and Elderly Mobility*, 67 J. URB. ECON. 194 (2010) (finding that rising property taxes cause older households to relocate); Donald Bruce et al., *Base Mobility and State Personal Income Taxes* 18 (Sept. 2008) (unpublished manuscript), available at http://cber.utk.edu/confpapers/Bruce_Fox_Yang.pdf ("[T]axpayers with pension income prefer lower-tax-rate states . . ."); Elda Pema, *Do State Taxes Affect the Migration of Human Capital?* (unpublished manuscript), available at https://www.msu.edu/~pemaelda/E_Pema-Taxes%20and%20Human%20Capital.pdf (finding that more educated households are also more responsive to local taxes, affecting migration rates).

44. See Clayton P. Gillette, *Local Redistribution, Living Wage Ordinances, and Judicial Intervention*, 101 NW. U. 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 more densely populated and more urban jurisdictions—will be more capable of stabilization spending.

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

46. 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, all else being equal. 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. See 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: An Applied General Equilibrium Analysis*, 55 NAT'L TAX J. 239, 251 (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* (2009) (unpublished manuscript), 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.

interest groups over the taxing/spending tradeoff. Beneficiaries of stabilizing transfer payments can form a coherent group to defend and expand their entitlement, just as the small group of wealthy taxpayers may overcome free-rider dynamics to lobby against rate hikes.⁴⁷ 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.⁴⁸ Thus, taxpayers who can make at least a credible exit threat will likely be disproportionately powerful in resisting local tax increases.⁴⁹ Again, there are many more of those taxpayers at the local level than at the national level.

B. *Borrowing*

An obvious alternative to tax hikes for revenue-starved states is borrowing. Public borrowing can take a variety of forms, ranging from a straightforward bank loan to the sale of bonds of various kinds.⁵⁰ 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.⁵¹ 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

47. 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) (arguing that legislators award pecuniary gains to discrete individuals and groups in order to "claim credit and exact tribute").

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

49. 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); Gillette, *supra* note 42, at 966; see also Emmanuelle Reulier & Yvon Rocaboy, *Regional Tax Competition: Evidence from French Regions*, 43 REGIONAL STUD. 915 (2009) (finding that the main source of pressure on individual income tax rates in competing localities is the ability of individuals to compare their own rates against those of their neighbors' and threaten to punish underperforming officials).

50. 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, 8-25 (2004).

51. 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*, 35 J. URB. ECON. 159 (1994); and Wildasin, *supra* note 11, at 13 (summarizing other studies).

around for the term of the repayment, and has a personal discount rate that matches the market rate of interest, these future promises to pay should be perfectly equivalent to a current tax obligation.⁵² This principle is known to economists as “Ricardian equivalence.”⁵³ 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.⁵⁴ 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, 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.⁵⁵

Even if Ricardian equivalence is incomplete, future debt can still lead to high exit pressure due to its effect on housing prices.⁵⁶ Because the price of a home reflects the net value of living in it, future tax obligations should depress home values by their proportionate discounted present value, a process known as “capitalization.”⁵⁷ As a result of capitalization, a state’s future loan obligations reduce the present wealth of its residents, even those who would other-

52. See Robert J. Barro, *Are Government Bonds Net Wealth?*, 82 J. POL. ECON. 1095, 1096 (1974).

53. ROMER, *supra* note 8, at 537; John J. Seater, *Ricardian Equivalence*, 31 J. ECON. LITERATURE 142, 142 (1993).

54. For discussion of the points in this paragraph, see ROMER, *supra* note 8, at 537-41; 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); and Seater, *supra* note 53, at 144-56.

55. For example, one comprehensive survey claims that equivalence is a close approximation of reality, see Seater, *supra* note 53, 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).

56. See Clayton P. Gillette, *Direct Democracy and Debt*, 13 J. CONTEMP. LEGAL ISSUES 365, 391 (2004); Inman, *supra* note 54, at 83.

57. See Gillette, *supra* note 56, at 391; Inman, *supra* note 54, 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.

Empirical evidence suggests that capitalization is usually incomplete, however. See Gillette, *supra* note 56, at 392 (summarizing studies).

wise have heavily discounted the burden of that debt.⁵⁸ Knowing this, residents might flee or threaten to flee a jurisdiction that was considering taking on new debt.⁵⁹ And, real estate aside, Ricardian equivalence need not be complete for current voters to have at least some qualms about the prospect of higher future tax bills.

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 to favor the present over the future. 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 incurs. Any given voter might die or move before the balance comes fully due.⁶⁰ 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 event.⁶¹ Thus, there is an intertemporal fiscal externality, in which present voters do not fully take into account the costs of borrowing on succeeding residents.⁶² Similarly, voters may expect that if future debt payments become too onerous, their government might simply repudiate or default on its debts.⁶³ Repudiation would damage the jurisdiction's credit rating, raising the costs of subsequent borrowing, but these costs again would be felt relatively far into the future.⁶⁴

58. See Inman, *supra* note 54, at 83.

59. See Gillette, *supra* note 56, at 392; Inman, *supra* note 54, at 83-84.

60. See Bayoumi & Masson, *supra* note 54, at 1028; Inman, *supra* note 54, at 84 n.4.

61. See Gillette, *supra* note 42, at 959-60; Inman, *supra* note 54, 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 EST. ECON. 635, 636 (2008). So lower home values should result in lower rents, which means that public debt actually benefits renters.

62. See Gillette, *supra* note 42, at 961; Inman, *supra* note 54, at 84.

63. See Gillette, *supra* note 42, at 971.

64. *Id.*

In addition to the intertemporal externality, state borrowing also involves some interjurisdictional externalities. Default by one state can increase credit costs for other similar or neighboring states.⁶⁵ 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.”⁶⁶ The prospect of a state outright defaulting on its debts would be relatively disastrous for residents, neighbors, creditors, and even other counterparties of the creditors.⁶⁷ Thus, most analysts assume that central governments implicitly guarantee the debts of their local governments.⁶⁸ This guarantee leads to moral hazard—the costs of risky debt are 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.⁶⁹

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.⁷⁰ Econometric studies so far can neither confirm nor refute the hypothesis that borrowing increases the size of government.⁷¹ A number of studies have shown, though, that *personal* borrowing patterns are consistent with a story in which individuals incur greater borrowing

65. See Gillette, *supra* note 56, at 976-77; Ehtisham Ahmad et al., *Subnational Public Financial Management: Institutions and Macroeconomic Considerations* 13 (Int'l Monetary Fund, Working Paper No. 05/108, 2005), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=887977.

66. See David E. Wildasin, *Externalities and Bailouts: Hard and Soft Budget Constraints in Intergovernmental Fiscal Relations* 1, 20-22 (World Bank Dev. Research Grp., Working Paper No. 1843, 1997), available at <http://ideas.repec.org/p/wbk/wbrwps/1843.html> (modeling the argument that larger subnational governments are more likely to receive bailouts).

67. Cf. Inman, *supra* note 14, at 45-53 (describing the intergovernmental impacts of defaults).

68. See, 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 N. Shaviro eds., 2008); Jonathan Rodden, *The Dilemma of Fiscal Federalism: Grants and Fiscal Performance Around the World*, 46 *AM. J. POL. SCI.* 670, 671-72 (2002); Andres Velasco, *Debts and Deficits with Fragmented Fiscal Policymaking*, 76 *J. PUB. ECON.* 105, 107 (2000). Robert Inman argues, though, that the United States has generally resisted bailouts, although he acknowledges some prominent recent exceptions. Inman, *supra* note 14, at 59-61.

69. See Rodden, *supra* note 68, at 671-72; Velasco, *supra* note 68, at 107; Ahmad et al., *supra* note 65, at 12-13.

70. See, e.g., BRENNAN & BUCHANAN, *supra* note 48, 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, 584-86, 605 (2002) (suggesting that taxation and budgeting may be driven by political manipulation of ignorant voters).

71. See Brian E. Dollery & Andrew C. Worthington, *The Empirical Analysis of Fiscal Illusion*, 10 *J. ECON. SURVS.* 261, 293-94 (1996); Wallace E. Oates, *On the Nature and Measurement of Fiscal Illusion: A Survey*, in *TAXATION AND FISCAL FEDERALISM: ESSAYS IN HONOUR OF RUSSELL MATHEWS* 65, 76-77 (Geoffrey Brennan et al. eds., 1988).

costs in the present than they would prefer later.⁷² Since your authors disagree on the policy implications of putatively irrational behavior,⁷³ we will proceed here on the assumption that voters are rational.

Whatever the ultimate behavior of individual voters, there are also familiar incentives for public officials 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 is out of office.⁷⁴ Besley and Case, for example, find that officials in their last term of a term-limited office spend more 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.⁷⁵

While federal officials also face these kinds of pressures, the dynamic is especially acute at the state and local level. 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

72. See Sumit Agarwal et al., *The Age of Reason: Financial Decisions over the Life Cycle and Implications for Regulation*, BROOKINGS PAPERS ON ECON. ACTIVITY, Fall 2009, at 51, 53 (reporting that younger and older individuals pay interest rates that “are not explained by differences in observed risk characteristics”); Paul S. Calem & Loretta J. Mester, *Consumer Behavior and the Stickiness of Credit-Card Interest Rates*, 85 AM. ECON. REV. 1327, 1327-28, 1333 (1995) (finding evidence that consumers are impatient or misestimate their future borrowing behavior, leading to excessive present costs); David Laibson et al., *A Debt Puzzle*, in KNOWLEDGE, INFORMATION, AND EXPECTATIONS IN MODERN MACROECONOMICS: IN HONOR OF EDMUND S. PHELPS 228, 228-29 (Philippe Aghion et al. eds., 2003).

73. Compare Jonathan Klick & Gregory Mitchell, *Government Regulation of Irrationality: Moral and Cognitive Hazards*, 90 MINN. L. REV. 1620, 1626 (2006) (suggesting that government correction of consumer errors may lower welfare in the long run by reducing incentives for consumers to change themselves), with Brian Galle, *Federal Fairness to State Taxpayers: Irrationality, Unfunded Mandates, and the “SALT” Deduction*, 106 MICH. L. REV. 805, 818-23 (2008) (arguing that Klick and Mitchell assume that consumers would have the power to change their own behavior without government intervention).

74. See Richard Briffault, *Foreword: The Disfavored Constitution: State Fiscal Limits and State Constitutional Law*, 34 RUTGERS L.J. 907, 917-18 (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 54, at 82.

75. Timothy Besley & Anne Case, *Political Institutions and Policy Choices: Evidence from the United States*, 41 J. ECON. LITERATURE 7, 54-56 (2003); see also James M. Poterba, *State Responses to Fiscal Crises: The Effects of Budgetary Institutions and Politics*, 102 J. POL. ECON. 799, 818 (1994) (finding that proximity to the next election affected governors’ choices of how to balance budget). Creditors are also a potential source of restraint on borrowing, Gillette, *supra* note 42, at 942, but the goals of creditors rarely match those of constituents, and many creditors have only weak incentives to monitor local governments. See *id.* at 972, 975-81; see also Ter-Minassian, *supra* note 13, at 10 (arguing that officials are insensitive to credit market discipline).

those of similar neighbors.⁷⁶ In a world where there is less than full Ricardian equivalence, 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.⁷⁷

3. *Legal limits on local debt*

Given the political dynamics we have just described, it is unsurprising that many states have tied their officials' hands by sharply limiting their own capacity to take on debt, 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 supermajority 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 purposes.⁸³ Similarly,

76. Timothy Besley & Anne Case, *Incumbent Behavior: Vote-Seeking, Tax-Setting, and Yardstick Competition*, 85 AM. ECON. REV. 25, 28-30 (1995). *But see* Gillette, *supra* note 42, at 958-59 (arguing that government services are too difficult to compare for inter-jurisdictional competition to be meaningful).

77. *See* Ahmad et al., *supra* note 65, at 12. As Inman explains, capitalization likely fails to restrain these exit-driven pressures to borrow, since rational home buyers will each free ride on one another's efforts to verify future debt burdens. *See* Inman, *supra* note 14, at 50-51.

78. *See* Knight & Levinson, *supra* note 11, at 169-70 tbl.1; Levinson, *supra* note 35, at 717.

79. Briffault, *supra* note 74, at 915-16.

80. *See* James M. Poterba, *Budget Institutions and Fiscal Policy in the U.S. States*, 86 AM. ECON. REV. 395, 396 (1996) (listing states' usual options for mitigating fiscal restraints, none of which are related to business cycle); *see also* Levinson, *supra* note 35, at 717-19 (same, and noting that restraints on state budget rules may in fact "exacerbate" the impact of business cycles on states).

81. *See* Briffault, *supra* note 74, at 917-18, 948 (discussing the reasons for state constitutional limits on spending).

82. *See id.* at 909, 918-25.

83. *Id.* at 919-22.

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, though effective, are 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, 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

84. *Id.* at 918-19.

85. *See, e.g.,* Bayoumi & Eichengreen, *supra* note 15, at 33, 40-41, 46; *see also* James Poterba, *Do Budget Rules Work?*, in *FISCAL POLICY: LESSONS FROM ECONOMIC RESEARCH* 53, 75-77 (Alan J. Auerbach ed., 1997) (collecting studies). *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 Government Accountability Office (GAO) lawyers, and eschew the state official self-reporting that was the basis for other studies. *Id.* at 532, 534-35. They do not verify the GAO's work. We find state self-reporting more persuasive, because officials will probably know the reality of their own budget constraints. Research assistants working at the GAO may easily have read what appears in a statute to be a strict state rule as strict, when in reality it has been judicially undermined or is easily circumvented.

86. *See* Briffault, *supra* note 74, 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 also* Poterba, *supra* note 75, at 804-18 (finding that even states with strict budget limits are able to adjust to fiscal shocks, but that more binding limits have larger effects on state spending).

87. Sobel & Holcombe, *supra* note 11, at 28.

88. *Id.* at 29-30.

89. *See* Martin Browning & Annamaria Lusardi, *Household Saving: Micro Theories and Micro Facts*, 34 *J. ECON. LITERATURE* 1797, 1799-812 (1996) (discussing saving and borrowing as alternative tools for income smoothing).

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time to the time of some future crisis. Other commentators overwhelmingly endorse rainy day funds as in theory the best solution to state fiscal crises.⁹⁰

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.⁹¹ 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.⁹² 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.⁹³ Accordingly, there are powerful political incentives for state officials both to save too little and also to withdraw savings from any existing rainy day fund well before any true fiscal crisis.

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

III. FEDERAL INTERVENTIONS

So far we have shown that income smoothing is an important function of government, but that state governments likely cannot 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 a moral hazard on the part of state policymakers. 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

90. See, e.g., Sobel & Holcombe, *supra* note 11, at 28, 30, 43-45; Super, *supra* note 1, at 2642-43.

91. See Sobel & Holcombe, *supra* note 11, at 33; Super, *supra* note 1, at 2611.

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

93. Cf. Gillette, *supra* note 42, at 955 (making this point about monitoring the misuse of public funds).

might.⁹⁴ There is already an extensive and generally inconclusive literature on the role of the federal government in redistributing wealth.⁹⁵ While centralized redistribution mitigates some problems, it also may sacrifice other federalism values.⁹⁶ For example, one set of federal policymakers cannot easily capture all social preferences for redistribution; redistribution at the local level allows individuals to sort themselves according to their preferences.⁹⁷ Recasting this familiar debate in the context of social insurance leads us to two additional arguments.

First, an underappreciated problem with the federal provision of social insurance is that it induces moral hazard at the state policymaking level.⁹⁸ Federal social insurance reduces the downside risk of policy reform for each state, leading to increased risk taking in all policy areas, not only those with federal funding.⁹⁹ Additionally, since federal funding is a common pool, each state has incentives to withdraw—that is, to take big risks—before others.¹⁰⁰ The inter-

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

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

96. See Wallace E. Oates, *Fiscal Competition and European Union: Contrasting Perspectives*, 31 REGIONAL SCI. & URB. ECON. 133, 133-43 (2001) (discussing the benefits and drawbacks of a tax system with multiple competing sovereigns rather than a single central authority); John Douglas Wilson & David E. Wildasin, *Capital Tax Competition: Bane or Boon?*, 88 J. PUB. ECON. 1065, 1088 (2004) (same); George R. Zodrow, *Tax Competition and Tax Coordination in the European Union*, 10 INT'L TAX & PUB. FIN. 651, 651-66 (2003) (same).

97. See MUSGRAVE & MUSGRAVE, *supra* note 38, at 451; Mariano Tommasi & Federico 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. See Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CALIF. L. REV. 569, 603-04 (1984). There is strong evidence that individuals are geographically segregated by wealth. See CHARLES M. HAAR, *SUBURBS UNDER SIEGE: RACE, SPACE, AND AUDACIOUS JUDGES* 5 (1996); Douglas S. Massey & Mary J. Fischer, *The Geography of Inequality in the United States, 1950-2000*, in BROOKINGS-WHARTON PAPERS ON URBAN AFFAIRS 1, 6-29 (2003).

98. See 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, 153-54 (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. See Ben Lockwood, *Inter-Regional Insurance*, 72 J. PUB. ECON. 1, 2 (1999).

99. See Oates, *supra* note 68, at 176-77; Rodden, *supra* note 68, at 672.

100. See Sanguinetti & Tommasi, *supra* note 98, at 151. As Persson and Tabellini note,

connectedness of state economies would make this increased recklessness a particular hazard for the national economy.¹⁰¹

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.¹⁰² A second hybrid not previously recognized in the literature for its stabilization potential is tax exporting.

Matching grants reduce the problems inherent in federal financing. Under a matching system, states bear some of the costs of risky policy, reducing moral hazard.¹⁰³ Cofinancing 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.¹⁰⁴ Thus, taxpayers in these worst-off areas experience higher government demand

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. *See* Persson & Tabellini, *supra* note 98, 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* 14-19 (Ctr. for Econ. Studies Info. & Forschung, Working Paper No. 1888, 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=959998 (arguing that the federal government cannot observe state precautionary efforts closely enough to set the correct subsidy amount and cannot commit politically to withholding aid from areas that fail to invest in disaster prevention).

We note that additional incentives to take on risky new policies might be desirable to the extent that such policies are undersupplied by the political market. *See* Brian Galle & Joseph Leahy, *Laboratories of Democracy? Policy Innovation in Decentralized Governments*, 58 EMORY L.J. 1333, 1341-98 (2009) (considering whether local governments innovate suboptimally). But calibrating federal social insurance to provide the correct amount of additional risk taking seems a challenging task.

101. *See* Oates, *supra* note 68, at 176.

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

103. *See* Lockwood, *supra* note 98, at 14 (finding that the optimal stabilization grant under asymmetric information provides only partial insurance); *cf.* WILLARD G. MANNING & M. SUSAN MARQUIS, *RAND CORP., HEALTH INSURANCE: THE TRADE-OFF BETWEEN RISK POOLING AND MORAL HAZARD* 31 (1989) (arguing that partial personal liability of the insured will counterbalance moral hazard of health insurance policies); Martin S. Feldstein, *The Welfare Loss of Excess Health Insurance*, 81 J. POL. ECON. 251 (1973) (same).

104. *See* Bayoumi & Masson, *supra* note 54, at 1027.

without an accompanying drop in consumer demand.¹⁰⁵ Matching grants also offer the possibility of traditional federalism benefits, such as superior information on the part of local officials.¹⁰⁶

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.¹⁰⁷ 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.

Tax exporting is probably a poor stabilization tool, however. The stabilization effects of tax exporting will be fairly haphazard, with costs flowing randomly to states with economic ties to the exporter.¹⁰⁸ And exporting states have no incentive to protect their trading partners from the negative effects of the exported tax.¹⁰⁹ 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 ones that are 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,¹¹⁰ such as the possibility that the cost of bailing a state out of a regional crisis could increase the federal government's own costs of borrowing, or even the chances of a national downturn.¹¹¹ More generally, federal supports may raise state expenditures above the level their citizens would have chosen in an undistorted political market,¹¹² although one of us has argued in turn that theory is ambiguous about whether this upward distortion would be outweighed by downward

105. *See id.* at 1030.

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

107. *See* Robert Tannenwald, *Fiscal Disparity Among the States Revisited*, NEW ENG. ECON. REV., July-Aug. 1999, at 3, 4. "Tax exporting" refers to a local tax system in which the incidence of the tax is borne by outsiders. *See generally* Charles E. McLure, Jr., *The Interstate Exporting of State and Local Taxes: Estimates for 1962*, 20 NAT'L TAX J. 49 (1967) (describing the phenomenon of tax exporting and measuring its extent).

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

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

110. *See* Thomas Aronsson & Magnus Wikstrom, *Optimal Taxation and Risk-Sharing Arrangements in an Economic Federation*, 55 OXFORD ECON. PAPERS 104, 105 (2003); Gillette, *supra* note 74, at 1055-56, 1059; Oates, *supra* note 68, at 175; Michael Smart, *Taxation and Deadweight Loss in a System of Intergovernmental Transfers*, 31 CANADIAN J. ECON. 189, 205-06 (1998).

111. *See* Sanguinetti & Tommasi, *supra* note 98, at 167.

112. *See* 2 DEP'T OF THE TREASURY, TAX REFORM FOR FAIRNESS, SIMPLICITY, AND ECONOMIC GROWTH 63-64 (1984); Gillette, *supra* note 74, at 1059; Edward M. Gramlich, *Federalism and Federal Deficit Reduction*, 40 NAT'L TAX J. 299, 305 (1987).

pressure from tax competition.¹¹³

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 funds in order to make them available for a more efficient project elsewhere.¹¹⁴ Additionally, since matching grants by definition require state expenditures, fiscally strapped states may actually draw less funds.¹¹⁵ 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. Moreover, outside subsidies may have undesirable stabilization effects when states' economies are expanding.¹¹⁶

Making federal fiscal supports temporary or discretionary solves some of these problems, but creates others. Macroeconomists argue that the delays and political costs that attend enacting discretionary programs greatly reduce the effectiveness of any resulting expenditure.¹¹⁷ Perhaps the most important aspect of countercyclical spending is its timing, and discretionary programs mean that the timing of funds will depend on politics, not economic necessity.¹¹⁸ Thus, experts claim that "automatic" stabilizers are much preferable to grant programs.¹¹⁹ For example, Christina Romer found historical evidence that automatic stabilizers such as the income tax were considerably more effective than discretionary policies.¹²⁰

Discretionary spending can be too fast as well as too slow. Officials with imperfect information about the duration of a downturn and political incentives for present over delayed spending may be inclined to spend all of a grant immediately.¹²¹ But if the downturn is prolonged, or the deepest state budget holes in fact lag behind the onset of the decline,¹²² then immediate spending is not optimal. This is another advantage of automatic stabilization: it persists as long as the downturn.

113. Brian Galle, *Federal Grants, State Decisions*, 88 B.U. L. REV. 875, 931-34 (2008).

114. See Weingast et al., *supra* note 47, at 656.

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

116. See Super, *supra* note 1, at 2610.

117. See, e.g., Strnad, *supra* note 3, at 179-80; Wildasin, *supra* note 11, at 9; see also John B. Taylor, *The Lack of an Empirical Rationale for a Revival of Discretionary Fiscal Policy*, 99 AM. ECON. REV. PAPERS & PROC. 550, 550 (noting the consensus of earlier economists on this point) (2009); Vigneault, *supra* note 6, at 14.

118. See Strnad, *supra* note 3, at 180; Super, *supra* note 1, at 2608; Vigneault, *supra* note 6, at 14.

119. See, e.g., Strnad, *supra* note 3, at 180.

120. See Romer, *supra* note 19, at 37.

121. We are grateful to Jeff Strnad for highlighting this point.

122. In fact, conventional wisdom is that because of delays in tax collection and real estate assessments, budget deficits lag downturns. See Rodden & Wibbels, *supra* note 1, at 57.

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 a 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.¹²³ Alternatively, 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 federal fiscal support that only operates when states need the money? It is indeed, as we shall now explain.

IV. THE ALTERNATIVE MINIMUM TAX AS AN 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 federal subsidies risk 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 and their constituents would be very attractive. These mechanisms would generate countercyclical effects without any proactive decisions being made on the part of political actors.¹²⁴

Surprisingly, the federal AMT already performs this function, although it has not yet been perfected for use as an automatic stabilizer. In one respect it

123. Rodden and Wibbels 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. *See id.* at 51-52; *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 the 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. *See, e.g.*, 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* Ter-Minassian, *supra* note 13, 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.

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

should not be totally surprising that the AMT is a major stabilization player. The federal income tax is known to be an automatic stabilizer at the national level because its progressive structure results in tax rate reductions as income declines.¹²⁵ In his important recent work, Yair Listokin predicts that many tax expenditures reduce the efficacy of this stabilization effect.¹²⁶ 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 "phase-outs," such as the AMT, may mitigate this procyclical effect by turning off the tax expenditure's incentive power when income rises above a certain level.¹²⁷

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 reach, 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.¹²⁸ In general, the AMT has a broader base but slightly less progressive rates.¹²⁹ 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 the 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.¹³⁰ Both

125. *See id.*; Strnad, *supra* note 3, at 180.

126. *See* Listokin, *supra* note 3, at 10-22.

127. *See id.* at 18-20.

128. *See* STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 2.

129. *See id.* at 19.

130. *Id.* at 2.

systems also phase out certain exclusions so that at very high incomes, effective rates may be higher.¹³¹ 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.¹³² 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 \$46,700.¹³³ This exclusion amount is not indexed for inflation, which is why more and more people have become subject to AMT liability over the years.¹³⁴ The exclusion amount for married couples filing jointly is less than double the individual exclusion,¹³⁵ so families are more likely to pay the AMT.

Typically, taxpayers become subject to the AMT because their taxable income under the standard income tax was reduced by deductions that are not available under the AMT.¹³⁶ For instance, suppose a single taxpayer, Galle, with a gross income of \$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 \$8950 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 exemptions for numerous children and itemizes his deductions, reducing his \$100,000 gross income to \$51,000 taxable income.¹³⁷ Klick’s tax liability under the standard system is about \$9088. The AMT does not permit exemptions 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 \$4770.

Because of the large exclusion amount, the likelihood of being subject to AMT liability increases with income, at least at low and moderate income levels.¹³⁸ That is, no matter how many child exemptions he claimed, if Klick’s

131. *See id.* at 21.

132. *See* 26 U.S.C. §§ 63(c)(2), 151 (2006); Rev. Proc. 2009-50 § 3.11, 2009-45 I.R.B. 617, 622.

133. *AMT Parameters, 1993-2009*, TAX POL’Y CENTER (Dec. 28, 2009), <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=539>.

134. STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 7.

135. *See AMT Parameters, 1993-2009*, *supra* note 133.

136. *See* STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 7.

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

138. *See* STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 20.

gross income were less than \$46,700, the 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 the AMT. This connection between the AMT and income turns out to be crucial to our argument, as we develop more fully in Part IV.A.2.

Another implication of this structure is that the AMT makes useless a number of deductions and exclusions available under the tax 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 the AMT, Klick paid more in tax than he expected. In our example, AMT liability was only higher by \$4770, so Klick lost \$4770 worth of the value of his depreciation deduction. In other cases, AMT liability may be much higher than standard income tax liability, so that effectively the taxpayer receives 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.¹³⁹ 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), § 164 of the tax code.¹⁴⁰ Disallowance of the SALT deduction continues to account for just under half of all the AMT’s revenues.¹⁴¹

139. See 26 U.S.C. § 56 (2006) (limiting certain other tax preferences under the AMT); *id.* § 106(a) (employer-provided health insurance premiums); *id.* § 162(a) (trade or business expenses); *id.* § 163(h) (home mortgage interest).

140. See Greg Leiserson & Jeffrey Rohaly, *The Individual Alternative Minimum Tax: Historical Data and Projections*, TAX POL’Y CENTER, 6 (June 2008), http://www.taxpolicycenter.org/uploadedpdf/411703_individual_amt.pdf.

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. See STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, 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 significance.

141. See STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 18 tbl.4.

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.¹⁴² For every dollar a taxpayer pays her state and local governments in income and property taxes, she reduces her federal tax bill by one dollar times her marginal federal rate.¹⁴³ 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.¹⁴⁴

Thus, the SALT deduction functions as a subsidy for state and local governments.¹⁴⁵ First, it induces a substitution effect in favor of state and local taxation.¹⁴⁶ 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 \$0.65, 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.

Earlier empirical work is inconclusive on whether deductibility has an upward influence on deductible state and local tax levels. Some find that deductibility increases the total amount of tax collected by the state, while others suggest that taxes may simply be shifted from deductible to nondeductible forms.¹⁴⁷ Our findings support the first view, as we will explain.

142. See Charles E. McClure, Jr. & George R. Zodrow, *Treasury I and the Tax Reform Act of 1986: The Economics and Politics of Tax Reform*, J. ECON. PERSP., Summer 1987, at 37, 55.

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

144. 26 U.S.C. § 164(b)(5) (2006). A use tax is a mirror image of the sales tax, but is imposed on the out-of-state purchase of goods. See Walter Hellerstein, *Jurisdiction to Tax Income and Consumption in the New Economy: A Theoretical and Comparative Perspective*, 38 GA. L. REV. 1, 20 (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).

145. 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 Galle, *supra* note 73.

146. See 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 S. Rosen ed., 1988).

147. 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, 270 (1990); Edward M. Gramlich, *The Deductibility of State and Local Taxes*, 38 NAT'L TAX J. 447, 453-58 (1985); and those surveyed in Bruce Bartlett, *The Case 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

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 deductions. 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 IV.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, reduces this exit pressure (or the credible threat of it) by diminishing the after-tax cost of any given state's own taxes. On the normative side, states should attempt to smooth rates over time.¹⁴⁸ The AMT/SALT combination allows states to achieve similar effective net-of-federal-tax rates during crises and other times, as we illustrate here with Figure 1.¹⁴⁹

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); and 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 140, at 10 tbl.2 (showing that total number of taxpayers nationwide subject to the AMT was 430,000 in 1985 and 200,000 in 1990, compared to 33.4 million today).

A subsequent study purported to find evidence that deductibility led states simply to shift tax bases without also increasing overall tax revenues. See Paul N. Courant & Edward M. Gramlich, *The Impact of the Tax Reform Act of 1986 on State and Local Fiscal 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 and Gramlich study provides unconvincing evidence that deductibility cannot increase revenues because the study could not control for several possible confounding factors. Courant and Gramlich studied the effect of the 1986 repeal of federal deductibility of state and local sales taxes. See Courant & Gramlich, *supra*, at 244. At the same time, federal marginal rates changed dramatically, greatly altering the value of deductibility. See Stephen H. Pollock, *Mechanisms for Exporting the State Sales Tax Burden in the Absence of Federal Deductibility*, 44 NAT'L TAX J. 297, 297-99 (1991). And, too, sales taxes are both hard to deduct (such that their prior deductibility may have been more theoretical than real) and uniquely useful as a means for tax exporting. See *id.* at 297-99, 306. Thus, looking only at the 1986 change offers at best mixed information about the importance of deductibility for other revenue sources. See Gilbert E. Metcalf, *Deductibility and Optimal State and Local Fiscal Policy*, 39 ECON. LETTERS 217, 221 (1992). So loss of deductibility might well present a much more serious blow to state revenues for other forms of tax.

148. See *supra* notes 37-39 and accompanying text.

149. The figure simplifies reality somewhat. In actuality, only some taxpayers will benefit from the SALT deduction even in severe downturns, so that effective rates for other 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

FIGURE 1

	SALT Deduction "Off"	SALT Deduction "On"
Gross Income	\$1800	\$900
State Income Tax Rate	11%	16.5%
State Income Tax Amount	\$200	\$150
Reduction in Federal Tax (Assume Marginal Rate of 33%)	\$0	\$50
State Tax Net of Federal Tax Reduction	\$200	\$100
Effective State Income Tax Rate	11%	11%

Note: Although the state raises tax rates during a downturn, when income declines the AMT allows the SALT deduction to phase back in, resulting in no net change in effective state income tax rates.

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 interjurisdictional 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 is illustrated in Figure 2. 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.

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.

FIGURE 2

	SALT Deduction "Off"	SALT Deduction "On"
Gross Income	\$1800	\$900
State Tax Amount	\$200	\$150
Federal Tax Amount (Assume Marginal Rate of 33%)	\$600	\$250 (\$300 - (\$150 × 0.33))
Total Tax Paid	\$800	\$400
Net After-Tax Income as % of Total Income	55.6% (\$1000/\$1800)	55.6% (\$500/\$900)

Note: Although the state increases its tax revenues during a downturn, the AMT allows the SALT deduction to phase back in, resulting in no net change in the average taxpayer's proportion of after-tax income available for consumption.

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 $Q_i = f(t_i(I - \alpha t_f), I, p_x)$, 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, 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 IV.B and V.

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.¹⁵⁰ We therefore focus here on the two we view as the 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.¹⁵¹ 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.¹⁵²

Just under half of all taxpayers who pay the AMT do so because it disallows their dependent exemptions.¹⁵³ Under the standard income tax, parents of dependent children and caretakers for adults with disabilities can reduce their taxable income by roughly \$3500 per dependent.¹⁵⁴ This 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.¹⁵⁵

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 will be an income effect, somewhat increasing support for local taxing and spending.

Targeting funds specifically to large families makes some policy sense. From a microeconomic perspective, bigger households must pay more to meet their bare essentials, making the value of income smoothing higher. And, from a macroeconomic perspective, there is evidence that families with many dependents have a higher marginal propensity to spend a fiscal stimulus.¹⁵⁶ That is,

150. *AMT Preference Items 2002, 2004-2007*, TAX POL'Y CENTER (July 27, 2010), <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=468>. For a complete listing and explanation of each provision, see STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 2-4.

151. See STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 17-18 & tbl.4 (reporting that in 2007, 42.7% of AMT payers lost personal exemptions they could have claimed under the standard income tax).

152. See *id.* at 18 tbl.3 (stating that in 2007, under two million taxpayers lost "other preferences and adjustments," including the home equity interest deduction).

153. See *id.* at 18 tbl.4.

154. See 26 U.S.C. § 151(d)(1), (4) (2006) (setting amount at \$2000 in 1989 dollars, adjusted for inflation).

155. Leonard E. Burman, *The Alternative Minimum Tax: Assault on the Middle Class*, MILKEN INST. REV., Fourth Quarter 2007, at 12, 14, available at http://www.urban.org/UploadedPDF/1001113_Burman_AMT.pdf.

156. See David S. Johnson et al., *Household Expenditure and the Income Tax Rebates of 2001*, 96 AM. ECON. REV. 1589, 1597 tbl.2 (2006). Families with dependent children may also have increased demand for local government services, such as schools and public safety.

they will save less of the stimulus, increasing its effectiveness.

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.¹⁵⁷ The AMT retains a deduction for “purchase money” debt, but turns off the home equity loans deduction.¹⁵⁸ Fewer than 1.6% of AMT taxpayers lost a home equity deduction in 2007.¹⁵⁹

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, 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.¹⁶⁰ 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.¹⁶¹ If (as is generally true) property taxes are based on appraised value, this increase in value will also increase property tax revenues.¹⁶² 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 the AMT, making the deduction somewhat countercyclical. But we freely concede that this 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.

157. 26 U.S.C. § 163(h)(3)(C) (2006).

158. *Id.* § 56(b)(1)(C) (2006).

159. See STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 18 tbl.4. However, the total dollar value of the miscellaneous lost deduction in 2007 was more than eight billion dollars. *Id.* at tbl.3.

160. See Listokin, *supra* note 3, at 16.

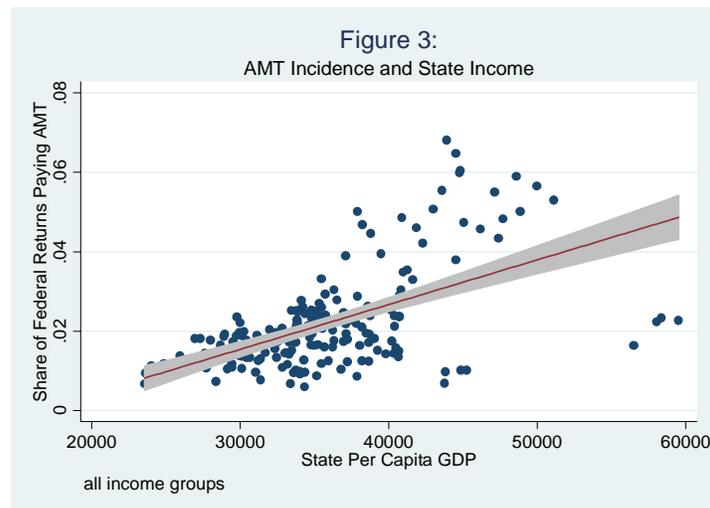
161. See Wallace E. Oates, *The Effects of Property Taxes and Local Public Spending on Property Values: An Empirical Study of Tax Capitalization and the Tiebout Hypothesis*, 77 J. POL. ECON. 957, 966-67 (1969).

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

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 system imposes a 35% maximum rate,¹⁶³ while the AMT tops out at 28%. Thus, it is theoretically ambiguous whether jurisdictions with higher average incomes experience greater AMT liability.¹⁶⁴ Accordingly, we present here empirical evidence that AMT liability is increasing in income at the jurisdictional level.

Using IRS Statistics of Income data from 2004-2007,¹⁶⁵ 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 3.¹⁶⁶ The data include observations for all fifty states.¹⁶⁷ In addition to the scatter plot, we provide a linear best-fit line through the data as well as its 95% confidence interval.



163. STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 12.

164. *See id.*

165. Public SOI data include the AMT data beginning only in 2004. State-level individual income tax data are collected at *SOI Tax Stats—Historic Table 2*, IRS.GOV, <http://www.irs.gov/taxstats/article/0,,id=171535,00.html> (last updated Sept. 2, 2010).

166. Note that for the graphs that follow, a similar picture emerges if one conditions on average state tax rates, suggesting that this correlation is not simply the result of high income states having higher tax rates.

167. Note that the cluster of observations with very low AMT shares, but high per capita GDP, represent Delaware, which has a relatively low tax burden despite the relatively high state income levels. *See Delaware's State and Local Tax Burden, 1977-2008*, TAX FOUND. (Aug. 27, 2008), <http://www.taxfoundation.org/taxdata/show/446.html>.

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Figure 3 shows a statistically significant positive relationship between AMT incidence and state per capita income. Further, this relationship endures and is statistically significant at each point of the income distribution. Figure 4 provides the same graph using data only for the returns of those individuals making more than \$50,000 in a year.

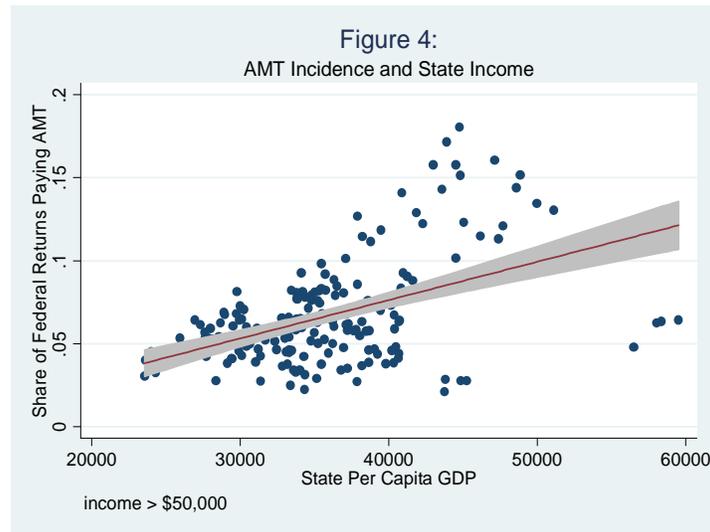


Figure 5 further restricts attention to returns of individuals making more than \$75,000.

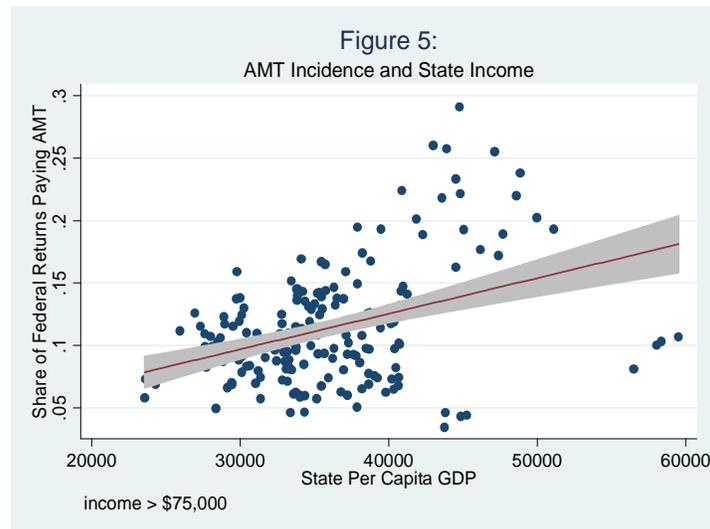
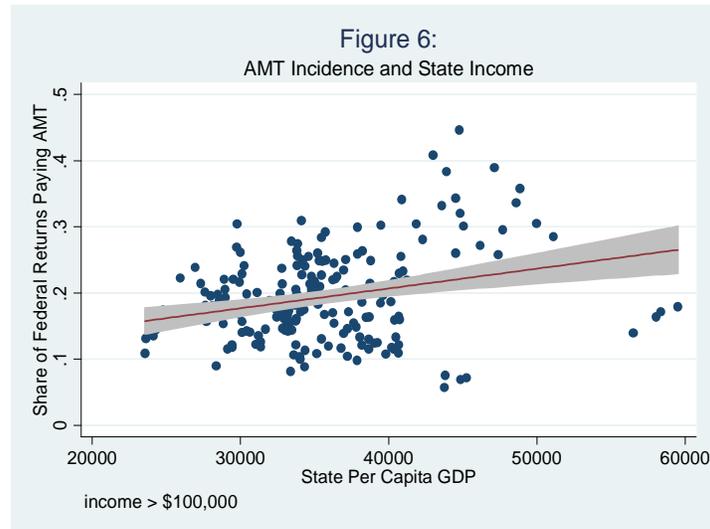
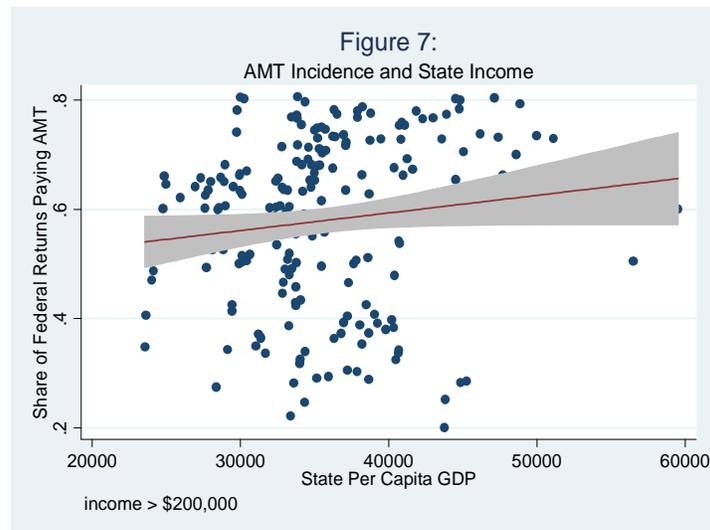


Figure 6 examines returns of individuals earning more than \$100,000.



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



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.

The scatter plots also show that while AMT incidence is low in the population overall, it is a significant fact of life among those earning more than \$200,000 annually. This disparity suggests an important story about the possible impact of the AMT. If high earners are disproportionately sensitive to the AMT, or have a high degree of political influence, the AMT may well be an important determinant of state spending. We turn now to examining that effect.

V. 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 subject to the AMT increases, conditional on state income.¹⁶⁸ As implied above, state spending in these areas is hypothesized as a normal good, thus we should find that as income goes up, spending goes up as well. Further, as the AMT covers a greater fraction of individuals, 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.¹⁶⁹ Because our AMT coverage data is only available beginning in 2004, our sample covers the period of 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.¹⁷⁰

To account for any effects of inflation on state spending, we use the con-

168. That is, for two states with identical income, the one with a higher total AMT liability spends less on social insurance.

169. These data come from the *Survey of State Government Finances*, U.S. CENSUS BUREAU, <http://www.census.gov/govs/state> (last updated July 15, 2010). 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.

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

sumer price index (CPI) to deflate all expenditure and income amounts to a constant price level.¹⁷¹ 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.¹⁷²

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

TABLE 1
Descriptive Statistics

Variable	Description	Mean	St. Dev.	Source
Spending	Real state government spending per capita on education, welfare, hospitals, and public health	1590	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	Share of federal returns paying AMT > 0	0.027	0.015	IRS
AMT Share 50k+	Share of federal returns paying AMT > 0 for filers with incomes > \$50,000	0.081	0.038	IRS
AMT Share 75k+	Share of federal returns paying AMT > 0 for filers with incomes > \$75,000	0.134	0.057	IRS
AMT Share 100k+	Share of federal returns paying AMT > 0 for filers with incomes > \$100,000	0.220	0.082	IRS
AMT Share 200k+	Share 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	2669	BEA

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

171. CPI data are available at *Consumer Price Index*, BUREAU LAB. STAT., <http://www.bls.gov/cpi/data.htm> (last visited Sept. 6, 2010). Prices from 1982-1984 provide the base year for price comparisons.

172. See JOSHUA D. ANGRIST & JÖRN-STEFFEN PISCHKE, *MOSTLY HARMLESS ECONOMETRICS: AN EMPIRICIST'S COMPANION* 92 (2009).

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 macroeconomic 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.¹⁷³ 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 a way not fully controlled for in the regression itself. To allow for these effects, we also provide standard errors that account for multiway clustering.¹⁷⁴

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.¹⁷⁵ 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

173. 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).

174. These problems and their solution are discussed in A. Colin Cameron, Jonah B. Gelbach, & Douglas L. Miller, *Robust Inference with Multi-way Clustering* (UC Davis Dep't of Econ., Working Paper No. 09-9, 2009), available at http://www.econ.ucdavis.edu/working_papers/09-9.pdf.

175. See *infra* text accompanying notes 183-93.

to predict that they will be affected by the AMT.¹⁷⁶ 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 Per Capita Spending

	(Standard Errors Clustered at the State Level in Parentheses)				
	[Standard Errors Multiway Clustered at the State and Year Level in Brackets]				
AMT Share	-776 (4097) [7162]				
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 on social insurance programs. 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 preci-

176. Additionally, at very low income levels AMT payers pay little in state tax, *see supra* note 140, and therefore the AMT is unlikely to affect their views of state tax levels.

sion 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 four-year sample.

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 on social insurance programs would decline by about 4%. The comparable effect of an increase in the fraction of AMT filers with incomes above \$200,000 is an 8% decline in per capita spending.¹⁷⁷ The exact magnitude of these figures is less interesting, however, than the fact that the practical size of the effect we have identified is nontrivial from a policy perspective.

177. Thus, states in roughly the top one-sixth of the national distribution of AMT liability would spend 8% less on social insurance annually than the median state—tens of millions of dollars each year.

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, this counteracting income effect need not be present because the income effect is based on real income and the AMT is not indexed for inflation.

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

TABLE 3
AMT Coverage and State Per Capita Education Spending

	(Standard Errors Clustered at the State Level in Parentheses)		[Standard Errors Multiway 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 (0.009)* [0.008]**	0.014 (0.009) [0.008]*	0.013 (0.009) [0.008]	0.012 (0.009) [0.008]	0.008 (0.008) [0.009]

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).*

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% level. We also continue to find that education spending's relationship with state per capita income is positive.

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In Table 4, we look at welfare spending.

TABLE 4
AMT Coverage and State Per Capita Welfare Spending

	(Standard Errors Clustered at the State Level in Parentheses)				
	[Standard Errors Multiway 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 (0.013) [0.008]	-0.003 (0.013) [0.008]	-0.005 (0.013) [0.009]	-0.007 (0.013) [0.009]	-0.003 (0.015) [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 (at the 10% level) only when we focus on AMT filers making above \$100,000.

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

TABLE 5
AMT Coverage and State Per Capita Hospital Spending

	(Standard Errors Clustered at the State Level in Parentheses)				
	[Standard Errors Multiway 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) [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 multiway dependence 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%. 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%. These results again suggest that this AMT subsidy effect is substantial.

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

TABLE 6
AMT Coverage and State Per Capita Public Health Spending

	(Standard Errors Clustered at the State Level in Parentheses)		[Standard Errors Multiway 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]*

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% 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%.

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 our attention to 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.¹⁷⁸ 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	1114	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.

178. *State & Local Government Finance*, U.S. CENSUS BUREAU, <http://www.census.gov/govs/estimate/> (last visited Oct. 11, 2010).

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

TABLE 8
AMT Coverage and Local Per Capita Spending

	(Standard Errors Clustered at the State Level in Parentheses)		[Standard Errors Multiway Clustered at the State and Year Level in Brackets]		
AMT Share	-16				
	(3427)				
	[2639]				
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	0.041	0.040	0.040	0.039
	(0.023)*	(0.021)*	(0.021)*	(0.020)*	(0.020)*
	[0.021]**	[0.019]**	[0.018]**	[0.018]**	[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 AMT coverage and real local government per capita spending on social insurance programs, but data limitations lead to very low precision. Interestingly, the relative effects estimated here are only about 20% 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.

C. Revenue Effects

The foregoing empirical results support our fiscal stabilization hypothesis. However, they represent a sort of “reduced form” analysis.¹⁷⁹ Presumably, the changing relative price of public spending occasioned by changes in AMT coverage leads to changes in the willingness of taxpayers to support state and local tax policy. In turn, this has an effect on spending.¹⁸⁰ While the expenditure effects isolated above are our primary interest, providing evidence on the intermediate revenue side increases confidence in our overall claim.

We collected data on state personal income tax revenue over the period for which we have AMT data (2004-2007)¹⁸¹ and analyzed the revenue counterpart to the regressions presented above. Specifically, we regressed real personal income tax revenue per capita by state, controlling for real per capita income, as well as state and year fixed effects. We again weight all regressions by state population. Results are provided in Table 9 below.

179. See JEFFREY M. WOOLDRIDGE, *INTRODUCTORY ECONOMETRICS: A MODERN APPROACH* 518 (4th ed. 2009).

180. In general, we think spending is the best measure of a state’s capacity to undertake countercyclical spending, since it includes both taxing and borrowing capacity. The AMT affects both: higher effective tax rates may impact borrowing by implying future liquidity problems for the state, leading rational voters to prefer to avoid taking on too much current government debt. We examine effects on revenues as well, however, because there might be political obstacles to cutting spending independent of cutting taxes. For instance, voters might doubt that officials will save excess revenues against future liquidity crunches, rather than just spending them at a politically useful later time. We thank Michael Knoll for raising this last point as a reason to be interested in the AMT’s effect on annual revenues.

181. Data for 2004 to 2007 are available at *State Government Tax Collections—Historical Data*, U.S. CENSUS BUREAU, http://www.census.gov/govs/statetax/historical_data.html (last visited Oct. 11, 2010).

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TABLE 9
AMT Coverage and State Per Capita Personal Income Tax

	(Standard Errors Clustered at the State Level in Parentheses)				
	[Standard Errors Multiway Clustered at the State and Year Level in Brackets]				
AMT Share	-19,911 (11,050)* [11,816]*				
AMT Share 50k+		-5540 (5325) [5031]			
AMT Share 75k+			-2278 (2293) [2348]		
AMT Share 100k+				-542 (303)* [352]	
AMT Share 200k+					-396 (241) [200]**
Income	0.056 (0.013)*** [0.013]***	0.048 (0.018)** [0.015]***	0.047 (0.017)*** [0.014]***	0.044 (0.015)*** [0.013]***	0.045 (0.013)*** [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).

Although we are again dealing with imprecise estimates, there is robust evidence of a negative effect of AMT coverage on state income tax revenue conditional on state income.¹⁸² This provides the missing “middle step” in our causal chain whereby changing AMT coverage affects the price of state and local spending, leading voters to change their support for state and local taxes, generating changes in spending. This finding provides additional confidence in our underlying hypothesis.

VI. 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 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

182. Results are qualitatively similar for total tax revenue. We present only the personal income tax results because many components of total tax revenue would be unaffected by our causal mechanism (e.g., revenue from user fees).

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. Second, taxpayers may anticipate that their earnings will soon rise, so that they may believe that any relief from the 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.¹⁸³

1. *Voter ignorance of AMT liability*

The AMT might not translate fully to the state level because voters may not take federal deductibility into account in forming their opinions about local tax policy.¹⁸⁴ Taxpayers who did not take a SALT 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 the AMT until they (or their preparers) calculate both standard and AMT liability the following April 15.¹⁸⁵ 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. Still other taxpayers may simply fail to take available information into account.¹⁸⁶ In each of these cases, voters may fail to approve higher state taxes, notwithstanding their

183. See Kaplow, *supra* note 147, at 486-87.

184. See *The Individual Alternative Minimum Tax: Hearing Before the S. Comm. on Finance*, 110th Cong. 12 (2007) (statement of Leonard E. Burman, Director, Tax Policy Center); Kaplow, *supra* note 147, at 487.

185. See 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, July 7, 2003, at 105, 115-16.

186. See Deborah Schenk, *Exploiting the Salience Bias in Designing Taxes* 27-28 (NYU Ctr. for Law, Econ. & Org., Working Paper No. 10-37, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1661322.

In laboratory studies, subjects had difficulty integrating in their heads the combined effects of two overlapping tax systems. See Edward J. McCaffery & Jonathan Baron, *The Political Psychology of Redistribution*, 52 UCLA L. REV. 1745, 1765-68 (2005). It is unclear to what extent these laboratory studies capture real world behavior. See Brian Galle, *Hidden Taxes*, 87 WASH. U. L. REV. 59, 84 (2009).

federal deduction.

Of course, officials can always simply attempt to educate voters when proposing tax increases, but counterintuitively, 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,¹⁸⁷ 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 that only extreme outliers, such as the rich, will themselves lobby.¹⁸⁸ 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 the 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 the AMT, they can calibrate their own lobbying efforts upwards to make up for the shortfall.¹⁸⁹ As a result, in the presence of the AMT the SALT deduction would not increase overall political support for tax increases.¹⁹⁰

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 thus the extent to which others would prefer higher local tax rates), the wealthy also do not know that they should ratchet up their own lobbying efforts.¹⁹¹ However,

187. See Gillette, *supra* note 42, at 958 (arguing that political free riding diminishes when costs of acquiring information decline).

188. See MANCUR OLSON, JR., *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* 21-22, 31, 35 (rev. ed. 1971); Gillette, *supra* note 56, at 389. Of course, in many cases this story will be much more complex. See *id.*

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

190. We note that this result is dependent on the existence of the AMT, which prevents some taxpayers ever from receiving the benefit of the SALT deduction. 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.

191. In many circumstances, these kinds of information deficits can be overcome by policy entrepreneurs. Entrepreneurs invest their own effort in gathering and sharing information, in exchange for rents and political support for their own cause from the beneficiaries. See Christopher H. Schroeder, *Rational Choice Versus Republican Moment—Explanations for Environmental Laws, 1969-73*, 9 DUKE ENVTL. L. & POL'Y F. 29, 49-56 (1998); Richard E. Wagner, *Pressure Groups and Political Entrepreneurs: A Review Article*, 1 PUB. CHOICE 161, 164-67 (1966) (reviewing MANCUR OLSON, JR., *THE LOGIC OF COLLECTIVE ACTION* (1965)).

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. See Galle, *supra* note 186, at 95 n.171. Therefore gathering the information is not simply a matter of investing time and effort—the data is literally inaccessible. Entrepreneur claims about hidden taxes may also

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 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.¹⁹² Over ten million more obtain extensions and file even later.¹⁹³ 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. *Taxpayers anticipate later tax increases*

Another problem limiting the stabilizing potential of the AMT 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 income will rise again in the future. In that case, the taxpayer may ignore the present lower effective tax rate and vote according to her expected, higher, future rate.¹⁹⁴ Movers may not relocate until the higher effective rate actually 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

have fairly low credibility. *See id.* at 91-92.

192. *See Filing Season Weekly Reports*, IRS.GOV, <http://www.irs.gov/taxstats/article/0,,id=184855,00.html> (last visited Oct. 15, 2010).

193. *See* Taukir Hussain, *Projections of Federal Tax Return Filings: Calendar Years 2005-2012*, IRS STAT. INCOME BULL., Winter 2005-2006, at 147, 147-49.

194. *See* STAFF OF THE JOINT COMM. ON TAXATION, *supra* note 4, at 22.

temporary tax hikes expire.¹⁹⁵ 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 to defend existing legislation.¹⁹⁶ That will tend to make it difficult to adjust rates downward again.¹⁹⁷ 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.¹⁹⁸

3. *Timing of the residual benefits of the 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 the AMT for the year in which they make their purchase.

Federal subsidies also offer some support for state revenues even if tax rates do not increase. If retail sales increase (as a result of lower effective sales tax rates), then sales tax revenues do, too. Even if consumers expect their effective sales tax rate to rise in the future, that expectation itself can spur spending in the present while rates are lower. And capitalization of the net-of-tax cost of the local tax burden may increase home values, adding to property tax proceeds.

Many of these benefits, however, may lag behind the onset of a recession. Again, timing stimulus to coincide with downturns is key to its effectiveness.¹⁹⁹ Most taxpayers, however, will only experience the economic benefit of a higher SALT deduction when they file their federal return for the following year, which may well be up to sixteen months after the recession starts. The savviest taxpayers might accelerate the gains through decreased withholding,²⁰⁰

195. See Elizabeth Garrett, Comment, *Accounting for the Federal Budget and Its Reform*, 41 HARV. J. ON LEGIS. 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).

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

197. Cf. BUCHANAN & TULLOCK, *supra* note 29, at 283-95 (arguing that political dynamics allow incumbents to ratchet tax payments upwards).

198. For an ingenious (but in our view pie-in-the-sky) proposed solution to this problem, see Gamage, *supra* note 5, at 123-43.

199. See *supra* text accompanying notes 117-23.

200. See INTERNAL REVENUE SERV., PUBLICATION 919: HOW DO I ADJUST MY TAX WITHHOLDING?, at 4-5, 11 (2010), available at <http://www.irs.gov/pub/irs-pdf/p919.pdf> (ad-

lower estimated quarterly federal tax payments,²⁰¹ or loans.²⁰² But policy planners should design their tax systems to maximize the extent to which the stimulus effect of the SALT deduction is concentrated during downturns. We think this can be done together with interventions targeted at the other problems we have mentioned, as we will now outline.

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 counterintuitive) 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 . . . and the very rich*

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 the federal subsidy. If rates are increased only for subsidy recipients, the AMT payers have no reason to lobby.²⁰³ Indeed, they may prefer to receive some additional government services for free. Targeting increases to those without AMT liability is also beneficial to the state because it maximizes the percentage of state tax revenue eligible for a federal matching grant (via the SALT deduction), which the AMT turns off.²⁰⁴

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

vising taxpayers to match liabilities with withholding, taking into account factors such as state taxes, hence in effect advising taxpayers with higher expected state taxes to reduce their federal withholding).

201. See INTERNAL REVENUE SERV., PUBLICATION 505: TAX WITHHOLDING AND ESTIMATED TAX, at 19-22, 36 (2010), available at <http://www.irs.gov/pub/irs-pdf/p505.pdf> (explaining the obligation to make estimated quarterly payments for self-employed taxpayers, and noting that payers should estimate the amount of deductions they will be allowed when making payments).

202. For more information on refund anticipation loans, see Michael S. Barr, *Banking the Poor*, 21 YALE J. ON REG. 121, 166-77 (2004).

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.

204. For our illustration of how this targeting can minimize the impact of tax increases on state residents, see *supra* Figures 1, 2.

those who pay the federal AMT.²⁰⁵ 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 solution, though, the state could simply calculate the income threshold for most local AMT payers, and limit its rate increase to those below that threshold: to tax the middle class, in other words. Similarly, while 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.

These targeted tax hikes could also fall on the very richest state taxpayers. Because the top AMT marginal rate is less than the maximum rate under the standard income tax, at very high incomes some taxpayers again escape the AMT. Thus, state tax hikes could also be targeted to kick in again at this upper threshold—as with the “millionaire’s tax.”

As we have explained, though, a precisely targeted tax would not in fact increase the net-of-federal-tax burden on any state taxpayer.²⁰⁶ Thus, assuming that beneficiaries of the SALT deduction are aware of its effects, targeting should diminish political resistance to tax increases.

Sales taxes present a thornier targeting problem, but one 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.²⁰⁷ 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.²⁰⁸ However, the wealthy pay a relatively low portion of their incomes in sales taxes.²⁰⁹ 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

205. For example, the state could award a credit against state tax liability for the lesser of the dollar value of the federal SALT deduction and the amount of federal AMT liability in excess of the standard tax. Such a credit would approximate the value of the federal deduction lost to the AMT. If the state calibrates its tax hike to roughly the value of the federal match, this credit would ensure that state taxpayers subject to the AMT would not experience any tax increase.

206. See *supra* text accompanying notes 149-50.

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

208. The exception is junk food. See Jonah B. Gelbach, Jonathan Klick & Thomas Stratmann, Cheap Donuts and Expensive Broccoli: The Effect of Relative Prices on Obesity (Dec. 15, 2009) (unpublished manuscript), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=976484.

209. See David Shakow & Reed Shuldiner, *A Comprehensive Wealth Tax*, 53 TAX L. REV. 499, 501-02 (2000).

justice and fair progressivity in the tax system.²¹⁰ That appearance is somewhat misleading, though. First, state rates net of federal tax may change only slightly, as we have explained.²¹¹ Second, countercyclical expenditures disproportionately benefit lower-income residents.²¹² Taking into account both taxing and spending the targeted rate increases and associated higher spending may on net be beneficial to the state's poorest, and not as negative for the middle class as a first glance would suggest. 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.²¹³

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

210. See JOSEPH M. DODGE, *THE LOGIC OF TAX: FEDERAL INCOME TAX THEORY AND POLICY* 88 (1989).

211. 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. Timing effects matter, and may be especially important for households that do not budget rationally or are highly liquidity constrained. See Brian Galle & Manuel Utset, *Is Cap-and-Trade Fair to the Poor? Shortsighted Households and the Timing of Consumption Taxes*, 79 GEO. WASH. L. REV. 33 (2010).

212. See Batchelder et al., *supra* note 3, at 58.

213. Kelly Sims Gallagher & Erich Muehlegger, *Giving Green to Get Green: Incentives and Consumer Adoption of Hybrid Vehicle Technology* 22-24, 28 (Harvard Univ. John F. Kennedy Sch. of Gov't, Working Paper No. RWP08-009, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1083716 (finding increased efficacy of income tax incentives in the second quarter, and suggesting that this effect cannot easily be explained except as connected to tax filing season). 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 186, at 76-77.

sales taxes incurred between January 1 and April 15 of Year Two to be deductible from the taxpayer's Year One tax return.²¹⁴ Under current law, only taxes paid during the applicable tax year are deductible.²¹⁵ 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 the AMT before making major purchases.²¹⁶

3. *Accelerate rebates*

If states cannot prudently wait until tax filing season to raise more revenue, an alternative is to accelerate federal tax refunds, as has been done with federal tax stimulus checks in 2001 and 2009. Again, the concern is that state and local voters may be unaware at the time of a state funding decision that the SALT deduction will reduce the cost of any tax increase. If voters were to receive a significant portion of the SALT deduction "up front," this problem could be greatly mitigated.

For example, federal law might provide for a chunk of projected SALT deductions to be mailed out upon enactment of an increase in a federally deductible tax by a state suffering from a downturn. Alternately, the state might send out checks at the time of or immediately in advance of a tax increase to taxpayers it projects will receive a SALT deduction, and then collect those funds back at the end of the year on the state return.²¹⁷ Similarly, the state might offer loans to its citizens, secured by the federal tax rebate.

In addition to their informational advantage, these schemes also help to overcome a possible problem with the timing of the SALT deduction stimulus.

214. See 26 U.S.C. § 219(f)(3) (2006).

215. 26 U.S.C. § 164(a) (2006).

216. One technical point perhaps worth mentioning about this proposal is that we would recommend slightly disfavoring retroactive deductions 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.

217. For example, Klick would receive a check from Pennsylvania for \$600 in June of Year One, on the effective date of a new Pennsylvania tax increase that will cost him \$600 over the course of the year. In April of Year Two, when he files his state tax return, he would repay the \$600 advance. At the same time, he would receive a \$600 refund from the federal government. On net, Klick comes out even both in Year One and Year Two. We assume here that the state charges Klick no interest; that benefit is offset (from Klick's perspective) by the fact that the federal government pays Klick no interest on the money he overpaid in Year One.

If taxpayers who are newly eligible to receive a SALT deduction fail to adjust their federal withholding to account for their lower expected federal tax liability, they will not see any benefit from the deduction until they file their returns in the following year. That means that any increase in consumer spending driven by the federal money cannot help alleviate the current year's recession.²¹⁸ Accelerating the rebate smoothes out that unwanted wrinkle.

4. *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 the 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 the 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 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

218. Taxpayers who were fully informed about their taxes and who had an unlimited ability to borrow would not face this timing challenge, since they could simply borrow against their expected rebate. But evidence suggests that borrowing even against fully expected tax rebates is incomplete. See, e.g., Matthew D. Shapiro & Joel Slemrod, *Consumer Response to Tax Rebates*, 93 AM. ECON. REV. 381, 392-93 (2003).

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receive from their banks, scholarship providers, and investment brokers.²¹⁹ States could take the opportunity to indicate not only their nominal marginal rates, but also the average effective tax rate net of federal deductibility.

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

CONCLUSION

The AMT is, we admit, an unlikely place to find a solution to the problem of state finance in times of crisis.²²⁰ 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.²²¹ 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

219. See, e.g., 26 U.S.C. § 6049 (2006) (requiring payors of interest to file information return with IRS and furnish payment information to payee).

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

221. Among repeal proponents are the leading tax-lawyer organizations, along with many former high-ranking tax officials. See Allen Kenney, *Former Commissioners Say It's Time to Scrap AMT*, 103 TAX NOTES 1466 (2004); ABA Section of Taxation et al., *Tax Simplification Recommendations from ABA, AICPA, and TEI*, TAX NOTES TODAY, Feb. 25, 2000, available at LEXIS 2000 TNT 39-82. One of the few in agreement with us on the future of the AMT is Deborah Schenk, who offers it as a second-best solution to political failures in other tax-setting mechanisms. Schenk, *supra* note 186, at 50-51.

others could add to our list.

Even for those who reject our arguments about the usefulness of the AMT as an 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.

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.²²² 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.

222. For a description of the controversy and summary of the existing data, see *supra* note 147.