



Georgetown University Law Center
Scholarship @ GEORGETOWN LAW

2014

Fiscal Federalism as Risk-Sharing: The Insurance Role of Redistributive Taxation


John R. Brooks

Georgetown University Law Center, jrb252@law.georgetown.edu

This paper can be downloaded free of charge from:
<https://scholarship.law.georgetown.edu/facpub/1347>
<http://ssrn.com/abstract=2456420>

68 Tax L. Rev. 89-142 (2014)

This open-access article is brought to you by the Georgetown Law Library. Posted with permission of the author.
Follow this and additional works at: <https://scholarship.law.georgetown.edu/facpub>

 Part of the [Insurance Law Commons](#), [Taxation-Federal Commons](#), [Taxation-State and Local Commons](#), and the [Tax Law Commons](#)

Fiscal Federalism as Risk-Sharing: The Insurance Role of Redistributive Taxation

JOHN R. BROOKS II*

I. INTRODUCTION

One major proposition of the fiscal federalism literature is that redistribution, and the closely related progressive income tax, should be assigned exclusively to the most central level of government in a federal system, leaving subnational governments to focus on allocation of public goods, funded with taxes tied closely to benefits.¹ The rationale for this proposition is straightforward: Generous state-level redistribution funded with high marginal tax rates has the potential to drive away high-ability taxpayers and attract low-ability taxpayers. Yet we live in a world where there are substantial state-level redistributive policies.² Are states just getting it wrong?

* Associate Professor of Law, Georgetown University Law Center. I am grateful to Stefan Bird-Pollan, Stephen Cohen, Mihir Desai, Michael Doran, Peter Edelman, Brian Galle, David Gamage, Michael Graetz, Itai Grinberg, Daniel Halperin, Edward Kleinbard, Leandra Lederman, Benjamin Leff, Louis Kaplow, Jason Oh, Eloise Pasachoff, Alex Raskolnikov, James Repetti, Diane Ring, David Schizer, Daniel Shaviro, Kirk Stark, Alvin Warren, David Weisbach, Eric Zolt, and participants in workshops at UCLA School of Law, Georgetown University Law Center, Boston College Law School, the Columbia Law School–Hebrew University Tax Conference, and the Harvard Law School Seminar on Current Research in Taxation for helpful conversations, comments, and suggestions. I am also especially grateful for the valuable research assistance of Yingchen Luo and Stephen Richmond.

¹ See Wallace E. Oates, *Fiscal Federalism* 14, 137-39 (Edward Elgar 2011) (1972) [hereinafter *Fiscal Federalism*]; Richard A. Musgrave, *The Theory of Public Finance: A Study in Public Economy* 181 (1959); Robin Boadway & Jean-François Tremblay, *Reassessment of the Tiebout Model*, 96 *J. Pub. Econ.* 1063, 1063-64 (2012); Wallace E. Oates, *Toward a Second-Generation Theory of Fiscal Federalism*, 12 *Int'l Tax & Pub. Fin.* 349, 351-52 (2005) [hereinafter *Second Generation*]; Kirk J. Stark, *Fiscal Federalism and Tax Progressivity: Should the Federal Income Tax Encourage State and Local Redistribution?*, 51 *UCLA L. Rev.* 1389, 1406-08 (2004); cf. Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 *J. Pol. Econ.* 416 (1956) (proposing that residents play a central role in determining the optimal level of services offered by a municipality by moving to the community that best matches their needs).

² See Section III.A. Here, state redistribution also includes redistribution at the local level. See Clayton P. Gillette, *Local Redistribution and Local Democracy: Interest Groups and the Court* 53-71 (2011) (discussing the scope of local redistribution in the United States).

This Article takes a new look at the tax assignment question and argues that the literature has largely misidentified the costs of state redistributive tax-and-transfer systems. The relevant costs, at least within the range of plausible current policies, are not from tax migration and crippling state tax competition, but rather from poor risk management—suboptimal insurance against income shocks, both for states and their residents. Thus states have some space to perform redistribution, but insurance against low income should be addressed nationally. The problem is that the central tool for both redistribution and income insurance is the same: the progressive income tax.

A redistributive tax-and-transfer system, and a progressive income tax in particular, not only funds the operations of government and provides for income redistribution, but also acts as a form of insurance against uncertain future income. This aspect of a progressive income tax is often forgotten in analyzing the tax, and that is particularly true in the fiscal federalism literature.³ Because a progressive income tax provides for relatively high taxes when incomes are high, and for low taxes, exemptions, and transfers when incomes are low, it acts to reduce the volatility in annual after-tax income for taxpayers, and reducing volatility is the classic function of insurance. Thus one can distinguish the redistributive function of an income tax—redistributing income from those with high ability or endowment to those with low ability or endowment—from the insurance function of an income tax—a given taxpayer paying some premium today that is a function of the expected value of potential transfers to her in the future.

In considering the question of where best to assign the progressive income tax in a federal system, one can thus ask what levels of government can best perform each of these two functions—redistribution and insurance. This Article suggests that the answer may be different for each function. Contrary to the classic fiscal federalism literature, there are good reasons for some limited redistribution to be assigned to the states. This is not so for the insurance function, however.

First, regarding redistribution, theoretical work shows that relaxing some of the assumptions in the early work of Richard Musgrave, Wallace Oates, Charles Tiebout, and others leads to the result that redistribution need not be exclusively federal.⁴ Furthermore, recent empirical work shows that the risks of tax migration actually may be quite limited, meaning that states may not pay a high economic cost

³ See, e.g., Lawrence Zelenak & Kemper Moreland, *Can the Graduated Income Tax Survive Optimal Tax Analysis?*, 53 *Tax L. Rev.* 51, 56-57 (1999) (characterizing the view of a progressive tax as insurance against uncertain labor income as one of “six situations that have received little or no attention in the optimal tax literature”).

⁴ See Section IV.A.

for implementing some limited redistribution.⁵ With the burdens on state budgets increasing, as more and more social insurance and other duties are devolved to the states, this is good news—news that the fiscal federalism literature has not yet fully absorbed.

Second, regarding insurance, even if there is little potential for hurting economic output and state revenues due to tax migration, other costs remain. In particular, a state and its residents are exposed to greater risk and volatility from a state progressive income tax. At the state government level, reliance on an income tax exposes a state to greater revenue volatility, which can exacerbate the costs of an economic downturn, as we have seen. The volatility problem is well understood, and has prompted many calls for states to have better counter-cyclical budget policy.⁶

A related cost, which has not previously been articulated in the literature, is the risk to individual state residents. Since a progressive income tax is partly insurance against uncertain future income, insuring at only the state level is simply not as efficient as insuring at the federal level. Because income shocks are often regionally correlated, a regionally defined insurer—that is, a state—is less equipped to smooth out income fluctuations than the federal government is. By pooling the risks of income shocks only at the state level, a state income tax misses out on the actuarial benefits of national risk-pooling present in a federal income tax.

The costs of such suboptimal insurance were displayed during the Great Recession. Following the 2008 financial crisis, state tax revenues dropped dramatically,⁷ even while the demands on state social insurance programs rose.⁸ This combination had a brutal effect on state budgets, state residents, and the overall economy: Nearly 750,000 state and local jobs were cut,⁹ state services shrank,¹⁰ schools

⁵ See Subsection IV.A.4.

⁶ See, e.g., Brian Galle & Kirk J. Stark, *Beyond Bailouts: Federal Tools for Preventing State Budget Crises*, 87 *Ind. L.J.* 599, 600 (2012); Brian Galle & Jonathan Klick, *Recessions and the Social Safety Net: The Alternative Minimum Tax as a Countercyclical Fiscal Stabilizer*, 63 *Stan. L. Rev.* 187, 190 (2010); David Gamage, *Preventing State Budget Crises: Managing the Fiscal Volatility Problem*, 98 *Calif. L. Rev.* 749, 758 (2010); Kirk J. Stark, *The Federal Role in State Tax Reform*, 30 *Va. Tax Rev.* 407, 442 (2010); David A. Super, *Rethinking Fiscal Federalism*, 118 *Harv. L. Rev.* 2544, 2550 (2005).

⁷ E.g., Donald J. Boyd & Lucy Dadayan, *State Tax Decline in Early 2009 Was the Sharpest on Record*, 76 *St. Revenue Rep.* (2009), available at http://www.rockinst.org/pdf/government_finance/state_revenue_report/2009-07-17-SRR_76.pdf.

⁸ See Super, note 6, at 2630-32 (discussing the countercyclical nature of many state programs).

⁹ Author's calculations based on Federal Reserve Economic Data and Bureau of Labor Statistics data. See FRED Graph, Fed. Res. Bank of St. Louis Econ. Research, <http://research.stlouisfed.org/fred2/graph/> (graph of "CES9093000001," and "CES9092000001" data series); U.S. Dep't of Labor, Bureau of Labor Statistics, <http://www.bls.gov/data/>; see also David Cooper, Mary Gable & Algernon Austin, *The Public-Sector Jobs Crisis* 13

increased class sizes and cut programs,¹¹ and so on. These effects not only likely slowed U.S. economic growth¹² but also had a profound and lasting human cost. And they can be traced largely to the risk-shifting properties of an income tax, and the revenue volatility that comes with that risk.¹³ Thus, there is a strong argument for assigning the insurance function of a progressive income tax to the federal government, which is better able to absorb that risk.

Therefore, it may be appropriate, or at least predictable, for a state to perform some of the redistributive function of taxation, but costly for it to perform the insurance function. Given that states use, and likely always will use, redistributive programs such as a progressive income tax, we should ask whether there are ways to limit those insurance costs and thereby mitigate some of the painful revenue volatility faced by states, due in part to their use of income taxes.

Because the costs of limited state-level progressive income taxation are related to insurance, rather than redistribution, there is an obvious way to mitigate those costs, at least theoretically: reinsurance. If it is possible to reinsure the state-level risks of a progressive income tax at the national level, then it would be possible in theory to have our cake and eat (at least some of it) too. We could have some state-level redistribution while still having largely national-level income insurance.

In particular, the most direct theoretical solution would be an actual pooled reinsurance fund, also known as a multistate rainy-day fund (RDF).¹⁴ A multistate RDF could pool the risks of state revenue volatility and provide some of the national risk-pooling benefits of a federal income tax. Many states already have their own independent

(Econ. Pol'y Inst., Briefing Paper No. 339, 2012), <http://s3.epi.org/files/2012/bp339-public-sector-jobs-crisis.pdf> (calculating 765,000 state and local government jobs lost during the recession, based on Current Population Survey data).

¹⁰ See, e.g., Nicholas Johnson, Phil Oliff & Erica Williams, Ctr. on Budget & Pol'y Priorities, *An Update on State Budget Cuts: At Least 46 States Have Imposed Cuts That Hurt Vulnerable Residents and Cause Job Loss 1* (Feb. 9, 2011), <http://www.cbpp.org/files/3-13-08sfp.pdf>.

¹¹ See, e.g., *id.* at 10-12; Phil Oliff & Michael Leachman, Ctr. on Budget & Pol'y Priorities, *New School Year Brings Steep Cuts in State Funding for Schools 12-13* (Oct. 7, 2011), <http://www.cbpp.org/files/9-1-11sfp.pdf>.

¹² See, e.g., J. Bradford DeLong & Lawrence H. Summers, *Fiscal Policy in a Depressed Economy*, *Brookings Papers on Econ. Activity*, Spring 2012, at 234; Press Release, Fed. Open Mkt. Comm. of Fed. Reserve 1 (May 1, 2013), available at <http://www.federalreserve.gov/newsevents/press/monetary/20130501a.htm> (stating that "fiscal policy is restraining economic growth").

¹³ See, e.g., Gary C. Cornia & Ray D. Nelson, *State Tax Revenue Growth and Volatility*, 6 *Fed. Res. Bank of St. Louis Reg'l Econ. Dev.* 23, 23-24 (2010), available at <https://research.stlouisfed.org/publications/red/2010/01/Cornia.pdf>; Gamage, note 6, at 750; Russell S. Sobel & Gary A. Wagner, *Cyclical Variability in State Government Revenue: Can Tax Reform Reduce It?*, 8 *St. Tax Notes* 569, 569 (Aug. 25, 2003); Stark, note 6, at 416-18.

¹⁴ See Gamage, note 6, at 766.

RDFs,¹⁵ which are essentially a form of self-insurance. The multistate RDF would improve on these, much as pooled health or casualty insurance for individuals is superior to self-insurance.

There has been relatively little work addressing the theory and design of a multistate RDF. What little work there is tends to be limited to basic policy proposals cast as second-best options for managing state fiscal volatility;¹⁶ here, by contrast, I argue that, properly conceived, a multistate RDF would actually be part of an appropriate risk-management system for the combined federal/state tax-and-transfer system.

The legal literature tends to be dismissive of a multistate approach, mostly due to the classic insurance problems of adverse selection¹⁷ and moral hazard.¹⁸ This Article suggests some design features to mitigate those problems. In particular, a key insight of this Article is that some moral hazard, in the form of increasing state reliance on income taxes, is a less of a threat when a purpose of the RDF is precisely to help support state-level redistribution. In the social insurance context, some moral hazard can be “good,” in the sense that the behavior being motivated, while costly, is ultimately desirable.¹⁹ Just as health insurance coverage leads to more health care,²⁰ state revenue insurance could lead to more redistribution. Therefore, moral hazard becomes less of a bug and more of a feature (though one that still requires close management).

Given the practical and political problems with implementing a multistate RDF, however, I also argue that a mix of existing programs could be retooled or expanded to get some of the same benefits of a multistate RDF. Some combination of expanded state deficit spending, federal support for independent state RDFs, federal revenue sharing that takes into account state revenue fluctuations and fiscal

¹⁵ *Id.*

¹⁶ See *id.* at 750; see also Akash Deep & Robert Lawrence, *Stabilizing State and Local Budgets: A Proposal for Tax-Base Insurance* 5-6 (Brookings Inst. Hamilton Project, Discussion Paper No. 2008-01, 2008), available at http://www.brookings.edu/~media/research/files/papers/2008/6/tax%20base%20lawrence/06_tax_base_lawrence; Richard Mattoon, *Creating a National State Rainy Day Fund: A Modest Proposal to Improve Future State Fiscal Performance* 119 (Fed. Res. Bank of Chicago, Working Paper No. 2003-20, 2003), available at https://www.chicagofed.org/digital_assets/publications/working_papers/2003/wp2003-20.pdf.

¹⁷ See, e.g., Galle & Stark, note 6, at 619 (arguing that states may not participate in a shared-pool arrangement because the benefits promised for their contributions are not recouped until some point in the unknown future); Gamage, note 6, at 767 (discussing the lack of incentive to participate during strong economic times)

¹⁸ See, e.g., Galle & Stark, note 6, at 618.

¹⁹ See John A. Nyman, *Health Insurance Theory: The Case of the Missing Welfare Gain*, 9 *Eur. J. Health Econ.* 369, 378-80 (2008).

²⁰ *Id.* at 371-72.

capacities, and a more explicit and defined federal bail-out role could provide risk-sharing similar to a multistate RDF. Viewed in this way, these programs are not independent responses to independent problems, but rather parts of a combined federal/state risk-management strategy.

Therefore, an important conclusion of this Article is that incorporation of the insurance function of taxation illuminates the degree to which risks can and should be shared and spread throughout a federal system. While much of the fiscal federalism literature is concerned with divvying up tasks among different, and often competing, layers of government,²¹ this Article instead views the combined federal/state tax-and-transfer system as a coherent whole, and asks how such a system can operate more effectively.

This Article proceeds as follows. Part II explains the insurance role of an income tax, in order to flesh out the key analytical tool used in this Article. Part III briefly discusses some features of state tax and budget policy, particularly the role of income taxes and budget rules that limit the ability of states to carry deficits. Part IV reviews the theoretical and empirical literature on fiscal federalism, to challenge the idea that redistribution should be exclusively handled by the federal government. This Part also explains the insurance-related costs of state income taxes: revenue volatility and actuarial inefficiency. Part V discusses potential options for national reinsurance of some state risks as a way to achieve the normative benefits of state-level redistribution while mitigating the insurance costs outlined in Part IV, looking in particular at the arguments for a multistate rainy-day fund. Part VI concludes.

II. REDISTRIBUTIVE TAXATION AS SOCIAL INSURANCE

A. *The Tax-and-Transfer System Generally*

If differences in ability to pay were purely a function of ex ante endowments, whether personal or financial, then any deviation from pure benefit taxation—taxing each individual based on the value he receives from government—would be redistributive.²² But of course

²¹ See, e.g., Musgrave, note 1, at 5-6; Oates, Fiscal Federalism, note 1, at xvii.

²² This is in relation to pretax market outcomes. But using those outcomes as a baseline is problematic, given that we hardly have purely competitive markets and the markets we have depend heavily on a functioning government to operate. Much of what appears to be pretax income is already a function of government action. See Liam Murphy & Thomas Nagel, *The Myth of Ownership: Taxes and Justice* 8 (2002). A better baseline might be the pretax income distribution assuming the same level of government expenditures, but funded out of lump sum, and therefore nondistortionary, taxes. But that is a very hypothetical baseline, and so provides little analytical help. See Louis Kaplow, *Taxation and Redistribution: Some Clarifications*, 60 *Tax L. Rev.* 57, 64-65 (2007).

actual outcomes vary for many reasons beyond ex ante endowments, even assuming comparable amounts of effort. Thus two people with the same ex ante endowments—identical twins who attend the same schools, say—might still end up with very different ex post abilities to pay.

Some of the difference might be explained based on educational or career choices or the like,²³ but some of the difference would be based simply on luck—who had an easy grader in college, who had a superior retire early, leading to an early promotion, who was hit by a bus, who had bad weather destroy a crop, and similar events. Indeed, some studies imply that luck plays a central role in explaining income variations; once all the usual factors, such as family background, education, cognitive ability, and the like,²⁴ are accounted for, a large amount of variation still remains.²⁵

Despite the importance of luck, many analyses and models of the effects of redistributive taxation do not account for this uncertainty. In the optimal tax literature, for example, models tend to either ignore uncertainty or assume that private markets are complete in providing insurance, and that therefore any observed risk is a function of the risk preferences of the individual, and not simply bad luck.²⁶ But this assumption is, of course, profoundly unrealistic.

First, even if it were possible to identify and estimate the likelihood of every possible event that might affect labor income, private insurance simply might not be available. The classic reasons given for pri-

²³ See Hal R. Varian, *Redistributive Taxation as Social Insurance*, 14 *J. Pub. Econ.* 49, 49-50 (1980) (citing Christopher Jencks, *Inequality* (1972)); see also Robert Gibbons & Lawrence Katz, *Does Unmeasured Ability Explain Inter-Industry Wage Differentials?*, 59 *Rev. Econ. Stud.* 515, 517 (1992) (arguing that ability does not explain all inter-industry wage differentials).

²⁴ Of course, the distribution of endowments and abilities is itself also a lottery, and one can think of redistributive taxation as also being partly insurance against bad outcomes in that lottery. See notes 42-45 and accompanying text; Ronald Dworkin, *What Is Equality? Part 2: Equality of Resources*, 10 *Phil. & Pub. Aff.* 283, 302 (1981). But the point is that even after accounting for many of the factors that are known to contribute to income and wealth, a large degree of variation remains.

²⁵ See Varian, note 23, at 49-52 (summarizing research on the causes of income inequality).

²⁶ See David A. Moss, *When All Else Fails: Government as the Ultimate Risk Manager* 35 (2002) (“Standard economic models actually envision a world of *complete contingent markets*, where any risk—no matter how small or unusual—can be bought and sold in the marketplace.”); Varian, note 23, at 50; Zelenak & Moreland, note 3; see also Alan J. Auerbach & James R. Hines Jr., *Taxation and Economic Efficiency*, in 3 *Handbook of Public Economics* 1362 n.8 (Alan J. Auerbach & Martin Feldstein eds., 2002) (providing an overview of optimal tax theory that explicitly assumes that markets for risk-sharing are complete). But see Louis Kaplow, *A Note on Taxation as Social Insurance for Uncertain Labor Income* 49 *Pub. Fin.* 244, 245 (1994) (discussing some optimal tax work that incorporates the insurance role).

vate insurance market failure are moral hazard²⁷ and adverse selection,²⁸ but these may not be totally satisfactory to address why public, social insurance is an improvement.²⁹ More satisfactory reasons for social insurance include the relative inability of individuals to estimate risk,³⁰ the inability of private insurers to fully commit to covering insured events,³¹ and externalization of costs associated with risk.³² Thus, even in a world with perfect information about risk and behavior—and therefore without the problems of adverse selection and moral hazard—one would still expect to see some failure in the private market for insurance against uncertain income.

Second, even complete markets for risk cannot fully insure against uncertainty. The notion of “risk” captures events whose outcomes are unknown, but for which we know the probability distribution of possible outcomes. “Uncertainty,” on the other hand, captures events for

²⁷ See Jonathan Eaton & Harvey S. Rosen, *Optimal Redistributive Taxation and Uncertainty*, 95 Q.J. Econ. 357, 357 (1980); Varian, note 23, at 5.

²⁸ See George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q.J. Econ. 488, 492-94 (1970); Robin Boadway, Manuel Leite-Monteiro, Maurice Marchand & Pierre Pestieau, *Social Insurance and Redistribution with Moral Hazard and Adverse Selection*, 108 Scand. J. Econ. 279, 280, 296 (2006); Agnar Sandmo, *Introduction: The Welfare Economics of the Welfare State*, 97 Scand. J. Econ. 469, 472 (1995).

²⁹ Kaplow disputes the argument that the lack of private insurance due to moral hazard means that government ought to provide social insurance through taxation. First, the government is no more immune to moral hazard than private insurers, and if, in fact, it turns out to be optimal for the government to provide social insurance, the same should be true for private insurers. Second, it may be less efficient for the government to provide social insurance through taxation than to just provide insurance directly, since the tax system externalizes the cost of the insurance, potentially leading to over-insurance by individuals. Kaplow, note 26, at 246; see also Sandmo, note 28, at 473. John Nyman, however, points out that what is considered “moral hazard” in the social insurance context includes welfare-enhancing acts, such as the provision of health care. This sort of “efficient” moral hazard might still lead to a failure of private insurance markets, even though the provision of the insurance would be efficient. In other words, some normative and redistributive goals might explain the government’s particular interest in providing social insurance, even though the government exposes itself to the costs of moral hazard. See Nyman, note 19, at 378-80.

³⁰ For example, if workers consistently overestimate their future income or underestimate their risk of an event that could take them out of the labor market. See Moss, note 26, at 40-45.

³¹ For example, insuring against low income is a massive undertaking, and it would be difficult to trust a private entity to be able to cover losses in a worst-case scenario. Government, on the other hand, has sufficient capital to cover worst-case losses and furthermore has the ability to shift risks across generations. See *id.* at 45-48.

³² For example, an individual concerned about low income probably is not internalizing the additional social costs of his being underemployed, such as the effects on others of living in a neighborhood with high poverty. See *id.* at 48-49; see also Patrick Sharkey, *Stuck in Place: Urban Neighborhoods and the End of Progress Toward Racial Equality* 105-07 (2012) (discussing the connection between racially segregated communities with persistent high poverty, and the costs of living in a community with high poverty even for those with relatively high income).

which we do not even know the possible outcomes or their likelihoods.³³ Uncertain—as opposed to risky—events are particularly hard to insure against, because an insurer has no way even to estimate the likelihood of a bad outcome.³⁴

Thus, there is a relatively strong case for at least a partially public role in insuring against the risk of uncertain labor income—private markets are unlikely to be able to play a role, and even if they could, they would be inadequate. This is, in essence, the argument behind almost all of our public social insurance programs such as unemployment insurance, disability insurance, health insurance, and Social Security.³⁵ However, the case for social insurance also partly explains the redistributive tax-and-transfer system in general, and the progressive income tax in particular.

A redistributive tax-and-transfer system partially insures against uncertain labor income by allowing individuals to pay some amount of money today in exchange for paying less money and receiving benefits in the future should income fall below a certain level. The system effectively narrows the range—reduces the variance—of possible after-tax income compared to, say, a lump sum tax that raised the same revenue. If an individual turns out to have high pretax income, her

³³ See, e.g., Frank H. Knight, *Risk, Uncertainty and Profit* 230-32 (1920). As Donald Rumsfeld would say, this is the distinction between “known unknowns” and “unknown unknowns.” U.S. Dep’t of Defense, DOD News Briefing—Secretary Rumsfeld and Gen. Myers (Feb. 12, 2002), <http://www.defense.gov/transcripts/transcript.aspx?transcriptid=2636>.

³⁴ Ronald Dworkin makes a similar distinction, between “option luck”—the result of “deliberate and calculated gambles”—and “brute luck”—essentially, other uncertain events that are not a result of gambles. Dworkin, note 24, at 293. As Dworkin acknowledges, the distinction between the two is not clean—in a sense just about everything one does is a calculated gamble, even if only the gamble that one will not be struck by lightning or hit by a meteorite. *Id.* (“Obviously the difference between these two forms of luck can be represented as a matter of degree, and we may be uncertain how to describe a particular piece of bad luck.”). But with this distinction, one can see that even insured events cannot be assumed away in considering the effects of luck. Thus, I might purchase health insurance, which in part insures against the effects of being hit by a meteorite. But if I am struck by a meteorite, I have still suffered from brute bad luck even if it is partly counterbalanced by my “good” option luck in gambling that I might need health care in the future. I am worse off than if I had only suffered the “bad” option luck of purchasing health insurance and not been struck by a meteorite. See *id.* Thus, even under the unrealistic assumption that insurance markets are perfect, the effects of uncertain events and brute bad luck cannot be ignored in considering the ultimate distribution of market resources. Even under the strongest possible assumptions about the availability of private insurance, bad luck still hurts. See Tom Baker, *On the Genealogy of Moral Hazard*, 75 *Tex. L. Rev.* 237, 278 (1996) (noting that insurance recovery cannot fully compensate for all losses).

³⁵ See Michael J. Graetz & Jerry L. Mashaw, *True Security: Rethinking American Social Insurance* 17-23 (1999) (discussing economic and normative reasons for government social insurance against low labor income); Moss, note 26, at 49-52 (discussing government’s superior ability to overcome information, perception, commitment, and externalization problems).

after-tax income will be somewhat less; if she turns out to have low pretax income, her after-tax (and after-transfer) income will be somewhat more.³⁶ Reducing the variance of possible outcomes is precisely what insurance does, by shifting that risk onto an insurer and thereby spreading it among all the insured.

To see this another way, ignore the insurance function for a moment. Consider the tax payment of a high-earning individual to contain two components: One component of the tax is the value of the benefits received from government services—a price, essentially—and the remaining component is redistributive—it goes to pay for income support and other benefits for low-earning individuals.³⁷ (And a low-earning person would receive a net redistributive transfer, since their tax would be less than the value of benefits received.) Reintroducing the insurance element adds a third component to the tax payments, the “premium” for the income insurance provided to the taxpayer herself.³⁸ (Or it might be considered as an additional part of the “benefit” component, shrinking the “redistributive” component correspondingly.) Thus, some amount of the tax, above and beyond a full accounting of all other benefits received, acts as sort of insurance premium, and therefore pays for an additional benefit that accrues to the taxpayer. As a matter of cash flows, some of that premium will go out in the form of payments and benefits to those with low income. But that is no different from any insurance program.³⁹ If my homeowners’ insurance premium funds a payment to another insured whose house burned down, that is not “redistribution”—that is just luck.⁴⁰

³⁶ See Kaplow, note 28, at 60-62.

³⁷ This essentially mirrors Richard Musgrave’s division of government into the Allocation Branch and the Distribution Branch (Musgrave also includes the Stabilization Branch, which I can ignore here). See Musgrave, note 1, at 5-6. Separating the roles would be difficult in practice, of course, particularly because the high-earning individual also gets direct and indirect benefits from redistribution (not including the insurance benefit). For example, the person might prefer to live in a more equal society, might take altruistic benefit in helping those in need, or might get particular economic benefits from living in a society with a stable class of consumers. Moreover, the value of many of the public goods provided by government, such as national defense, rule of law, and property rights, arguably accrue more to those with more wealth to protect. See Boris Bittker, *The Income Tax: How Progressive Should It Be?* 48-54 (1969) (arguing that the benefits of government increase in proportion to income and wealth).

³⁸ The insurance metaphor can be extended beyond the idea of a “premium.” Because the value of lower taxes and higher transfers may not fully make up for the downside risk of uncertain income, there is also a degree of “coinsurance.” Similarly, one could imagine the amount of lost income needed for transfers to kick in, or even to drop a tax bracket, as a partial “deductible.” See Kaplow, note 26, at 245 n.7.

³⁹ See Dworkin, note 24, at 296-97.

⁴⁰ To be more precise, I mean that the transfer is actuarially fair and not based on broader social policy goals.

In practice, however, disentangling the redistributive and insurance elements is impossible, and there is room for significant disagreement over definitions.⁴¹ For example, the distribution of endowments and abilities is itself a lottery, and we can think of redistributive taxation as also being partly insurance against bad outcomes in that lottery.⁴² Thus redistribution itself could be conceived as endowment insurance from Rawls' original position.⁴³ Rawls himself argued that the choice of his two principles of justice in the original position could be based entirely on self-interest.⁴⁴ If so, then in part the question of where to draw the line between redistribution and insurance may be one of timing. From any given point in life, transfers based on *ex ante* factors may look like redistribution, and transfers based on uncertain *ex post* factors may look more like insurance.

But even from the original position, an individual choosing a redistributive tax-and-transfer system may not be solely insuring himself. Indeed, some commentators on Rawls say that he was incorrect in arguing that no external normative values are required to deduce the principles of justice in the original position, and that in fact some intuitive idea of "fairness" must play a role in his logic.⁴⁵ Thus some of the choice, even in the original position, may simply be a normative or aesthetic preference for a more egalitarian society. Even in the earli-

⁴¹ See, e.g., Edward D. Kleinbard, *We Are Better Than This: How Government Should Spend Our Money* 327-33 (2015) (arguing that much social insurance is misidentified as redistribution).

⁴² See, e.g., Dworkin, note 24, at 302.

⁴³ On the original position, see John Rawls, *A Theory of Justice* 118-83 (1971); John F. Rawls, *Fairness as Justice: A Restatement* 15 (2001) [hereinafter *Restatement*]:

In the original position, the parties are not allowed to know the social positions or the particular comprehensive doctrines of the persons they represent. They also do not know persons' race and ethnic group, sex, or various native endowments such as strength or intelligence, all within the normal range. We express these limits on information figuratively by saying the parties are behind a veil of ignorance.

⁴⁴ Rawls, *Restatement*, note 43, at 85 ("[T]he parties [in the original position] take no direct interest in the interests of persons represented by other parties."); see also Brian Barry, *Theories of Justice* 213-14 (1989) ("[T]he difference principle is said to be what mutually disinterested people choosing principles to advance their own interests from behind a veil of ignorance would agree in choosing.").

⁴⁵ See Barry, note 44, at 214 ("No other aspect of Rawls's theory has attracted more commentary . . . and it is, I think, safe to say that no other aspect of the theory has met with such uniform rejection."), 334-37 ("[T]here is simply no way in which [Rawls] can adapt an original position with self-interested choices so as to get it to reflect his basic moral commitments. . . . It seems clear that Rawls has hit upon a method whereby you can get anything out of the theory at the end by simply putting it in at the beginning."); Thomas Nagel, *Rawls on Justice*, in *Reading Rawls: Critical Studies on Rawls' A Theory of Justice* 1, 15 (Norman Daniels ed., Stanford Univ. Press 1989) (1975) ("The egalitarian liberalism which [Rawls] develops and the conception of the good on which it depends are extremely persuasive, but the original position serves to model rather than to justify them.").

est theoretical time period, then, we can imagine that only part of the choice is self-regarding, while another part is explicitly redistributive.

The distinction between redistribution and insurance is further clouded because, just as a redistributive tax-and-transfer system is partly social insurance, social insurance is partly redistributive. For private insurance to operate effectively, it needs to manage the problems of adverse selection and moral hazard. With regard to adverse selection in particular, without some form of experience rating,⁴⁶ an insurance scheme can end up being a net transfer from those with low risk to those with high risk.⁴⁷ Low-risk individuals generally would not like that deal and might opt out. In the tax system, however, opting out is not generally available, and thus we end up with some subsidization of those with a higher risk of low labor income by those with a lower risk. Therefore social insurance like this almost always contains a redistributive element.⁴⁸ This feedback loop—redistributive programs having insurance value, insurance programs having redistributive value—makes disentangling the two practically impossible. Nonetheless, the insurance function exists, and thus what appears to be the redistributive function of a tax-and-transfer system is actually partly redistribution and partly insurance.⁴⁹

Looking at the tax-and-transfer system as in part a form of insurance, not just redistribution, affects the analysis of certain tax policy questions. For example, the results from optimal tax theory models differ substantially based in part on whether they include the element of uncertainty of income. The standard view is that a lump sum tax-

⁴⁶ “Experience rating” describes the methods by which insurers price premiums based in part on the particular risks of the individual being insured. See, e.g., Mark V. Pauly, *The Welfare Economics of Community Rating*, 37 *J. Risk & Ins.* 407, 408 (1970). It is in contrast to “community rating,” whereby all insureds in a group are charged the same premium based on the aggregate risk of the group. See, e.g., *id.* at 407.

⁴⁷ See *id.* at 410-11.

⁴⁸ See Graetz & Mashaw, note 35, at 22; Boadway et al., note 28, at 280, 295; Jean-Charles Rochet, *Incentives, Redistribution and Social Insurance*, 16 *Geneva Papers on Risk & Ins. Theory* 143, 145, 149 (1991).

⁴⁹ Indeed, a recent paper by Hilary Hoynes and Erzo Luttmer claims that the insurance value of state tax-and-transfer systems is actually quite high, and rising with income, which can partly explain why support for progressive taxation is also relatively high. They define as insurance those potential future transfers that are based on the uncertainty of future income; thus their determination of insurance is done at a certain point in time, looking toward the future. As they acknowledge, they likely overestimate the insurance value for high-income individuals. In addition, they do not include any savings, and thus do not account for self-insurance in measuring individual utility from potential transfers. Hilary W. Hoynes & Erzo F.P. Luttmer, *The Insurance Value of State Tax-and-Transfer Programs*, 95 *J. Pub. Econ.* 1466, 1467 (2011); see also Varian, note 23, at 62-63.; cf. Richard Blundell, Luigi Pistaferri & Ian Preston, *Consumption Inequality and Partial Insurance*, 98 *Am. Econ. Rev.* 1887, 1887-89 (2008) (examining the insurance of tax-and-transfer policies with a parametric income generation model that allows for self-insurance through savings).

and-transfer system is efficient and generates no excess burden, ignoring any desire for equity.⁵⁰ However, introducing uncertainty in labor income changes the result such that lump sum taxes may no longer be efficient, even, again, ignoring any desire for redistribution.⁵¹ As is discussed in Part IV, the distinction between redistribution and insurance also bears on the question of how to assign tax functions in a federal system.

B. Progressive Income Taxation

The prior discussion explains the insurance function of a redistributive tax-and-transfer system in general, and therefore applies to many of the programs explicitly categorized as social insurance, such as Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), Medicaid, and Social Security.⁵² There should be little surprise that these transfers have an insurance function.

But the same argument for insurance value also applies when looking more narrowly just at tax instruments, separate from the classic social insurance programs. Thus, an income tax itself has an insurance function, by charging more when times are good and less when times are bad—this also acts to lower the variance in after-tax income. That is true for a flat-rate income tax,⁵³ but it applies even more so to a progressive income tax, with graduated rates, exemptions, and even tax-based transfers, such as an earned income tax credit (EITC).⁵⁴ Graduated rates and EITCs are not typically thought of as providing insurance,⁵⁵ but by helping to narrow the range of possible future out-

⁵⁰ See, e.g., Harvey R. Rosen & Ted Gayer, *Public Finance* 330-33 (9th ed. 2010).

⁵¹ See Jonathan Eaton & Harvey S. Rosen, *Labor Supply, Uncertainty, and Efficient Taxation*, 14 *J. Pub. Econ.* 365, 373 (1980) (showing that under certain assumptions the optimal wage tax rate is strictly greater than zero).

⁵² This is not to say that any of these programs functions well as social insurance. TANF in particular has low benefit rates and participation. See David A. Super, *The Quiet “Welfare” Revolution: Resurrecting the Food Stamp Program in the Wake of the 1996 Welfare Law*, 79 *N.Y.U. L. Rev.* 1271, 1309-11 (2004). Nonetheless, the intent of TANF and the other programs is to provide additional support in cases of low income. *Id.* at 1391.

⁵³ And would also be a true for a property tax or sales tax or other tax instrument that charges more in good times than bad.

⁵⁴ This is assuming that the transfer side of the equation would not be greatly altered by the political economy of a hypothetical move from a flat-rate income tax (or even a lump sum tax) to a more progressive income tax. It could be, however, that transfers become relatively less progressive to make up for a more progressive tax system, in which case there would be no net difference. This seems unlikely, however, and the generally accepted view is that a progressive income tax is a major source of redistribution. See note 49.

⁵⁵ But see Graetz & Mashaw, note 35, at 48-54 (describing the EITC as a social insurance program, though an imperfect one because, as a wage subsidy, it does not protect those completely out of the work force).

comes, they provide a form of insurance against uncertain labor income just as the classic social insurance programs do.

This Article focuses in particular on the progressive income tax for the following reasons. First, because the Article is concerned with fiscal federalism, and the tax assignment question in particular, it is necessary to focus on particular tax instruments, rather than the “tax-and-transfer system” generally. Only by narrowing in on particular instruments can we begin to discuss what level(s) of government ought to use those instruments.

Second, the progressive income tax is arguably our most powerful redistributive tool,⁵⁶ at least from a pretax income baseline.⁵⁷ As discussed in Part IV, there is active debate in the fiscal federalism literature about what level of government can best perform the redistributive function, and this bears directly on the question of whether and to what degree a state can effectively use an income tax.

Third, of the major tax instruments—income, sales, property, and wealth-transfer taxes—the income tax also has the largest insurance function.⁵⁸ The focus here is on insurance against uncertain future income, and a tax that uses an income baseline can be most closely targeted to changes in income. And this insurance function, as this Article argues, is what complicates the fiscal federalism question in important ways.

III. STATE TAX OVERVIEW

This Article is concerned with aspects of state tax and budget policy in a federal system, and so I briefly review some of the relevant features here. Readers familiar with these features may wish to skip to Part IV. State fiscal systems are, of course, enormously complicated and diverse, and so this is by necessity just an overview.⁵⁹ Below, I address three key areas of state fiscal systems. In Section A, I discuss state tax mixes, and the role of state income taxes in particular. In Section B, I discuss the collection of institutional rules that govern state tax and budget policy, particularly those rules that ostensibly

⁵⁶ See Ronald McKinnon & Thomas Nechyba, *Competition in Federal Systems: The Role of Political and Financial Constraints*, in *The New Federalism: Can the States Be Trusted?* 3, 51-52 (John A. Ferejohn & Barry R. Weingast eds., 1997) (noting the particular importance of a progressive income tax to redistribution policy).

⁵⁷ Though this baseline is problematic. See note 22.

⁵⁸ See Louis Kaplow, *Taxation and Risk Taking: A General Equilibrium Perspective*, 47 *Nat'l Tax J.* 789, 795-96 (1994).

⁵⁹ For more detail on state tax and budget policies, see generally *The Oxford Handbook of State and Local Government Finance* (Robert D. Ebel & John E. Petersen eds., 2012) [hereinafter *Oxford Handbook*]; see also Gamage, note 6, at 754-65; Super, note 6, at 2605-40.

limit state borrowing and deficit spending. In Section C, I note some of the examples of state spending on redistributive programs.

A. *State Income Taxes*

In general, states (and their localities) rely on a mix of property, income (both individual and corporate), and sales and use taxes, miscellaneous fees and charges, and federal transfers to fund their operations. The property tax is the largest component of the tax mix, generating \$443.3 billion in state and local revenue, or about 33.1% of own-source revenue, in 2011.⁶⁰ General use sales taxes tend to be the second largest, though individual income taxes are a close third, sometimes surpassing sales taxes.⁶¹ In 2011, general use sales taxes and individual income taxes made up 22.9% and 21.2% of state own-source revenue, respectively.⁶²

That said, there is substantial variation among the states in their relative reliance on income taxes. Most prominently, nine states have little or no income tax. Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming have no state income tax, and New Hampshire and Tennessee have an income tax only on interest and dividend income.⁶³ Of the forty-one states with a full income tax, northeastern states tend to rely more heavily on income taxes compared to a sales tax, while those in the southeast and southwest tend to rely more heavily on sales taxes.⁶⁴ That trend is partially explained by some of the relatively large states with policies that swing in one direction or the other. For example, New York and Massachusetts rely much more on income taxes compared to sales taxes, while Texas and Florida lack an income tax entirely.⁶⁵

Every state's income tax should be considered progressive, even where the rates are flat, and even before taking into account the transfer side of the equation. This is because, first, every state with an income tax includes some sort of exemption or standard deduction,⁶⁶

⁶⁰ See Urban-Brookings Tax Pol'y Ctr., *State and Local General Revenue 2004-2011*, at 1 (Sept. 20, 2013), http://www.taxpolicycenter.org/taxfacts/Content/PDF/dqs_table_64.pdf.

⁶¹ *Id.* In 2008, for example, individual income taxes generated \$304.9 billion, while general use sales taxes generated \$304.7 billion. *Id.* at 4.

⁶² *Id.* at 1.

⁶³ *Id.*; Joseph J. Cordes & Jason N. Juffras, *State Personal Income Taxes*, in *Oxford Handbook*, note 59, at 300, 301.

⁶⁴ See Urban-Brookings Tax Pol'y Ctr., note 60, at 1.

⁶⁵ See Cordes & Juffras, note 63, at 301.

⁶⁶ Arguably Pennsylvania is an exception, since it has a flat rate structure with no exemptions or standard deduction. See Pa. Const. art. VIII, § 1; Pa. Dep't of Rev., *Personal Income Tax Guide* ch. 6, at 7 (May 15, 2012), http://www.revenue.pa.gov/FormsandPublications/PAPersonalIncomeTaxGuide/Documents/pitguide_chapter_06.pdf; Urban-Brookings Tax Pol'y Ctr., *Individual State Income Tax Rates 2000-2014*, at 1 (May 28, 2014), <http://>

meaning that average tax rates are increasing, even if marginal rates are flat. Furthermore, twenty-four states and the District of Columbia provide an EITC, on top of the federal EITC, refundable in all but three states.⁶⁷ This provides essentially a negative income tax rate at the low end of the rate schedule.⁶⁸

The degree of rate graduation varies between the states, however. Seven states have single-rate income taxes.⁶⁹ Of those with graduated rates, the top rates vary from 3.22% (North Dakota, for income above \$398,350)⁷⁰ to 13.3% (California, for income above \$1 million).⁷¹

After a period of flattening in the 1980's and 1990's, presumably mirroring the trend in federal tax rates, states have been increasing the graduation of their income tax rates since 2008.⁷² The timing suggests that this was in large part due to revenue needs created by the 2008 financial crisis and subsequent recession, and a few states that increased top rates during that period either have rolled the top rate back⁷³ or are scheduled to do so.⁷⁴ That said, some analysts believe that states do not have much room to cut rates further and may be forced to raise them. An aging population will likely lead to a relative shrinking of the tax base,⁷⁵ which means that rates must go up to keep

www.taxpolicycenter.org/taxfacts/Content/PDF/state_income_rates.pdf. However, Pennsylvania does have a "Tax Forgiveness" program that provides a credit against tax for low-income taxpayers, thus operating much like a zero bracket for low-income taxpayers. See 72 Pa. Stat. Ann. § 7304 (West 2013); Pa. Dep't of Rev., Tax Forgiveness, <http://www.revenue.pa.gov/GeneralTaxInformation/Tax%20Types%20and%20Information/Pages/Personal%20Income%20Tax/Tax%20Forgiveness/Tax%20Forgiveness.aspx> (last visited Nov. 3, 2014).

⁶⁷ See Urban-Brookings Tax Pol'y Ctr., State Earned Income Tax Credits Based on the Federal EITC 1 (Aug. 13, 2013), http://www.taxpolicycenter.org/taxfacts/Content/PDF/state_eitc.pdf.

⁶⁸ See David A. Weisbach & Jacob Nussim, The Integration of Tax and Spending Programs, 113 Yale L.J. 955, 1026 (2004).

⁶⁹ Urban-Brookings Tax Pol'y Ctr., note 66, at 1 (Colorado, Illinois, Indiana, Massachusetts, Michigan, Pennsylvania, and Utah).

⁷⁰ N.D. Cent. Code Ann. § 57-38-30.3 (West).

⁷¹ Urban-Brookings Tax Pol'y Ctr., note 66, at 1. California's top bracket is 12.3%, but there is an additional 1% surtax on incomes over \$1 million. Cal. Rev. & Tax. Code § 17041 (West 2014) (setting the 2009 tax rate schedule and providing for annual adjustments based on the California Consumer Price Index); State of Calif. Franchise Tax Bd., 2014 California Tax Rates and Exemptions, https://www.ftb.ca.gov/forms/2014_California_Tax_Rates_and_Exemptions.shtml (last visited Nov. 3, 2014) (adjusting the tax brackets for the annual change in inflation).

⁷² See Cordes & Juffras, note 63, at 309-11.

⁷³ In 2009 New Jersey's top rate increased from 8.97% to 10.75%, but in 2010 the rate reverted back to 8.97%. Oregon's top rate went from 11% to 9.9% in 2011. Urban-Brookings Tax Pol'y Ctr., note 66, at 4.

⁷⁴ Hawaii's top rate is scheduled to go from 11% to 8.25% in 2015. See Cordes & Juffras, note 63, at 310.

⁷⁵ The tax base shrinks with an aging population because, first, average income falls with age, and, second, income for the elderly is disproportionately made up of tax-preferred items, such as dividends, capital gains, pensions, and Social Security. See *id.* at 316.

per capita revenue constant.⁷⁶ And after the axe taken to state budgets during the Great Recession, including deferral of spending, there is little room for revenue to drop further.

B. Fiscal Institutions

There are several key types of institutional rules, sometimes called “fiscal constitutions,”⁷⁷ governing the administration of state taxes and expenditures. Particularly important for this discussion are balanced budget requirements, tax and expenditure limitations, and rainy-day funds.

1. Balanced Budget Requirements and Debt Limitations

Every state except Vermont has some sort of balanced budget requirement, either by constitution or statute. The rules vary in strength. Some require only that budgets be balanced as enacted, but do not prohibit the state from having a deficit and carrying a debt in fact.⁷⁸ Most apply only to operating budgets and general funds, thus freeing a state to fund capital projects or pension funds with debt. Furthermore, enforcement provisions are generally weak or not invoked.⁷⁹

More powerful than actual rules, however, may be the combination of bond markets, voters, and custom. The actual rules apply to less than 75% of state spending,⁸⁰ but states typically balance their budgets to a far greater degree,⁸¹ implying that they are not merely obeying the legal minimum.

Related to balanced budget requirements are debt rules that limit the amount of debt a state can carry, either as a fixed amount or as a percentage of the state budget. Both the budget and debt rules generally arose out of a state debt crisis in the 1840's. States had run up enormous debts in the early 1800's to help fund railroads and the like,

⁷⁶ See *id.* at 310, 316-17.

⁷⁷ See *Super*, note 6, at 2549 n.21.

⁷⁸ See Tracy M. Gordon, *State and Local Fiscal Institutions in Recession and Recovery*, in *Oxford Handbook*, note 59, at 246, 249.

⁷⁹ See *id.*

⁸⁰ James M. Poterba, *Balanced Budget Rules and Fiscal Policy: Evidence from the States*, 48 *Nat'l Tax J.* 329, 331 (1995).

⁸¹ See Urban-Brookings Tax Pol'y Ctr., *State and Local Government Revenues and Expenditures, Per Capita, by Function, Selected Years 1977-2011* (Sept. 20, 2013), http://www.taxpolicycenter.org/taxfacts/Content/PDF/dqs_table_49.pdf (showing close alignment between revenues and expenditures over time); see also Yilin Hou & Daniel L. Smith, *Do State Balanced Budget Requirements Matter? Testing Two Explanatory Frameworks*, 145 *Pub. Choice* 57, 63-64 (2009) (noting little connection between legal stringency and fiscal behavior).

but after the financial panic of 1837 and the recession that followed, a number of states defaulted on their debts.⁸² Following the debacle, states found that they needed hard limits on borrowing in order to attract lenders again. States that entered the union after this period have followed the lead of the older states.⁸³

Currently, forty-six states have constitutional or statutory limitations on total debt outstanding, and many also have procedural limitations, such as supermajority or voter approval requirements.⁸⁴ Many of these limitations also extend to local borrowing, though some writers have suggested that one reason for the growth in special-purpose entities, such as water and sewer districts, is to get around these limitations.⁸⁵

2. *Tax and Expenditure Limits*

In addition to limits on spending in excess of revenue, some states have rules restricting how revenue or expenditures can grow. For example, Proposition 13 in California limits the growth in property tax assessed values to no more than 2% per year unless the property is sold.⁸⁶ Massachusetts similarly limits growth in property tax rates.⁸⁷ Other states have “taxpayer bills of rights,” which provide rules for, among other things, voter approval of tax increases.⁸⁸

3. *Rainy-Day Funds*

RDFs, also known as budget stabilization funds, are a relatively recent innovation in state budget policy, dating largely to the 1980’s (though some date as far back as the 1940’s).⁸⁹ Their growth in recent years can be partly explained by the increase in state revenue volatility during the 1980’s,⁹⁰ as a result of the relative shift toward income

⁸² See Gordon, note 78, at 251 (“[E]ight states and the Territory of Florida defaulted, five states repudiated all or part of their debts, two states renegotiated with creditors, and two states delayed by ultimately repaid their obligations.”).

⁸³ *Id.*

⁸⁴ *Id.* at 251-52.

⁸⁵ See John Joseph Wallis & Barry Weingast, *Dysfunctional or Optimal Institutions? State Debt Limitations, the Structure of State and Local Governments, and the Finance of American Infrastructure*, in *Fiscal Challenges: An Interdisciplinary Approach to Budget Policy* 329, 360-61 (Elizabeth Garrett, Elizabeth A. Graddy & Howell E. Jackson eds., 2008).

⁸⁶ Cal. Const. Art. 13A.

⁸⁷ Mass. Gen. Laws Ch. 59 § 21C.

⁸⁸ Nikolai Mikhailov & Jason Kolman, *Lincoln Inst. of Land Pol’y, Types of Property Tax and Assessment Limitations and Tax Relief Programs* 3 (2001), <https://www.lincolninst.edu/subcenters/property-valuation-and-taxation-library/dl/mikhailov.pdf>.

⁸⁹ See *id.* at 252-53.

⁹⁰ See Galle & Stark, note 6, at 605-06.

taxes and also because of the loss of General Revenue Sharing in the mid-1980's.⁹¹ As states came to rely on more volatile sources of revenue, they had to find a way to smooth out expenditures over the business cycle in the absence of borrowing, and saving some current revenue to spend on a “rainy day” was the accepted solution.

The procedures governing RDFs differ, with some requiring deposits of a particular percentage of revenue and fund levels of a particular percentage of revenue or expenditures, while others are closer to discretionary.⁹² Rules on withdrawals can also vary in stringency. Some states require a supermajority vote to withdraw from the RDF, and some require that withdrawals be repaid with interest, sometimes by fiscal year end.⁹³ In some cases, these rules may be strong enough to inhibit use of the RDFs even when most needed.⁹⁴ In general, RDFs are relatively small and the consensus is that they have been inadequate to manage state fiscal crises.⁹⁵ RDFs are discussed further in Section V.A, in the context of a multistate RDF.

C. *State Social Insurance and Redistributive Programs*

The notion that social insurance and redistribution should be largely handled by the most central level of government is already challenged by the deep involvement of state and local governments in redistribution. To begin with, a number of the largest national social insurance and redistribution programs have a joint federal/state structure. For example, states are heavily involved in the Medicaid program. Technically, states fund Medicaid expenditures directly, but then have a share of the expenditures reimbursed by the federal government.⁹⁶ While federal law mandates minimum coverage for certain populations,⁹⁷ states are relatively free to expand Medicaid coverage

⁹¹ See Bruce A. Wallin, *From Revenue Sharing to Deficit Sharing* 137 (1998) (stating that the loss of General Revenue Sharing led initially to lower state general fund balances).

⁹² See Gordon, note 78, at 252.

⁹³ See *id.*

⁹⁴ New York has not made a withdrawal from its Tax Stabilization Reserve Account since 1992 and never from its Rainy Day Reserve Account. See Citizen's Budget Comm'n, *The Broken Umbrella: How to Make New York State's Rainy Day Fund More Useful* 6 (2011), http://www.cbcny.org/sites/default/files/REPORT_BrokenUmbrella_06062011.pdf; see also Office of State Comptroller, *State of New York Comprehensive Annual Financial Report 114-15* (Sept. 4, 2012), <http://www.osc.state.ny.us/finance/finreports/2012cafr.pdf>.

⁹⁵ See Section V.A.

⁹⁶ Ctrs. for Medicare & Medicaid Servs., *Financing & Reimbursement*, <http://www.medicare.gov/Medicaid-CHIP-Program-Information/By-Topics/Financing-and-Reimbursement/Financing-and-Reimbursement.html> (last visited Sept. 7, 2014). The expansion of Medicaid under the Affordable Care Act shifts more of the funding responsibility onto the federal government, at least for those states that have adopted the expansion.

⁹⁷ See 42 C.F.R. §§ 435.110-170 (2012) (listing Medicaid mandatory eligibility groups). For example, for parents with dependent children, the required minimum income standard

beyond that. For example, the range of eligibility for adults who are parents of dependent children ranges from those whose incomes are 16% of the federal poverty line (Alabama) to 220% of the federal poverty line (District of Columbia; the next highest state, Minnesota, covers those with incomes up to 205% of the federal poverty line).⁹⁸

The federal government reimburses between 50% and 75% of a state's (pre-Affordable Care Act) Medicaid costs, based on average state income levels,⁹⁹ so even at the most generous reimbursement rate, a state still bears some direct costs of expanding Medicaid beyond the minimum coverage levels, costs that are borne by state residents.

TANF, the latest iteration of the classic cash welfare program, is funded largely through federal block grants to the states.¹⁰⁰ There is still a significant role for direct state spending, however, because in order to receive the full TANF block grant, a state must directly contribute some of its own money in order to satisfy the "maintenance of effort" (MOE) requirement.¹⁰¹ To satisfy the MOE requirement, generally states have to spend around 80% of what they spent on welfare and related programs in fiscal year 1994.¹⁰² MOE spending is significant, accounting for almost half of total TANF spending.¹⁰³ In addition, many localities provide substantial welfare aid, for example through programs that help the homeless.¹⁰⁴

is "a State's [Aid to Families with Dependent Children (AFDC)] income standard in effect as of May 1, 1998 for the applicable family size converted to a [modified adjusted gross income]-equivalent standard." *Id.* at § 435.110(c)(1).

⁹⁸ See Ctrs. for Medicare & Medicaid Servs., *State Medicaid and CHIP Income Eligibility Standards 1* (2014), <http://medicaid.gov/AffordableCareAct/Medicaid-Moving-Forward-2014/Downloads/Medicaid-and-CHIP-Eligibility-Levels-Table.pdf>.

⁹⁹ See 42 U.S.C. § 1396d(b) (2012). These are known as the Federal Medical Assistance Percentages, or FMAPs. *Id.* While the maximum statutory FMAP is 83%, *id.*, no state's FMAP exceeds 75%, see Ctrs. for Medicare & Medicaid Servs., note 96. This is not including the increased FMAP of 90%-100% for the Medicaid expansion under the Affordable Care Act. See 42 U.S.C. § 1396d(y)(1).

¹⁰⁰ See generally Ctr. on Budget & Pol'y Priorities, *Policy Basics, An Introduction to TANF 1-3* (Dec. 4, 2012), <http://www.cbpp.org/files/7-22-10tanf2.pdf>.

¹⁰¹ See 42 U.S.C. § 609(a)(7) (2012); 64 Fed. Reg. 17,720, 17,816 (Apr. 12, 1999) (providing an explanation of the statute).

¹⁰² See 42 U.S.C. § 609(a)(7)(A), (B)(ii)-(iii).

¹⁰³ See Liz Schott, LaDonna Pavetti & Ife Finch, Ctr. on Budget & Pol'y Priorities, *How States Have Spent Federal and State Funds Under the TANF Block Grant 5-6* (Aug. 7, 2012), <http://www.cbpp.org/files/8-7-12tanf.pdf>.

¹⁰⁴ See Gillette, note 2, at 85. These programs are largely confined to the large cities, however. See U.S. Census Bureau, *Local Governments—Expenditures and Debt by State: 2008 tbl.456* (2012), available at <http://www.census.gov/compendia/statab/2012/tables/12s0456.pdf> (listing local government expenditures on public welfare by state); U.S. Census Bureau, *City Governments—Expenditures and Debt for Largest Cities: 2006 tbl.458* (2009) available at <http://www.census.gov/compendia/statab/2012/tables/12s0458.pdf> (listing welfare spending of the largest U.S. cities). On average, municipalities spend relatively little on redistributive programs. See Leah Boustan, Fernando Ferreira, Hernan Winkley

Perhaps more important than classic social insurance programs, however, are K-12 public schools and, to a lesser degree, state higher education.¹⁰⁵ Public schools are funded out of a combination of local property taxes and grants from the state and federal governments.¹⁰⁶ The government grants are broadly redistributive—the revenues come from progressive taxes and are spent in progressive ways, going disproportionately to poorer school districts.¹⁰⁷ And within a given locality, wealth is likely redistributed from those families with valuable property to those with children,¹⁰⁸ who for that reason have less disposable income.

Higher education is a complicated subject, and higher education financing is in a period of flux as of this writing. Many states continue to subsidize state colleges and universities, even as tuitions rise.¹⁰⁹ The degree of actual redistribution, however, depends on issues like the relative subsidization of flagship research universities versus community colleges and similar issues. But at a first approximation, state support for higher education likely acts to redistribute from the wealthiest state residents to needy students and those supported economically by colleges and universities.

Even state employment itself may be somewhat redistributive, with tax revenue funding the wages and salaries of unionized teachers, laborers, and clerical workers.¹¹⁰ Indeed, the degree to which states and localities act in a redistributive manner is hard to overstate, and the

& Eric M. Zolt, *The Effect of Rising Income Inequality on Taxation and Public Expenditures: Evidence from U.S. Municipalities and School Districts, 1970–2000*, 95 *Rev. Econ. & Stat.* 1291, 1293 (2013) (finding less than 5% of local budgets spent on redistributive programs).

¹⁰⁵ See Boadway & Tremblay, note 1, at 1065 (noting that many quasi-private goods, like education, health care, and social services are inherently redistributive).

¹⁰⁶ See, e.g., Nat'l Ctr. for Education Stat., *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2010-11 (Fiscal Year 2011)* 6, 8 (2013), available at <http://nces.ed.gov/pubs2013/2013342.pdf>.

¹⁰⁷ For example, Title I federal spending, under the Elementary and Secondary Education Act, goes to school districts with disproportionate numbers of students from low-income families. 20 U.S.C. §§ 6301-6587 (2013).

¹⁰⁸ See Haydar Kurban, Ryan M. Gallagher & Joseph J. Persky, *Estimating Local Redistribution Through Property-Tax-Funded Public School Systems*, 65 *Nat'l Tax J.*, 629, 630 (2012). The issue is complicated, however, to the degree that spending on public education is capitalized into home values. 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 (1969).

¹⁰⁹ See State Reports, Ill. St. U. College of Educ., <http://education.illinoisstate.edu/grapevine/statereports/> (last visited Oct. 4, 2014) (listing state appropriations for higher education); Tuition and Fees at Flagship Universities over Time, Coll. Bd., <http://trends.collegeboard.org/college-pricing/figures-tables/tuition-and-fees-flagship-universities-over-time> (last visited Oct. 4, 2014) (listing tuition and fees at state universities).

¹¹⁰ See Alberto Alesina & Reza Baqir, *Redistributive Public Employment*, 48 *J. Urb. Econ.* 219, 219-21 (2002).

forces driving states to do so have only increased in recent decades.¹¹¹ Thus, beginning in the 1980's the "new federalism" movement encouraged states to take on more of the roles that previously had been ceded to the federal government in the 1960's and 1970's.¹¹² As a result, between 1952 and 2006 state budgets almost tripled as a share of GDP and doubled as a share of overall government spending.¹¹³ While not all of that spending is redistributive, a substantial amount is, particularly health care spending, such as the Medicaid spending discussed above.¹¹⁴ And there have been serious proposals to increase the state role in these programs even further.¹¹⁵ State redistributive policies are substantial and well-entrenched.

IV. ASSIGNMENT OF TAX FUNCTIONS

A central concern of fiscal federalism is the assignment of taxation and good-provision functions between the multiple levels of government in a federal system. Of particular concern to this Article is the proper assignment of the redistribution function, and therefore the progressive income tax. The standard view in the literature is that redistribution, and therefore progressive income taxation,¹¹⁶ should be exclusively allocated to the most central level of government—at the federal level, in the United States—with subnational governments focusing more on allocation of public goods and raising revenue from flatter and more stable taxes, such as a real property tax.¹¹⁷ However, in the more complicated world in which we live, it is not clear that this strict division is optimal. States are performing some redistributive functions, and this may in fact be appropriate.

Yet, as discussed in Part II, a redistributive state tax-and-transfer system performs not just a redistributive function, but an insurance function as well. And while the analysis that follows supports a partial

¹¹¹ The Lewin Group, Rockefeller Inst. of Gov't, *Spending on Social Welfare Programs in Rich and Poor States: Key Findings 9-10* (2004), <http://aspe.hhs.gov/hsp/social-welfare-spending04/summary.pdf> (prepared for the Office of the Ass't Sec'y for Planning and Evaluation, U.S. Dep't of Health and Human Servs.).

¹¹² See, e.g., John A. Ferejohn & Barry R. Weingast, Introduction, in *The New Federalism*, note 56, at i, viii-x.

¹¹³ See Katherine Baiker, Jeffrey Clemens & Monica Singhal, *The Rise of the States: U.S. Fiscal Decentralization in the Postwar Period*, 96 *J. Pub. Econ.* 1079, 1079 (2012).

¹¹⁴ See Hoynes & Luttmer, note 49, at 1466 (noting the rise of redistributive state health care spending).

¹¹⁵ See, e.g., House Comm. on the Budget, *The Path to Prosperity: Restoring America's Promise: Fiscal Year 2012 Budget Resolution 38-39* (2012) (outlining Rep. Paul Ryan's proposal to shift a larger share of the Medicaid burden to the states).

¹¹⁶ See McKinnon & Nechyba, note 56, at 49.

¹¹⁷ See Oates, *Fiscal Federalism*, note 1, at 143-44; McKinnon & Nechyba, note 56, at 19; Darien Shanske, *How Less Can Be More: Using the Federal Income Tax to Stabilize State and Local Finance*, 31 *Va. Tax. Rev.* 413, 417-18 (2012).

state redistributive role, the argument for state, as opposed to federal, insurance against uncertain labor income is much weaker. States are simply not as well-positioned as insurers compared to the federal government, a fact clearly demonstrated by the strain on state budgets during the Great Recession.

The next Section reviews the fiscal federalism arguments related to the redistributive function of taxation. Some recent theoretical and empirical work implies that some state-level redistribution could be desirable, or at least not as damaging as classic fiscal federalism theory concludes. This may explain, in part, the states' increasing reliance on progressive income taxes.¹¹⁸ The following Section turns to the insurance function. Even if states can engage in more redistribution without the parade of horrors threatened by the classic fiscal federalism literature, it still remains the case that state-level progressive income taxation is costly from an insurance standpoint—it causes substantial revenue volatility and is actuarially inefficient. These are costs that are likely better handled at the federal level.

A. *Redistributive Function*

The classic theoretical result of fiscal federalism is that redistribution and social insurance programs are best handled at the most central level of government—in the United States, at the federal, rather than the state or local, level.¹¹⁹ As developed in particular by Charles Tiebout and Wallace Oates, the argument focuses on interstate competition and migration: States with significant redistributive policies may become unattractive to higher-earning individuals and correspondingly more attractive to lower-earning individuals.¹²⁰ If taxpayers are highly mobile within a nation, this could be costly to such a state, since the state would prefer the reverse—to be attractive to high-earning individuals, rather than low-earning individuals.

In addition, even those redistributive and social insurance programs a state does offer may be suboptimal. First, spillover effects at the borders could cause some of the benefits to accrue to residents in other states,¹²¹ which may lead state legislatures to discount the value of such benefits. Second, there are simply political constraints to the provision of such benefits: The net contributors are likely to be more politically powerful than the net recipients.

¹¹⁸ See Cordes & Juffras, note 63, at 309-11; Gamage, note 6, at 759-60.

¹¹⁹ See note 1 and accompanying text.

¹²⁰ Oates, *Second Generation*, note 1, at 351-52; Tiebout, note 1; see Stark note 1, at 1408-09.

¹²¹ See Oates, *Fiscal Federalism*, note 1, at 66; McKinnon & Nechyba, note 56, at 6; Stark, note 1, at 1408-09.

Thus, the tax law and public finance literature generally has concluded that it is better for the central government, rather than subnational governments, to provide social insurance and redistribution. The cost of out-migration from the United States is much higher than from any given state and spillover effects are minimal, and thus the federal government would be better insulated against the possible negative effects of redistributive policies.

This view tends to dominate policy and academic discussion, but a close look at the theoretical and empirical literature reveals a more nuanced set of conclusions about the role of state tax-and-transfer programs. It may be that some limited state role in redistribution—perhaps close to what states are currently doing—is appropriate, and may even be optimal.

1. *Taxpayer Mobility*

The argument that competition between states will drive out redistributive policy depends on “Tiebout sorting,” the idea that residents can choose where to live based on the policy mixes in different localities. Thus a higher-earning individual might move to avoid high marginal rates, while a low-earning person might move to receive greater income-support benefits. In equilibrium, no redistribution would occur and any tax is just the price for benefits received from the government.

Only in the setting where we have perfect competition and mobility does the theory say that all taxes must be benefit taxes, however. But of course we do not have the perfect competition and costless mobility that the Tiebout hypothesis requires. When those assumptions are relaxed, the results are not as clear.¹²² Mobility in particular can actually be quite costly.¹²³ If it is difficult for taxpayers to move, and if there are factors that outweigh taxation (such as jobs, family, culture, and the like), then states actually may have some room for redistribution with little repercussion.¹²⁴

¹²² See, e.g., Bernard Dafflon, *The Assignment of Functions to Decentralized Government: From Theory to Practice*, in *Handbook of Fiscal Federalism* 271, 278-79 (Ehtisham Ahmed & Giorgio Brosio eds., 2006).

¹²³ See Pierre Salmon, *Horizontal Competition Among Governments*, in *Handbook of Fiscal Federalism*, note 122, at 61, 68-69 (“[The high cost of moving] is often considered a decisive objection to models—like the Tiebout model or the Oates and Schwab model—that are dependent on the assumption of mobility.”).

¹²⁴ That said, there is another dimension of state competition that is not dependent on mobility. What is sometimes called “yardstick competition” refers to the fact that residents of one jurisdiction might compare their jurisdiction to another, favorably or unfavorably, and reward or punish politicians accordingly. See Ben Lockwood, *The Political Economy of Decentralization*, in *Handbook of Fiscal Federalism*, note 122, at 33, 48-50; Susan Rose-Ackerman, *Risk-Taking and Reelection: Does Federalism Promote Innovation?*, 9 *J. Legal*

Indeed, some theoretical models imply that the balance of redistributive policies between the federal and state governments is largely a function of migration elasticity; where migration responsiveness to taxation is high, redistributive policy ought to be handled by the federal government, but where migration responsiveness is low or nonexistent, it may be that states are actually better providers of redistribution than the federal government.¹²⁵ This could be the case because state taxes can actually lower federal revenue, through labor supply effects¹²⁶ as well as the deduction for state and local taxes¹²⁷ (though the latter effect may be partially offset by the Alternative Minimum Tax¹²⁸). In the case where there is low mobility, rather than absorbing that cost, the federal government may be better off just ceding the redistributive function to the states entirely. This may partly explain the structure of the European Union federation, where redistribution is still largely left to the individual member states.¹²⁹

Furthermore, taxpayer mobility is also complicated by having three (or more) levels of government, as typically occurs in the United States: local, state, and federal (plus county and special purposes zones, like water and school districts).¹³⁰ If a person likes the tax-and-transfer system (and other benefits) of her locality, but not those of her state, what to do? Whether or not to move in such a case is not theoretically clear.

But even where mobility is high, we should still expect to see states engaging in some redistribution, for the same reason that govern-

Stud. 593, 593 (1980). So even if voting with one's feet is too costly, one can still vote. If a voter thinks that the grass is greener in a neighboring state, the politicians suffer. But the theoretical effect on state tax policy is unclear. See Wallace E. Oates, *On the Evolution of Fiscal Federalism: Theory and Institutions*, 61 *Nat'l Tax J.* 313, 322-27 (2008) (summarizing research on the impact of the yardstick competition on state tax policy); see also Koleman S. Strumpf, *Does Government Decentralization Increase Policy Innovation?*, 4 *J. Pub. Econ. Theory* 207, 227 (2002) (laying a foundation to use a game theory model for analyzing the implications of the yardstick competition on local government policies).

¹²⁵ See Roger H. Gordon & Julie Berry Cullen, *Income Redistribution in a Federal System of Governments*, 96 *J. Pub. Econ.* 1100, 1103, 1108 (2012).

¹²⁶ See Robin Boadway, Maurice Marchand & Marianne Vigneault, *The Consequences of Overlapping Tax Bases for Redistribution and Public Spending in a Federation*, 68 *J. Pub. Econ.* 453, 454 (1998); Gordon & Cullen, note 125, at 1100; William R. Johnson, *Income Redistribution in a Federal System*, 78 *Am. Econ. Rev.* 570, 570 (1988).

¹²⁷ See Stark, note 1, at 1417 (arguing that the deduction for state and local taxes encourages states to increase the progressivity of their income taxes, in part because some of the costs of doing so will be borne by the federal government).

¹²⁸ IRC §§ 55-59; see Galle & Klick, note 9, at 213-17.

¹²⁹ See Gordon & Cullen, note 125, at 1100 n.3.

¹³⁰ See Dafflon, note 122, at 283. As of 2007 there were over 89,000 governmental units in the United States. U.S. Census Bureau, *Statistical Abstract of the United States: 2012, State and Local Government Finances and Employment* 267, available at <http://www.census.gov/compendia/statab/2012/tables/12s0428.pdf>.

ments engage in redistribution even if it depresses labor supply.¹³¹ If there were no redistribution, then optimal tax theory would predict that at the margin there would be welfare gains from redistributing from high-income individuals to low-income individuals, assuming declining marginal utility of income.¹³² That the transfer might result in less income earned by high-income individuals in the state—whether because of lower labor supply or migration—is offset by the welfare gains to the low-income individuals. It is only at the point where migration (or declines in labor supply) becomes high enough to offset the welfare gains of redistribution that the standard optimal tax treatment would tell a state not to increase redistribution further.¹³³ Thus, even in an idealized world with high mobility, we would still predict some state-level redistribution.

2. *Heterogeneity and Local Preferences*

The classic theory is also complicated by the heterogeneity of states and localities. Jurisdictions are heterogeneous, both in terms of the summation of individual preferences within the jurisdictions, and also in terms of the benefits of living in the jurisdiction. Indeed, the Tiebout hypothesis would predict as much—that there would be some variation in social contracts in order to allow taxpayers to choose the one that best lines up with his or her preferences. Given this heterogeneity, we should expect the residents of some states to have a greater desire for redistribution than the nation on average. Thus, even if the federal government chooses the degree of redistribution favored by the national median voter, the median voter of, say, New

¹³¹ See, e.g., Peter Diamond & Emmanuel Saez, *The Case for a Progressive Tax: From Basic Research to Policy Recommendations*, 25 *J. Econ. Persp.*, Fall 2011, at 165-70 (reviewing optimal tax literature and applying a similar model).

¹³² See Gordon & Cullen, note 125, at 1104.

¹³³ To explain a bit more fully: Suppose the federal government chooses some degree of redistribution based on its maximization of the social welfare function. Thus, it has perfectly balanced the utility gains from redistribution with the labor supply and utility losses for high-income individuals. If a state then decides to engage in additional redistribution, that may cause additional labor supply effects but, as described above, the utility losses will be borne in part by out-of-state residents, through the relative decline in federal tax revenue. The state loses less utility than the federal government would, at least in terms of labor supply effects, and would accordingly pick some amount of redistribution greater than the federal government would. See *id.* at 1101. States, however, face the additional cost, not faced by the federal government, of migration. But if starting from a point of zero redistribution, and thus zero tax migration, the utility benefits of redistribution would likely initially outweigh the utility costs of migration. See *id.* at 1104–06. Even if a few people migrate, the extra revenue can do good things—at least up until the point where too many high-income individuals migrate. See *id.* at 1108.

York or California may desire yet more.¹³⁴ Thus we should not be surprised that some states add additional redistribution on top of the federal government's.

Moreover, in addition to different compositions of residents, the states themselves provide different benefits, geographic ones in particular. New York City and California can arguably charge higher situational rents, in the form of higher taxes, than can Arkansas.¹³⁵ Similarly, states may be heterogeneous simply in the likelihood of mobility in response to taxation. If a given state's residents are less likely to move, for whatever reason, then the state has more freedom to engage in redistribution.¹³⁶

That said, heterogeneity may also be evidence of tax migration to some degree. Even if individuals are unlikely to move based on tax policy alone, their tax policy preferences may correlate with other political, cultural, and economic preferences that in total do cause migration.¹³⁷ But if that is the case, then what we actually observe is sorting both in and out of states based in part on these policies. For example, those with libertarian-leaning preferences on taxation and other policies have likely already chosen New Hampshire over Massachusetts, while those with preferences for more public goods and social insurance have likely already chosen New York City over just about anywhere. The unidirectional migration of high-ability individuals predicted by the classic view is thus complicated by other factors.

Furthermore, even if states were homogenous, they might still prefer local redistribution over national.¹³⁸ Another key result of classic fiscal federalism theory is that local public goods defined spatially (for example, public mass transit or a local library) can be most efficiently

¹³⁴ Looking to the median voter as the driver of policy is obviously a simplification of complicated public choice and political economy questions, and I do not mean to specifically endorse it here. See, e.g., Keith Krehbiel, *Legislative Organization*, *J. Econ. Persp.*, Winter 2004, at 113, 114-17 (2004) (discussing criticisms of median voter theory and proposing alternatives). However, it can still be a useful heuristic in thinking about political economy, see, e.g., Randall G. Holcombe, *The Median Voter Model in Public Choice Theory*, 61 *Pub. Choice* 115, 115-17 (1989) (comparing the median voter model to the perfect competition model in economics, arguing that it is descriptive of a number of majority-rule decisions), particularly on expenditure issues, see Boustan et al., note 104, at 1292. Furthermore, it is not crucial to the point that I adopt a particular theory of public choice; the point is only that state and national policies may differ based on different compositions of voters and political actors.

¹³⁵ See Salmon, note 123, at 64.

¹³⁶ See Gordon & Cullen, note 125, at 1105.

¹³⁷ See Alden Spence, Frances Koblin & Ward Kingkade, *The Influence of Socioeconomic Bonds and Satisfaction on Interstate Migration*, 61 *Soc. Forces* 551, 551-52 (1982) (discussing factors such as social bonds, duration of residence, and education as significant factors in migration).

¹³⁸ See McKinnon & Nechyba, note 56, at 48-50; Mark V. Pauly, *Income Redistribution as a Local Public Good*, 2 *J. Pub. Econ.* 35, 36 (1973).

provided by the government whose political lines lie most close to the spatial dimension for the local public good, all else equal.¹³⁹ While redistributive equity is, largely, a national (and arguably international) issue, there are good reasons to think that people generally value redistribution more if it is to people close to them spatially, rather than far away. This comes from two main drivers: first, that we tend to be more altruistic towards those closest to us—family, friends, neighbors—and second, that the relatively well-off have more of an interest in mitigating the negative externalities of nearby poverty—crime, blight, and the like.¹⁴⁰ As shown by Mark Pauly, under certain assumptions, this can lead to shared state-federal role in redistribution.¹⁴¹ In addition, Yair Listokin and David Schizer argue that tax morale factors, such as the salience of local public goods, the greater potential for individual involvement in local political decisionmaking, and greater homogeneity of local communities give states and localities some additional ability to raise taxes compared to the federal government.¹⁴²

Finally, at least part of what is called redistribution actually provides direct benefits to the taxpayer. As noted in Part II, progressive income taxes and redistributive policies contain an insurance element as well as a redistributive one, which means that even high-paying taxpayers get some direct insurance value from a progressive income tax that charges them a higher percentage of income.¹⁴³ In addition, the peacekeeping and economic stimulus elements of redistributive transfers can create direct benefits to the high-paying taxpayer.¹⁴⁴ This is just to say, as discussed in Part II, that much of what is labeled “redistribution” actually encompasses benefits to the taxpayer paying higher taxes, and thus is less likely to drive her away.

3. *Alternatives to Competition*

State competition for high-value taxpayers is not the only possible behavior. Coordination and even collusion are also possible.¹⁴⁵ This may be more likely in federal systems with fewer subnational regions

¹³⁹ See Oates, *Fiscal Federalism*, note 1, at 35.

¹⁴⁰ See Pauly, note 138, at 37-38.

¹⁴¹ See *id.* at 58 (“[S]eparate governments could optimally perform at least some of the redistributive function . . . when migration in response to tax or benefit differentials is not quantitatively overwhelming.”); see also McKinnon & Nechyba, note 56, at 48-51.

¹⁴² See Yair Listokin & David M. Schizer, *I Like To Pay Taxes: Taxpayer Support for Government Spending and the Efficiency of the Tax System*, 66 *Tax L. Rev.* 179, 201 (2013).

¹⁴³ See Hoynes & Luttmer, note 49, at 1467.

¹⁴⁴ See Bittker, note 37, at 48-54; Salmon, note 123, at 65.

¹⁴⁵ See McKinnon & Nechyba, note 56, at 28-29.

than the United States, such as Canada—it is difficult for the fifty states to collude on, say, increasing the top rate of their income taxes. But all fifty states need not coordinate—it may be enough just for neighbors to do so. Some neighboring states do appear to try to use tax policy to poach residents, such as New Hampshire from Massachusetts.¹⁴⁶ But states in other areas, such as the New York metropolitan area, show at least some similarities in their tax policies. While state and local tax rates on top earners differ in New York, New Jersey, and Connecticut, one cannot avoid income taxation entirely, as one could in moving from Massachusetts to New Hampshire.

Furthermore, the trend generally among states seems to be to increase the role of a progressive income tax in its tax mix. While outliers remain and some states have tried to lower rates,¹⁴⁷ it is becoming increasingly difficult to avoid state-level income taxes simply by moving. This is in large part simply because of the large revenue needs of a state, due to the substantial amounts of money that states spend on public and quasi-public goods, even before redistributive concerns enter the mix.¹⁴⁸ With states already taxing the bases of property and sales, income taxes have been the obvious next place to look.

4. *Empirical Findings on Migration*

Finally, the empirical research on the sensitivity of migration to taxes is mixed.¹⁴⁹ Studies by Charles Varner and Cristobal Young have found relatively little migration by high-income individuals in New Jersey¹⁵⁰ and California¹⁵¹ in response to small surtaxes on high

¹⁴⁶ See, e.g., John DiStaso, NH to “Taxachusetts”: Bring It On, N.H. Union Leader, Jan. 20, 2013, <http://www.unionleader.com/article/20130120/NEWS06/130129940>.

¹⁴⁷ See notes 73-74 (Hawaii and New Jersey). Other states cutting rates include Illinois, Indiana, Massachusetts, and North Carolina. See Joseph Henchman, Taxes in Many States Changing January 1, 2015, Tax Foundation Bog, <http://taxfoundation.org/blog/taxes-many-states-changing-january-1-2015>.

¹⁴⁸ See note 105 and accompanying text.

¹⁴⁹ For a recent review of the literature claiming that state tax differences “have little to no effect on whether and where people move,” see generally Michael Maserov, Ctr. on Budget & Pol’y Priorities, State Taxes Have a Negligible Impact on Americans’ Interstate Moves 1 (May 21, 2014), <http://www.cbpp.org/files/5-8-14sfp.pdf>. For a critical view of this report, see Lyman Stone, The Facts on Interstate Migration, Tax Found. (May 12, 2014), <http://taxfoundation.org/blog/facts-interstate-migration-part-one> (last visited Nov. 19, 2014).

¹⁵⁰ Cristobal Young & Charles Varner, Millionaire Migration and State Taxation of Top Incomes: Evidence from a Natural Experiment, 64 Nat’l Tax J. 255, 277–78 (2011).

¹⁵¹ Charles Varner & Cristobal Young, Millionaire Migration in California: The Impact of Top Tax Rates 3–4 (Stanford Ctr. on Poverty and Inequality, Working Paper, 2012), available at http://www.stanford.edu/group/scspi/_media/working_papers/Varner-Young_Millionaire_Migration_in_CA.pdf (prepared for the Calif. St. Bd. of Equalization).

incomes.¹⁵² The New Jersey study found somewhat more, though still relatively little, migration by retirees, who were thus less bound to a location by employment,¹⁵³ an effect also seen in studies of migration due to estate tax differences.¹⁵⁴ Those moving into a multistate metropolitan area appear to be somewhat sensitive to tax rates in choosing a place to live,¹⁵⁵ though by definition these are individuals with low mobility costs, since they have already made the choice to move. Similarly, foreign soccer players in Europe appear to be highly sensitive to tax rates, though professionals playing in their home countries do not.¹⁵⁶ And mobility is heterogeneous: The young and highly-educated tend to be more mobile and responsive to tax rates than more experienced and settled workers.¹⁵⁷

¹⁵² New Jersey added a 8.97% top marginal rate on incomes over \$500,000 beginning with the 2004 tax year, a 2.6% increase from the previous top rate. N.J. Stat. Ann. § 54A:2-1 (West). For California, Varner and Young studied the effects of the introduction of the Mental Health Services Tax in 2005, which levied a tax of 1% on incomes over \$1 million. Varner & Young, note 151, at 2.

¹⁵³ See Young & Varner, note 150, at 272.

¹⁵⁴ Jon Bakija & Joel Slemrod, Do the Rich Flee from High State Taxes? Evidence from Federal Estate Tax Returns 36 (Nat'l Bureau Econ. Research, Working Paper No. 10645, 2004), available at <http://www.nber.org/papers/w10645>. Bakija and Slemrod find that higher state estate and inheritance taxes are associated with a 1.4% to 2.7% drop in the number of estate tax returns filed in a state. Their result is statistically significant, but obviously quite modest.

¹⁵⁵ See Paul A. Coomes & William H. Hoyt, Income Taxes and the Destination of Movers to Multistate MSAs, 63 J. Urb. Econ. 920, 936-37 (2008). Their results are somewhat confusing, however, since they are statistically significant only when including states that tax based on employment, not residence. For states that tax based on residence, the results are no longer statistically significant. Thus, it is not clear that the study tells us much about choice of residence based on taxes. *Id.*

¹⁵⁶ See Henrik Kleven, Camille Landais & Emmanuel Saez, Taxation and International Migration of Superstars: Evidence from the European Football Market, 103 Am. Econ. Rev. 1892, 1922-24 (2013). Anecdotal, some professional athletes in the United States may also be responsive to tax differences. See, e.g., Michael Lee, Trevor Ariza Agrees to Deal With Rockets, Wash. Post, July 12, 2014, <http://wapo.st/1kPQl73> (reporting that the Washington Wizards player accepted an offer from the Houston Rockets for the same salary, in part because the cost of living and state taxes are lower in Texas than in the Washington, D.C. area).

¹⁵⁷ See Jeffrey P. Thompson, Costly Migration and the Incidence of State and Local Taxes 28 (Political Econ. Research Inst., Univ. Mass. Amherst, Working Paper No. 251, 2011), available at http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_251-300/WP251.pdf; see also Thomas Liebig, Patrick A. Puhani & Alfonso Sousa-Poza, Taxation and Internal Migration: Evidence from the Swiss Census Using Community-Level Variation in Income Tax Rates, 47 J. Regional Sci. 807, 833-34 (2007) (finding modest migration caused by tax increases, but that young and highly-educated individuals were more responsive than older and less-educated individuals). But see Martin Feldstein & Marian Vaillant Wrobel, Can State Taxes Redistribute Income?, 68 J. Pub. Econ. 369, 391 (1998) (arguing that sensitivity to tax rates is high enough that wage rates rise in response to out-migration, thus potentially canceling out any redistributive benefit of higher taxes).

On the transfer side, one study found little interprovincial migration in Canada as a result of different provincial policies, especially for unemployment insurance.¹⁵⁸ In the United States, a number of studies have looked at the migration effects of policies like AFDC/TANF because of the relative differences in benefits between different states.¹⁵⁹ The results vary from no tax migration effect at all¹⁶⁰ to a relatively large one.¹⁶¹

Of course, it is difficult for any empirical study to resolve this question, since there are so many disparate factors that can affect migration. Community, economic, employment, and family factors likely overwhelm any tax effect, and thus the question is how taxation affects migration, all else equal. But all else is never equal, and any study will suffer from omitted variable biases. Furthermore, migration is surely sticky, and thus the effect of tax changes on migration may play out only over a long period.¹⁶² Yet the empirical studies that exist at least do not foreclose the idea that a state could get some net benefit from employing redistributive policies.

5. Summary

In the end, the most we can probably say about the optimal level of state-level redistribution is: It is complicated. But one thing does appear to be relatively clear: Zero state-level redistribution is very likely not the right answer. Adjusting theoretical models with real world constraints opens up space for states to engage in redistribution

¹⁵⁸ See Kathleen M. Day & Stanley L. Winer, Policy-Induced Internal Migration: An Empirical Investigation of the Canadian Case, 13 *Int'l Tax & Pub. Fin.* 535, 535-36 (2006). The unemployment insurance system in Canada is substantially more generous to residents of states with above-average unemployment. See *id.* at 535-36. Day and Winer examine over twenty years of tax data and ultimately find little migration based on these policy differences, especially when compared to other factors, like political disruption in Quebec in the 1970's and the closing of the cod fishery on the east coast in 1992, affecting migration from the Maritime Provinces.

¹⁵⁹ For a brief description of why states differ, see Section III.C.

¹⁶⁰ See, e.g., Robert Kaestner, Neeraj Kaushal & Gregg Van Ryzin, Migration Consequences of Welfare Reform, 53 *J. Urb. Econ.* 357, 358-59 (2003); Phillip B. Levine & David J. Zimmerman, An Empirical Analysis of the Welfare Magnet Debate Using the NLSY, 12 *J. Population Econ.* 391, 407 (1999).

¹⁶¹ See, e.g., María E. Enchautegui, Welfare Payments and Other Economic Determinants of Female Migration, 15 *J. Lab. Econ.* 529, 549 (1997); Edward M. Gramlich & Deborah S. Laren, Migration and Income Redistribution Responsibilities, 19 *J. Hum. Resources* 489, 510 (1984); Paul E. Peterson & Mark Rom, American Federalism, Welfare Policy, and Residential Choices, 83 *Am. Pol. Sci. Rev.* 711, 725-26 (1989).

¹⁶² The Young and Varner study on the New Jersey millionaire tax only included four years after the tax change (with the 2007 year not including all late filers). They argue that this time period has been sufficient to show migration effects in other studies. Young & Varner, note 150, at 275-76.

efficiently,¹⁶³ and empirical work suggests that states could benefit on balance from employing at least some redistribution. And indeed, there are substantial amounts of redistributive tax-and-transfer policies at the state level, even if dwarfed by the federal tax-and-transfer system.¹⁶⁴

B. Insurance Function

While a state may rationally choose to perform some redistribution without causing crippling levels of migration, that does not mean that there are no costs of state-level redistribution and progressive income taxes. This Section focuses on two other costs of a progressive income tax: fiscal volatility and the actuarial costs of a smaller risk pool.

These costs are rooted in the insurance function of a redistributive tax-and-transfer system, rather than solely its redistributive function. State fiscal volatility reflects the increased demand on the system as a result of individual income fluctuations and shocks that are at least somewhat independent of individuals' endowments and effort, and shows the strain on a state as it tries to smooth the volatility of individuals' incomes. And this is partly because a state risk pool is smaller and more cross-correlated than a federal risk pool, and thus does not provide sufficient income smoothing.¹⁶⁵

1. Fiscal Volatility

Due to the fluctuation of incomes with the business cycle, personal income taxes are among the most volatile of revenue sources, second only to corporate income taxes.¹⁶⁶ As a result, states that rely heavily on personal income taxes face the risk of budget shortfalls during an economic downturn, precisely when the demand for social services is likely to be higher.¹⁶⁷ Furthermore, state reliance on personal income taxes has increased, going from 16.6% of total state and local tax revenues in 1977 to a peak of 22.9% in 2008, before dropping to 20.5% in

¹⁶³ Gordon and Cullen find that the degree of actual state-level redistribution is broadly consistent with their optimal taxation model incorporating both positive and negative externalities due to state taxation. Gordon & Cullen, note 125, at 1108.

¹⁶⁴ See Section III.C.

¹⁶⁵ See Dafflon, note 122, at 278 (noting the "actuarial efficiency" of more centralized redistributive programs).

¹⁶⁶ See Cornia & Nelson, note 13, at 36 (stating that revenues generated by personal income taxes are more volatile than all but corporate income and tobacco taxes); Deep & Lawrence, note 21, at 8-11, 27 (describing and explaining income tax volatility); Gamage, note 9, at 759-60 (stating that income tax revenues fluctuate more than sales tax revenues); Sobel & Wagner, note 17, at 572 (comparing the elasticity of personal income taxes to sales taxes and corporate income taxes).

¹⁶⁷ See Galle & Stark, note 6, at 600; Gamage, note 6, at 759-60; Super, note 6, at 2632.

2010¹⁶⁸ (the drop in response to the Great Recession being evidence of precisely that short-term volatility).

A progressive income tax is especially volatile, since it raises a greater proportion of its revenue from the wealthiest residents. Income for those in higher brackets tends to be more volatile, especially because capital income is a larger proportion of overall income for high earners,¹⁶⁹ and thus a progressive income tax is likely to be more volatile than a proportional income tax that has the same expected revenue.¹⁷⁰ Finally, as income inequality increases, the relative reliance on volatile upper incomes is becoming even more pronounced.¹⁷¹

The procyclical volatility on the revenue side is also exacerbated by the procyclical nature of much state spending. States carry a large share of the burden of redistributive social insurance programs, such as Medicaid, TANF, and unemployment insurance.¹⁷² Ironically, given the classic fiscal federalism view that redistribution and social insurance should be centralized, the design of much of these programs derives from some of the same theories of fiscal federalism. Oates and Musgrave, among others, argue that a major problem with state-level programs such as these is the potential for spillovers to nonresidents, which could lead to underprovision of goods and services, since the costs to the state could outweigh the benefits to its residents.¹⁷³ The way to address this, they argue, is with federal matching grants as a Pigouvian subsidy.¹⁷⁴ The matching grant lowers the price to the state government down to a level where they are willing to provide the good or service. The catch, however, is that states have to step up and allocate some of their budgets to the program, in amounts that may be somewhat out of reach during economic downturns.¹⁷⁵

To be clear, however, the state budget problems are not only because of the volatility of the progressive income tax and the provision of social services. Indeed, the federal government relies largely on a

¹⁶⁸ Urban-Brookings Tax Pol'y Ctr., Total Government Revenues, 1977-2011 (Sept. 20, 2013), http://www.taxpolicycenter.org/taxfacts/Content/PDF/dqs_table_51.pdf.

¹⁶⁹ See Galle & Stark, note 6, at 606 (“Unlike low and middle-income households, wealthy households derive a substantial share of their income from notoriously volatile sources, such as capital gains, dividends, restricted stock, and stock options.”).

¹⁷⁰ See Sobel & Wagner, note 13, at 574 (“Using an average of all state income tax codes interacted with the data above suggests an average variability of 1.14 that could potentially be reduced to 0.87 simply by adopting a completely proportional income tax.”).

¹⁷¹ See Galle & Stark, note 6, at 606.

¹⁷² See *id.* at 606-07.

¹⁷³ See Richard A. Musgrave & Peggy Musgrave, *Public Finance in Theory and Practice* 509 (4th ed. 1984); Oates, *Fiscal Federalism*, note 1, at 65-75; Gordon & Cullen, note 127, at 1108.

¹⁷⁴ See Musgrave & Musgrave, note 173, at 509; Oates, *Fiscal Federalism*, note 1, at 65-75.

¹⁷⁵ See Super, note 6, at 2587.

personal income tax, and a much more progressive one, without nearly as much budget strain, and obviously spends a lot on redistributive social insurance programs. As discussed below, this is in part because the federal government is better able to handle the risk of revenue volatility, but state expenditure volatility also stems from the additional features of state tax and budget policy discussed in Part III.

As a result of balanced budget requirements, debt limits, and other fiscal institutions,¹⁷⁶ states cannot easily borrow to make up revenue shortfalls during an economic downturn. This means that a state may not be able even to maintain its baseline level of expenditures and services, much less deal with the increased demand for safety net services during a downturn.¹⁷⁷ The federal government, by contrast, can borrow cheaply and easily, and is thus much more able to maintain or even increase spending during a recession.

Since a state cannot implement counter-cyclical budget policy well using debt, the standard answer has been for it to instead maintain a rainy-day fund—set aside a portion of revenue during strong economic times in order to make up revenue shortfalls during weaker times.¹⁷⁸ Yet as an empirical matter, state RDFs are generally underfunded and do not sufficiently cover costs during downturns.¹⁷⁹ This is especially so during extreme times such as the period beginning with the 2008 financial crisis. Even a fully funded RDF would be unlikely to cover extreme events such as that.¹⁸⁰

As a result of limited borrowing capacity and limited use of RDFs, states that rely more heavily on volatile personal income taxes face more revenue, and thus expenditure, volatility. This exacerbates the economic effects of the business cycle, rather than mitigating them the way Keynesian theory teaches. The resulting economic slowdown, job losses, and the like, are very real costs to states. This is not the way insurance ought to operate.

¹⁷⁶ See Subsection III.B.1.

¹⁷⁷ This is not say that states do not borrow money. Indeed, current state and local debt is near \$3 trillion. Jeffrey L. Barnett & Phillip M. Vidal, U.S. Census Bureau, *State and Local Government Finances Summary: 2011*, at 2 (2013), available at http://www2.census.gov/govs/local/summary_report.pdf. However, fiscal institutions limit such borrowing largely to capital projects. While accounting gimmicks are available to apply some of that debt toward state operating budgets, states are nonetheless constrained in practice from using debt to expand welfare spending. See, e.g., Super, note 6, at 2607; see also Section III.1.

¹⁷⁸ See Section III.B.3.

¹⁷⁹ See Deep & Lawrence, note 16, at 16; Galle & Stark, note 6, at 611-17; Gamage, note 6, at 766.

¹⁸⁰ RDFs are discussed more fully in Section V.A.

2. *Risk-Pooling and Actuarial Efficiency*

A related problem to the fiscal volatility issue is the issue of efficient risk-pooling. If a tax-and-transfer system is, in part, a group of individuals who *ex ante* pool their risk of having uncertain income, then the question is, what is the optimal risk pool for doing so? Simply put, the bigger and more diverse, the better.

Consider a small community of people with a large degree of correlation in employment risk—a factory town, say. An income tax as a means of pooling income and employment risk will not be all that successful at the times when it is most needed. If one person loses his job, revenue from the rest of the community can still sufficiently fund the government, including any social services the unemployed worker might rely on, such as unemployment insurance. But if the factory closes, it is unlikely that the community could provide the same benefits to everyone. To do so, it would either need to have saved an excessively large amount of money during good times, or it would have to borrow money at likely prohibitive interest rates (given the lack of future revenue to service the debt).

On the other hand, if the community got together with other communities with different sources of income, uncorrelated with the first community's factory, it becomes much easier to share the risks of bad fortune—it is more likely that there will always be sufficient revenue to maintain whatever safety net and other services the communities wish to provide.

In standard insurance theory, the variance in the amount of possible payouts decreases with a larger risk pool, even if the expected payout amount stays the same.¹⁸¹ The insurer can lower substantially the likelihood of an extreme payout, such as when the factory closes, by increasing the size of the risk pool. There might be a good chance in any given period that a factory closes, but the chance that all the factories in all the towns close in a given period is much lower.

Applied to the states, if income shocks are regional,¹⁸² then a given state is not a particularly well-suited risk pool.¹⁸³ The citizens of Louisiana would have trouble insuring each other from the income risks of another Hurricane Katrina, as would the citizens of Michigan against a collapse in the auto industry.¹⁸⁴ This is especially so given the issues discussed in the prior Subsection—states are not able to deficit spend

¹⁸¹ See, e.g., Judy Feldman Anderson & Robert Brown, *Risk and Insurance* 2-5 (2005), available at <http://www.soa.org/files/pdf/P-21-05.pdf>.

¹⁸² Some shocks are national or even international, of course. I address highly correlated income shocks in Subsection V.A.3.

¹⁸³ See Deep & Lawrence, note 16, at 8-11 (describing regional income shocks).

¹⁸⁴ See Anderson & Brown, note 181, at 5.

at optimal levels. Assigning progressive income taxation largely to the federal government would thus provide an insurance benefit at a lower cost, due to the greater number of people insured, the lower volatility of income, and the ability to borrow cheaply. Handling the insurance function of progressive income taxation instead at the state level thus carries costs relative to the federal level.

This feeds back into the fiscal volatility problem noted above. A state with a redistributive tax-and-transfer system is at least implicitly making a commitment to provide some insurance against uncertain future drops in labor income. It is thus absorbing some of the risk of uncertain income that otherwise would be held by individuals. The volatility seen in state budgets as a result of the business cycle is therefore in part a reflection of that risk-absorption; if incomes did not fluctuate, neither would state revenues or transfers.¹⁸⁵ But what we observed during the Great Recession is that states are not able to meet their insurance commitments, and this is in part a reflection of the fact that they are simply not that able to handle the risks that they are insuring against.

C. Summary

This Part argues that a state may be able to provide some redistribution at a reasonable cost, but that it is less able to provide income insurance at a reasonable cost. The obvious answer from a fiscal federalism standpoint, then, would be to allocate some of the redistributive function to the states, but to let the federal government largely or exclusively handle the insurance function. The difficulty is that both of those functions are rooted in the same tax functions: the insurance function is baked into the redistributive programs, and the progressive income tax in particular. Therefore, while the articulation of the different costs and benefits of redistribution and income insurance helps to focus the issues, it does not provide a clear way to balance them. The next Part attempts to do so.

V. STATE REDISTRIBUTION WITH FEDERAL REINSURANCE

Suppose a state without a progressive income tax was considering adding one in order to increase redistribution and reduce income inequality. Section IV.A suggests that it probably should go ahead; if that were a policy favored by the state residents, then the welfare gains from that additional redistribution would likely offset any negative effects to labor supply due to migration or shifts to leisure. But

¹⁸⁵ See note 8.

by performing redistribution, the state would also be providing insurance against uncertain income, and Section IV.B argues that many states are not well equipped to do so. Absorbing the risk of uncertain income is expensive and volatile for a state.

But the fact that these costs of a progressive income tax are rooted in insurance, rather than tax competition, points a way to a potential solution: reinsurance. That is, the typical approach for an insurer who cannot adequately manage all the risks it has insured against is to re-allocate some of that risk to a different party.¹⁸⁶ If a state that has implicitly insured against excessive income volatility of its residents can offload some of that risk to a party that operates on a national scale, such as the federal government, then we could have a system with some state-level redistribution, but national-level income insurance.

Framed as a problem of insurance and reinsurance, the obvious solution is a pooled insurance vehicle for states, otherwise known as a multistate RDF. Relatively little has been written about multistate RDFs,¹⁸⁷ and even less that is positive.¹⁸⁸ Nonetheless, the framework of this Article suggests that a multistate RDF could have substantial benefits for state and federal fiscal policy. Whether it can overcome political and logistical obstacles is less clear, however. Thus, I also consider below what mix of existing policies could be expanded and coordinated to replicate the reinsurance effects of a multistate RDF. Viewed in this way, a number of policies that normally are considered independently in fact ought to be considered as a comprehensive risk management scheme for fiscal federalism. The multistate RDF thought experiment thus points the way toward a more holistic view of fiscal federalism.

A. *Multistate Rainy Day Fund*

One standard answer to the problem of state fiscal volatility due to state balanced budget constraints is for a state to maintain a RDF. Having an RDF decreases state expenditure volatility somewhat,¹⁸⁹ thus helping a state to weather business cycle downturns. Yet for

¹⁸⁶ See, e.g., David M. Raim & Joy L. Langford, Understanding Reinsurance, in 4 New Appleman Insurance Law Practice Guide § 40.01, at 40-5 to 40-6 (Jeffrey E. Thomas, Leo Martinez & Marc S. Mayerson eds., 2013).

¹⁸⁷ See Galle & Stark, note 6, at 617 (noting lack of literature). For examples of proposals, see Deep & Lawrence, note 21, at 18-30, and Mattoon, note 21, passim.

¹⁸⁸ See Galle & Stark, note 6, at 618-19; Gamage, note 6, at 766-68 (arguing that state revenue insurance is not feasible).

¹⁸⁹ See Brian Knight & Arik Levinson, Rainy Day Funds and State Government Savings, 52 Nat'l Tax J. 459, 469-70 (1999); Oates, note 124, at 328-29; Sobel & Wagner, note 13, at 574-75.

nearly every state, independent RDF size is suboptimal, and RDFs have not saved states from much of the pain of revenue volatility.¹⁹⁰

In principle, using an RDF is not all that different from deficit spending—both are a form of dissaving. A state with an RDF would increase its savings during good times, by depositing funds in the RDF.¹⁹¹ A state that borrowed to cover revenue shortfalls would pay off debt acquired during bad times, thus also increasing its net savings (from a negative amount toward \$0). During bad times, a state with an RDF would withdraw funds from the RDF, thus lowering its savings,¹⁹² just as a deficit-spending state would by borrowing.¹⁹³

Example: States A and B each have an annual budget of \$1000. State A maintains an RDF equal to 15% of expenditures, so \$150, invested in Treasury bonds. State B has no RDF, but does not have a balanced budget requirement. In Year 0, State A thus has savings of \$150 (it is a creditor for \$150), and State B's net debt is \$0. In Year 1, each state has a revenue shortfall of \$150. State A sells the bonds held by its RDF to make up the shortfall, while State B borrows \$150 from the debt market. Each state's net savings has decreased by \$150. (State A: \$150 → \$0; State B: \$0 → -\$150.) In Year 2, tax revenues generate \$1150 in each state. State A puts the surplus revenue back into its RDF, by buying Treasury bonds. State B uses the \$150 surplus to pay back its loans from Year 1. Thus each state's net savings has increased by \$150. (State A: \$0 → \$150; State B: -\$150 → \$0.)

In the example, the main difference is whether a state self-insures or is able to rely on the credit markets to fund revenue shortfalls. But in this simplified example, the full debt is paid off in the next period. More realistically, the states would take time to either fund the RDF or service the debt. As a result, the annual payments, in the idealized case, would be an actuarially fair premium¹⁹⁴ to the RDF for *State A*, and the interest or amortization on the debt for *State B*.

¹⁹⁰ See Deep & Lawrence, note 16, at 16; Galle & Stark, note 6, at 601-02, 611; Gamage, note 6, at 766-67.

¹⁹¹ If it invested the RDF in Treasury bonds or similar assets, it would actually be decreasing its net debt position (by becoming a net creditor), much as a state that borrowed money would decrease its net debt position by paying down debt in good times.

¹⁹² Or, if the RDF held bonds, increasing its net debt position.

¹⁹³ An alternative analogy is dissaving through sales of property. States will sometimes sell assets, such as real property, during a downturn. An RDF is just another asset, and selling it is analogous to selling a building. Indeed, states will often structure such a sale as a sale-leaseback, which is similar to an RDF withdrawal plus regular contributions, or borrowing and paying interest. See Super, note 6, at 2613 n.266, 2624.

¹⁹⁴ That is, the annual expected cost of the risk being insured.

Here, a comparison to the life-cycle hypothesis for consumer spending is apt.¹⁹⁵ Basic models of consumer life-cycle spending assume that consumers are able to borrow to cover income shocks but that where there are borrowing constraints they would instead self-insure through savings.¹⁹⁶ Insurance and borrowing are in effect substitutes for one another, and the need for self-insurance is greater when borrowing is constrained.¹⁹⁷ And indeed, that is precisely the case for states with balanced budget requirements and debt limits: They are essentially forced to self-insure through RDFs because they are not able to borrow sufficiently to fund revenue shortfalls.

But borrowing, if available, may be preferred (assuming away political costs) to self-insurance.¹⁹⁸ This is in part because interest on debt is likely to be cheaper than saving the equivalent of an actuarially fair premium (or more) to self-insure. Interest rates, at least to some degree, will reflect macroeconomic conditions like the overall risk in the market, and not only the individual credit risk of the debtor. Debt is more similar to pooled insurance than self-insurance, and shares some of the same efficiencies. Just as with the insurance properties of a progressive income tax, discussed above, the risk-pooling aspect of pooled insurance can allow for efficiencies and economies of scale when risks are not fully correlated across the risk pool.¹⁹⁹ A risk-averse self-insurer would likely have to save more than the equivalent pooled insurance premiums or the debt service payments if it borrowed to cover income shocks.²⁰⁰

¹⁹⁵ See, e.g., Franco Modigliani, *The Life Cycle Hypothesis of Saving, the Demand for Wealth and the Supply of Capital*, 33 *Soc. Res.* 160, 162-63 (1966); Franco Modigliani & Richard Brumberg, *Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data*, in *Post-Keynesian Economics* 388 *passim* (Kenneth K. Kurihara ed., 1954) (establishing the life-cycle hypothesis).

¹⁹⁶ See, e.g., Angus Deaton, *Saving and Liquidity Constraints*, 59 *Econometrica* 1221, 1222 (1991) (“Precautionary motives interact with liquidity constraints because the inability to borrow when times are bad provides an additional motive for accumulating assets when times are good, even for impatient consumers.”); Pierre-Olivier Gourinchas & Jonathan A. Parker, *Consumption over the Life Cycle*, 70 *Econometrica* 47, 49 (2002) (“Our fitted model indicates that wealth is accumulated early in life for precautionary reasons—were it not for income uncertainty, households would instead borrow against future labor income.”); Modigliani & Brumberg, note 195, at 4-6.

¹⁹⁷ The degree of self-insurance is also related to the ability to purchase insurance. See, e.g., Franco Modigliani, *The Role of Intergenerational Transfers and Life Cycle Saving in the Accumulation of Wealth*, *J. Econ. Persp.*, Spring 1988, at 15, 17 (noting that the amount of self-insurance depends in part on factors like the existence of retirement and health insurance).

¹⁹⁸ See Robin Boadway, *Intergovernmental Redistributive Transfers: Efficiency and Equity*, in *Handbook of Fiscal Federalism*, note 122, at 355, 370 (equating borrowing with self-insurance).

¹⁹⁹ See Deep & Lawrence, note 16, at 16.

²⁰⁰ As a practical matter, some organizations and institutions may choose to self-insure, such as by creating their own employee health insurance plan. In this case, the organiza-

Thus, state fiscal institutions and practices, especially debt and borrowing limits,²⁰¹ force states away from debt-financing income shocks—which would have some risk-pooling efficiencies—to self-insuring through RDFs, a more expensive and risky approach, and one far less able to handle extreme events.²⁰²

With each state effectively on its own, it should come as little surprise that state RDFs have not been adequate to fund large revenue shortfalls.²⁰³ Self-insurance against uncorrelated risk is simply not the best move. Consider the inefficiencies of requiring every individual to self-insure against untimely death or property loss. This would lead to either massive over-saving or frequent painful consumption shocks. The counter-factual is absurd, simply because the market case for insurance in these situations is so clear that the product has existed for centuries. Why not a similar approach for states?

In its simplest form, a multistate RDF would function essentially like pooled insurance. Each state would pay an annual premium to the multistate RDF—much as they already are to their own independent RDFs—and the multistate RDF would pay out when revenue dropped below a particular level.²⁰⁴ The premiums would be based on a combination of overall group risk, with perhaps some experience-rated variation to account for differences among states. The premiums would also depend on the size of the particular state's budget. The payout itself would be some percentage of the shortfall from expected revenues. For example, if a state is expected to raise (or, alternatively, had spending commitments of) \$1000 per capita but only raised \$700 per capita, the RDF could make up the shortfall. Depending on the degree of co-insurance, the RDF might pay out 100% of the \$300 shortfall, or something less than 100%.

tion is generally large enough to be a sufficiently diverse risk pool. By self-insuring it can avoid the fees and overhead expenses of third-party insurance, and can also tailor its plans more closely to its employees' situations. This argument does not apply as clearly to states, since we are not comparing third-party private insurance to self-insurance.

²⁰¹ See Subsection III.B.1. As noted there, the rules themselves may not be as restrictive as the restraints from voters, customs, and bond markets, but the whole picture is nonetheless one where states are limited in their ability to borrow. See Gamage, note 6, at 750 n.4.

²⁰² This is not to say the credit markets do not currently play a role. States are not completely constrained from borrowing. See note 177. Furthermore, individuals themselves still have access to debt. As a result, the credit markets likely do already do play some role in income smoothing. See Pierfederico Asdrubali, Bent E. Sorensen & Oved Yosha, Channels of Interstate Risk Sharing: United States 1963-1990, 111 Q.J. Econ. 1081, 1092 (1996) (finding that 23% of shocks to gross state product are smoothed by credit markets).

²⁰³ See note 179 and accompanying text.

²⁰⁴ This is not to suggest that this is a simple matter. I explore some of the problems in measuring downturns in Subsection V.A.2.

Premiums and payouts would thus depend on the relative size of the state's budget. A state like California would contribute much more, but also get larger payouts, than a state like Rhode Island. This raises the question, however, of when a state becomes large enough to be a sufficiently diverse risk pool on its own. California may be such a state, though further research and modeling would be required to be certain. California is limited in its ability to borrow, however, which means that it is still not as well-equipped to self-insure as it could be.

While the financial case for such a multistate RDF is strong, the practicalities of real-world administration are a different matter. In my view, for a multistate RDF to be feasible and desirable, it would have to be designed to limit adverse selection and moral hazard problems, it would have to have a mechanism for dealing with cross-correlation and "tail risk," and it would have to be politically and logistically feasible. I discuss each of these elements, and some of the additional design features that would go along with them, in turn below.

1. Adverse Selection

Because the multistate RDF would operate much like insurance, the key potential problems are the classic ones for any insurance program: adverse selection and moral hazard.

The adverse selection problem is the potential for an insurance program to be more attractive to the riskiest parties, and that the least risky parties may find participation too expensive to participate, given their risks. This can result in the pool of insureds being especially risky, which would increase claims and drive up costs. In this worst case, this can create a downward spiral leading to breakdown in the market altogether.²⁰⁵

In the revenue-insurance context, the adverse selection problem is that the multistate RDF may only be attractive to the most volatile states. If a state paid an actuarially fair premium—an "experience-rated" amount based on the expected value of payouts to that state²⁰⁶—there would likely not be substantial savings over self-insuring through an independent RDF, and it would be particularly expensive for the high-volatility states. But a premium based on average risk to the whole group would be a bad bet for a low volatility state—it could end up paying more in premiums than any expected payouts it would receive. For individuals, risk aversion often still makes such a

²⁰⁵ E.g., David M. Cutler & Richard J. Zeckhauser, Adverse Selection in Health Insurance, in 1 *Frontiers in Health Policy Research* 1, 8 (Alan M Garber ed., 1998) (referring to the "adverse selection death spiral").

²⁰⁶ See note 46.

transaction worthwhile,²⁰⁷ but it is not clear that politicians behave in the same way. Research suggests that politicians are myopic, and therefore would likely prefer to spend money on a show project today, rather than on an insurance policy against revenue shortfalls tomorrow (when they may be out of office anyway).²⁰⁸ Indeed, we already know that states are not putting aside sufficient amounts in their own RDFs,²⁰⁹ and it is likely that incentives to politicians would not be any different in the multistate case.

Generally the adverse selection problem in insurance is addressed through mandates of one kind or another. The Affordable Care Act imposes a fine/tax on individuals who do not purchase health insurance,²¹⁰ and mortgage lenders generally require homeowners to take out homeowner insurance policies.²¹¹ Deep and Lawrence suggest that their proposal for multistate tax base insurance be mandated, particularly if the federal government would be on the hook for losses outside the capacity of the insurance program.²¹²

Galle and Stark, by contrast, propose federal subsidies rather than mandates to induce states to better fund and manage their independent RDFs. They address a different problem—encouraging states to sufficiently self-insure, rather than encouraging low-volatility states to participate in a multistate RDF. But they recognize that mandates in this context would be a difficult sell, particularly if the multistate RDF is only quasi-governmental.²¹³ If the RDF were in fact a federal program, then in principle the federal government could use a pay-to-play mandate, requiring states to pay up if they wanted to receive any future bail-outs. In practice, however, the ability of the federal government to credibly commit to deny bail-outs to nonparticipants is doubtful.²¹⁴

Thus, the federal government would likely have to subsidize the RDF premiums such that even low-volatility states would have a positive expected return from participating in the program. While this may still run up against the short-term bias of politicians, as Galle and

²⁰⁷ E.g., Matthew Rabin & Richard H. Thaler, *Anomalies: Risk Aversion*, *J. Econ. Persp.*, Winter 2001, at 219.

²⁰⁸ See Alessandra Bonfiglioli & Gino Gancia, *Uncertainty, Electoral Incentives and Political Myopia*, 123 *Econ. J.* 373, 376-87 (2013); Galle & Stark, note 6, at 608-09; Rose-Ackerman, note 124, at 595-96 (each summarizing research).

²⁰⁹ See Deep & Lawrence, note 16, at 16; Galle & Stark, note 6, at 611-17; Gamage, note 6, at 766.

²¹⁰ IRC § 5000A.

²¹¹ See, e.g., Nat'l Ass'n of Ins. Comm'rs, *A Consumer's Guide to Home Insurance 1* (2010), available at http://www.naic.org/documents/consumer_guide_home.pdf.

²¹² See Deep & Lawrence, note 16, at 27.

²¹³ Galle & Stark, note 6, at 620-22.

²¹⁴ But see Galle & Stark, note 6, at 616 n.95 (suggesting that the U.S. federal government does have the ability to credibly threaten not to bail out states).

Stark note,²¹⁵ it has a better chance of inducing participation than a system that uses a more actuarially fair premium.

2. *Moral Hazard*

Moral hazard presents a different and, in the context of this Article, more interesting problem. Moral hazard is essentially the problem that some insured may end up behaving riskier than they would otherwise, because the costs of that risk are spread around and covered by insurance. In the context of state finances this could manifest, for example, as a state getting lazy about collections, or making changes to the tax law that lower revenue below the insurance payout threshold, or making giveaways to privileged interest groups. As Akash Deep and Robert Lawrence note, however, much of this can be managed by carving out policy changes and looking only at policy-neutral changes.²¹⁶ The baseline could adjust based on policy changes, such as a tax cut or new tax expenditure, and then any shortfall would be determined based on the new baseline.²¹⁷ Furthermore, revenue could be measured based on what ought to be collected, rather than what actually is collected.

The more likely problem is simply that states will increase their reliance on volatile revenue sources, such as increasing the progressivity of their personal income tax.²¹⁸ Here, however, we have to differentiate “good” from “bad” moral hazard.²¹⁹ In the context of social insurance, some moral hazard is “good,” in the sense that the behavior is socially positive. For example, in the health care context, there is the potential for insured persons to seek more health care than they would if uninsured, which would end up raising overall costs—a moral

²¹⁵ See Galle & Stark, note 6, at 624-26 (suggesting subsidy features designed to encourage politicians to make better use of RDFs).

²¹⁶ Deep & Lawrence, note 16, at 21; see also Boadway, note 198, at 370-72 (discussing the need to distinguish income shocks from mere fiscal changes). But see Ben Lockwood, *Inter-Regional Insurance*, 72 *J. Pub. Econ.* 1, 4-5 (1999) (discussing how even an optimal interregional insurance program can lead to distortions in the supply of public goods).

²¹⁷ Which is not to say that picking a baseline is easy of course. Any determination of what constitutes a policy “change” would undoubtedly be fraught and contested, and the success of a multistate RDF would depend heavily on the design of such rules. Because this Article pursues the theoretical and economic case for the multistate RDF, in part as a way to better explain the risk-sharing aspects of a federal system, such detailed design questions are beyond its scope. Yet they would be central to any actual implementation, and I hope that further work will explore them.

²¹⁸ Another potential moral hazard problem is the anticipation of future federal bail-outs. See, e.g., Galle & Stark, note 6, at 616 (discussing the moral hazard of bail-outs); Oates, note 124, at 319 (discussing soft budget constraints and raiding the fiscal commons).

²¹⁹ See Baker, note 34, at 288-89 (discussing positive externalities from insurance); Nyman, note 19, at 370-71.

hazard problem. But the result is also more care, which is, on balance, a good thing and welfare-enhancing.²²⁰

In the context of taxation, the good moral hazard is the use or expansion of redistribution. Because having some state income taxation would likely lead to a greater degree of overall redistribution, those in favor of greater redistribution should see such moral hazard as an overall good, even if it costs the insurer some.²²¹ And just as the ultimate goal of health insurance is to provide health care, so is one of the goals of a progressive income tax to provide redistribution. Therefore, moral hazard concerns alone should not be a reason to reject the multistate RDF approach.

But on the other hand, there are forms of bad moral hazard that would need to be policed against. In addition to cutting back on collection efforts, a state might also engage in accounting gimmickry to generate larger paper losses. The European Union has seen both kinds of bad behavior, underscoring the difficulty of policing these types of behaviors.²²² Some of this would have to be policed through regulation and monitoring. Some of it, however, would also be policed by voters and markets. After all, tax migration still looms as a potential check on the ability of states to raise marginal rates too high, and voters might intervene before it gets to that point. And at the time of this writing, politicians in some states have essentially turned down free money to expand state Medicaid programs because doing so would go against their normative preferences.²²³

Finally, we should be cautious about fully accepting moral hazard objections to social insurance.²²⁴ Moral hazard has been raised as an objection to just about every government program for risk management and social insurance, such as limited corporate liability,²²⁵ bankruptcy,²²⁶ deposit insurance,²²⁷ unemployment insurance,²²⁸ and so on.

²²⁰ See note 219. This is not to say that all additional care is good, of course. Some will be excessive and wasteful. But the point is that, for at least some currently uninsured individuals, receiving some additional care above what they currently receive is good, even if costly.

²²¹ Assuming that the multistate RDF was either part of or backstopped by the federal government, the added cost would mean perhaps some greater burden on the federal income tax, which in turn would likely be borne most heavily by high-income taxpayers. See Joseph Bankman & Thomas Griffith, *Social Welfare and the Rate Structure: A New Look at Progressive Taxation*, 75 Cal. L. Rev. 1905, 1906-07, 1945 (1987). Thus, national redistribution would still be served.

²²² See Oates, *Second Generation*, note 1, at 365-66.

²²³ See, e.g., Sabrina Tavernise & Robert Gebeloff, *Millions of Poor Are Left Uncovered by Health Law*, N.Y. Times, Oct. 3, 2013, at A1.

²²⁴ On problematic moral hazard arguments, see generally Baker, note 34, *passim*.

²²⁵ See Moss, note 26, at 67-68.

²²⁶ See *id.* at 124-25.

²²⁷ See *id.* at 118-19.

²²⁸ See Graetz & Mashaw, note 35, at 70-72; Moss, note 26, at 188-89.

These have each instead turned out to be vital legal and policy innovations that have improved overall welfare enormously.²²⁹ This is not to say that moral hazard is not a real concern; rather, it is just to say that moral hazard can be managed so that the benefits of a program vastly outweigh any costs.

3. *Cross-Correlation and Tail Risk*

A key assumption in this plan, as in any insurance, is that the RDF will not have to pay out claims to every state in every year. Those having a good year help to pay the claims to those having a bad year, and next year, perhaps the positions reverse. This would help the fund to remain solvent even as it makes payouts. But there is a chance that many, even most states, experience below-threshold revenue in a given year. Indeed, that outcome is likely for a national recession or financial crisis, as in 2008. When there is a nationwide housing price drop, for example, nearly every state will feel the pinch. But having the multistate RDF accumulate enough reserves to pay out every state in a given year is not feasible.

This is potentially another avenue for federal involvement. The multistate RDF could aim to have sufficient reserves for most events, but the federal government could take on the “tail risk” for the extreme events. Here an analogy to Value at Risk (VaR) is instructive. Value at Risk is a tool used by financial institutions to measure the lowest amount an investment portfolio would lose, say, 95% of the time.²³⁰ If the RDF were required to maintain reserves to cover the 95% VaR, it would be adequate in most situations. But 5% of the time the payouts might exceed reserves and premiums, perhaps during a severe national recession. At those times, the federal government could make up any shortfalls.

In this sense, the federal government would act essentially as a reinsurer, taking on a certain slice of the risk held by the multistate RDF (or really more like a re-reinsurer, since the RDF is itself re-insuring some of the risk held by the state as an insurer of its resident). The RDF could even pay a partial premium to the federal government in exchange for that risk, though if the RDF is investing its reserves in Treasury bonds, paying a premium in addition could end up being just

²²⁹ See Moss, note 26, at 1.

²³⁰ See John R. Brooks II, *Taxation, Risk, and Portfolio Choice: The Treatment of Returns to Risk Under a Normative Income Tax*, 66 *Tax L. Rev.* 255, 280-83 (2013) (discussing Value at Risk).

an accounting fiction.²³¹ If not, then the federal absorption of tail risk would act as an additional subsidy to the states, in addition to the premium support discussed above.

4. *Feasibility*

At this point a reader would be forgiven for wondering whether this is a rather complicated mechanism for doing something that could be achieved largely by just having the federal government do the work directly. Raise federal rates, centralize the redistributive function of government, limit states to property and similar residence-based taxes, and so on—the standard fiscal federalism view with which that this Article began. A simple story, but likely even more politically difficult. While there is a strong moral and economic case for more redistribution at the federal level, the national political process makes that prospect doubtful. And the discussion in Section IV.A suggests that regardless of what level of redistribution the federal government chooses, some states may wish to add to it.

As imagined here, the multistate RDF would be a quasi-public arrangement of contracts and procedures to fill the gap left by the political process, much in the same way that we use a highly regulated mixture of private insurance companies, federal subsidies, and mandates in the individual health insurance market, rather than a single public option. In this case, we would be interposing a quasi-public agency, the multistate RDF, between the state and federal governments, in order to facilitate a more optimal assignment of tax duties. In particular, the multistate RDF could allow a subset of states to get the benefits of some centralization, though still potentially at a subnational level.

One question then is whether such an agency can be both insulated enough from the political process and also open enough to not be fully captured by state politicians looking for gain with no pain. This comes down to a question of political economy and public choice that is beyond this Article, which is more concerned with the thought experiment of suggesting the possible operation of a multistate RDF. That said, there are some reasons to be hopeful.

While it is hard to imagine states cooperating in this manner, and with enough federal involvement to make it work, there are significant incentives for all parties to participate. For the states, if they have a positive expected return from the RDF, the rational choice is clear,

²³¹ Indeed, the short-term bond rate is likely below the risk-free rate, implying a net transfer from bond holders to the government. See *id.* at 291-95; Yair Listokin, Taxation and Liquidity, 120 Yale L.J. 1682, 1701-06 (2011).

even if state politicians are not sufficiently risk-averse. There may be counter-productive resistance to the subsidization of poor and volatile states, but the recent recession and crisis in state revenues could make most states realize how precarious their fiscal positions are. Furthermore, there are also already a number of interstate compacts, covering issues such as taxation,²³² water rights,²³³ pollution and environmental issues,²³⁴ fisheries,²³⁵ and children.²³⁶ States seem to be able to cooperate when it is in their interests to do so.

From the federal government's standpoint the motivation would be to reduce the need for direct counter-cyclical support from the federal government during economic downturns and to lower the chance of procyclical cutbacks on state government programs and employment during a downturn. In the Great Recession, state government layoffs were likely a major drag on the economy and overall levels of employment,²³⁷ which made the federal government's macroeconomic stabilization task more difficult. Providing a protection against that behavior is thus in the federal government's interest—but likely not at such a high cost that the subsidies end up costing more than a bail-out would.

Finally, a program like this is somewhat consistent with localism and the new federalism, in the sense that we would be asking states to take on more of what had been largely a federal duty—redistribution—in part from a belief that some redistribution has a local character.²³⁸ Thus, this program may be appealing even to right-leaning policymakers who care about issues of federalism and subsidiarity.

Therefore, there is perhaps a path that could bring together the federal government, states with disparate interests and fiscal capacities, and the opposing political parties. But the stars would have to align quite well.

²³² E.g., Multistate Tax Comm'n, *Multistate Tax Compact* (1966); see Joseph F. Zimmerman, *Interstate Cooperation: Compacts and Administrative Agreements* 121-22 (2d ed. 2012).

²³³ E.g., *Apalachicola-Chattahoochee-Flint River Basin Compact*, Pub. L. No. 105-104, 111 Stat. 2219 (1997); *Upper Colorado River Basin Compact*, Pub. L. No. 81-37, 63 Stat. 31 (1949); see Zimmerman, note 234, at 131-35.

²³⁴ E.g., *Tri-State Compact*, Pub. Res. No. 74-62, 49 Stat. 932 (1935); see Zimmerman, note 234, at 137-41.

²³⁵ E.g., *Potomac River Fisheries Compact*, Pub. L. No. 87-783, 76 Stat. 797 (1962); see Zimmerman, note 234, at 114-17.

²³⁶ E.g., *Interstate Comm'n for Juveniles, Interstate Compact on Juveniles* (1955); see Zimmerman, note 234, at 117-18.

²³⁷ See note 12.

²³⁸ See notes 138-142 and accompanying text. [X]

B. An Alternative Using Existing Programs

While an ideal multistate RDF with sufficient participation by the states, federal subsidies and backstopping, adequate protections against moral hazard, and public-interested management could serve a valuable role, it may simply be asking too much for it all to come together, and furthermore for the combined federal/state tax-and-transfer system to rely so heavily on it. But it may be that a series of small changes elsewhere in the fiscal federalism system could roughly mimic the key advantages of a multistate RDF.

In particular, some combination of expanded borrowing and deficit spending by the states, subsidization and expansion of existing independent state RDFs, partial fiscal equalization of the states by the federal government, and a more clearly defined role for federal bail-outs of states could encompass a federal/state risk management scheme that would have as many of, and perhaps more than, the benefits of a multistate RDF. Each element here has been written about and discussed in detail elsewhere, though typically as single proposals to address a single problem or set of problems. By comparing them instead to the thought experiment of a multistate RDF, I argue that it is better to think of them as a single risk management scheme, able to manage the insurance and volatility risks of the combined federal/state redistributive tax-and-transfer system.

1. State Borrowing and Deficit Spending

As noted in Section V.A, insurance is often a substitute for borrowing. If capital markets were perfect, and politicians acted purely in the voters' interests, one partial solution to the problems of volatility and risk management would be to release states from the restrictions of balanced budget requirements and borrowing limitations. That would shift some of the risk of revenue volatility onto creditors who, if they were adequately diversified, could be well-equipped to absorb that risk. This would also avoid some of the moral hazard problems of a multistate RDF, since the credit markets would presumably price risk into the interest rate it demanded, meaning that a state could not shift away all of the risk of revenue volatility.

This is unlikely to be a satisfactory solution alone, however. First, politicians are not selfless actors, and the fiscal limitations came into being in the first place following a national crisis of state bad behavior.²³⁹ While it may be salutary for states to increase spending above revenue at times, David Super reminds us that another possible result of repealing balanced budget requirements is cutting taxes below

²³⁹ See text accompanying note 82.

spending, much as we have seen at the federal level since 1986.²⁴⁰ While there may be a fiscal-stimulus argument for such an action at times, the general approach is likely to be contrary to the goal of expanding redistribution.

Second, it is not clear that states would behave much differently today if the rules were all repealed. The rules themselves vary in strength across states, with many quite weak. Many states require only that budgets be balanced, but not outlays, meaning that a state could borrow if actual revenue dropped below expectations.²⁴¹ Borrowing for capital projects is generally unrestricted, and states make use of that to fund operations.²⁴² According to James Poterba, balanced budget requirements apply to less than 75% of state spending.²⁴³ That leaves a substantial amount of room for possible deficit spending, and it appears that states do not make the most use of it. As noted earlier, the stronger constraints on a state are likely a combination of the bond market and voters,²⁴⁴ neither of which would disappear if balanced budget requirements and debt restrictions were loosened.

David Super has suggested a partial loosening of the budget rules, allowing for greater borrowing during economic downturns.²⁴⁵ Such a change would involve a combination of loosened balanced budget requirements—for example, allowing a legislature to pass an unbalanced budget during a recession—and also loosening of restrictions on total debt outstanding. Coupled with a change requiring states to pay down the additional debt during strong economic periods, such a rule could allow for at least partial counter-cyclical budget policy while limiting the chances for bad behavior at other times.²⁴⁶ Whether bond markets and voters would agree is an open question, however. But at the margin, it is likely that there would have been more borrowing and deficit spending during the Great Recession had states felt more able to do so.

²⁴⁰ See Super, note 6, at 2641-42.

²⁴¹ According to Tracy Gordon, forty-four states require that governors submit balanced budgets to the legislature, forty-one states require that legislatures pass balanced budgets, and thirty-eight require that states not carry deficits over into the next fiscal year. See Gordon, note 71, at 249.

²⁴² See Subsection III.B.1.

²⁴³ Poterba, note 80, at 331.

²⁴⁴ See Gamage, note 6, at 764-65; Gordon, note 78, at 249.

²⁴⁵ See Super, note 6, at 2642.

²⁴⁶ Preset triggers on budgets and debt limits would be similar in design to David Gamage's proposal for automatic adjustments in tax rates to deal with revenue shortfalls, though Gamage rules out changes to borrowing rules because of the "nature of the political process." Gamage, note 6, at 766; compare Super, note 6, at 2644-45, with Gamage, note 6, at 806-08.

2. *Support for State RDFs*

Assuming that state borrowing and deficit spending would not entirely smooth out revenue volatility, states should continue to self-insure through their independent RDFs. Galle and Stark have examined the role of state RDFs in detail and propose a set of reforms to shore them up. They suggest a combination of federal subsidies, matching grants, and tax preferences; “lockboxes” to ensure RDF withdrawals go to specific purposes; stricter rules for contributions and withdrawals; and behavioral economics–influenced incentives to try to combat short-term biases of politicians and voters.²⁴⁷

Broadly speaking, their proposals are valuable, though I would put more emphasis on subsidies and matching grants, and less on stricter rules for uses of funds. The danger is that strict rules for uses of funds may prove constraining, particularly when we cannot predict in what form that next state fiscal crisis will come. For example, the lockbox approach would need to be sensitive to changes in risks and relative prices over time. If the next state fiscal crisis relates to, say, climate change and extreme weather, it would be unfortunate if too much of an RDF were dedicated to, say, supporting state worker pensions. And even if state pensions were the right thing to spend on, lockbox allocations based on wages and prices today may lead to over- or under-allocation when withdrawals are made years or decades into the future. Money is fungible, of course, but part of managing fiscal and economic crises is having a flexible set of tools that can be adapted to different purposes. Furthermore, some states, such as New York, currently under-use their existing RDFs and budget stabilization funds due to a concern about strict repayment rules and the like. At any rate, Galle and Stark fully explore the issues, and they need not be repeated further here.

3. *Equalization and Revenue Sharing*

A major topic of fiscal federalism research largely left out of the discussion thus far is the role of equalization payments.²⁴⁸ In a unitary national system, the government can spend as it sees fit to account for the regional differences in income, wealth, and economic resources generally. In a federal system, that discretion can be limited if some of the government spending in a state is funded purely out of own-source state revenue. States vary drastically in their fiscal capaci-

²⁴⁷ See Galle & Stark, note 6, at 619-34.

²⁴⁸ For general discussion of equalization and revenue sharing, see Musgrave, note 1, at 182; Oates, *Fiscal Federalism*, note 1, at 65-95; Kirk J. Stark, *Rich States, Poor States: Assessing the Design and Effect of a U.S. Fiscal Equalization Regime*, 63 *Tax L. Rev.* 957 *passim* (2010).

ties,²⁴⁹ and thus even if Mississippi had an income tax system that matched New York's or California's, it would still generate far less revenue per capita.

The standard answer to this is to have equalization between the regions, in the form of federal tax revenue from richer states funding relatively more generous transfers to poorer states. These tend to be a feature of most federal systems,²⁵⁰ though there is relatively little in the United States,²⁵¹ despite the fact that we had a system of General Revenue Sharing in the 1970's and early 1980's.²⁵²

The tax assignment question at the heart of this Article is generally separate from the question of equalization. Nonetheless, a system of equalization could partially include federal reinsurance of the states.²⁵³ For example, payments could be made a function not only of factors like population and fiscal capacity, but also revenue shortfalls, state unemployment rate, or other measures of relative economic performance.²⁵⁴ In a sense, this is just a subset of the larger point that federal spending can serve reinsurance goals.²⁵⁵

That said, it is also not clear how successful fiscal equalization has been, either in the United States or in other countries. There is some evidence that large fiscal equalization payments can create a sort of transfer dependency that inhibits the development of a region's economy. Fabio Padovano contrasts Italy, with large fiscal equalization payments, and the United States, with relatively little, as telling examples.²⁵⁶ In Italy, the more economically backward regions have remained so for decades, even centuries, while the United States has

²⁴⁹ See Stark, note 248, at 981-89.

²⁵⁰ See Wallace E. Oates, *An Essay on Fiscal Federalism*, 37 *J. Econ. Literature* 1120, 1127 (1999).

²⁵¹ Federal transfers actually make up a large portion of state revenues. See, e.g., *Urban-Brookings Tax Pol'y Ctr.*, note 60, at 1. The transfers are generally not related to fiscal capacities, and therefore are largely not equalizing. Stark, note 248, at 960.

²⁵² See generally Wallin, note 91, at 6.

²⁵³ Boadway, note 198, at 370 (“[A] transfer system that equalizes fiscal capacities automatically insures against temporary shocks to states’ tax bases as well as compensating for permanent differences in fiscal capacity.”); Lockwood, note 216, at 2-3.

²⁵⁴ The federal government briefly tried something along these lines by using counter-cyclical revenue sharing as part of its stimulus package in 1977. See Edward M. Gramlich, *Stimulating the Macro Economy Through State and Local Governments*, 69 *Am. Econ. Rev.* 180, 180 (1979) (discussing the program).

²⁵⁵ See Oates, *Second Generation*, note 1, at 364-66 (discussing federal grants that incorporate “risk-sharing contracts”).

²⁵⁶ See Oates, note 124, at 324 (discussing Fabio Padovano, *The Politics and Economics of Regional Transfers: Decentralization, Interregional Redistribution, and Income Convergence* (2007)); see also Fernando M. Aragon, *Local Spending, Transfers, and Costly Tax Collection*, 66 *Nat'l Tax J.* 343, 343-44 (2013) (discussing the tendency of localities to increase spending more due to an incremental increase in federal grants than to an incremental increase in local tax base, because the costs of raising the revenue are borne elsewhere).

had somewhat more success in spreading development around the country.²⁵⁷

Equalization is further complicated by the fact that one relatively clear path to increasing equalization payments could cut into state-level redistributive efforts. In Section III.C, I noted that several of the major combined federal-state redistributive programs, namely Medicaid and TANF, allow for state-level differences in generosity. But that fact also means that some funding must come from a state's own sources of revenue, which, again, differ widely.²⁵⁸ If Medicaid, TANF, and other programs were entirely federal and based on a single, national eligibility formula, the programs would also play a stronger equalization role—regions with proportionally more eligible individuals would receive proportionally greater payments, funded out of revenue from richer regions.²⁵⁹

Thus one path to increasing equalization would also decrease state-level redistribution. That may in fact be a worthwhile trade-off, assuming no other changes. But assuming that the hypothetical national Medicaid eligibility formula would roughly track the median voter's preferences, we would still have the case of some states wanting to supplement national redistributive efforts.²⁶⁰ This could mean that the risk-shifting benefits of more equalization could be muted, and thus that it would likely not be able to play the reinsurance role alone.

4. *Federal Bailouts*

In Subsection V.A.3, I argued that a successful multistate RDF would likely still need federal backstopping and absorption of tail risk. However, to be clear, there is already a large amount of federal reinsurance of states and the individuals in a state. This takes a number of different forms. The federal government now provides substantial disaster aid, mortgage relief, deposit insurance, and other programs that are aimed in part at regionally-based income shocks.²⁶¹ In addition, the federal government made a number of ad hoc actions during the

²⁵⁷ See Oates, note 124, at 325.

²⁵⁸ The Medicaid FMAP formula appears to be intended to allow for equalization through disproportionate payments to poorer states. See note 99 and accompanying text. Yet the fact that states have to partially fund the programs out of their own-source revenue largely wipes out any equalizing effect of the FMAP formula. See Stark, note 248, at 992-93.

²⁵⁹ Social Security operates somewhat in this way now. Because the payments are highly progressive, see 42 U.S.C. § 415 (2012) (outlining computation of Social Security Primary Insurance Amount), the poorer elderly—and thus regions with greater proportions of poor elderly—receive disproportionate payments.

²⁶⁰ See Subsection IV.A.2.

²⁶¹ See Moss, note 26, at 1-2.

Great Recession and in other recessions that can provide a model for future bail-outs, such as a payroll tax holiday,²⁶² extension of unemployment insurance,²⁶³ and deferral of payments for Medicaid and other matching grant programs (essentially loaning money to the states to help them make up their portion of matching grant payments).²⁶⁴

Independent state RDFs, though still underfunded, could work better if coordinated with more explicit federal absorption of tail risk. As discussed above,²⁶⁵ part of the problem with self-insuring is that one loses the advantage of lowering volatility through increasing the size of the risk pool. And ultimately volatility is about tail risk—the average loss does not change as the risk pool increases, only the variance in the distribution of possible losses. If the federal government took on more tail risk explicitly, that would serve a similar, though less ideal, way of avoiding extreme losses.

The difficulty is that federal bail-outs are subject to politics, and as we saw during the Great Recession, there is a risk of inadequate help to the states. In a tight revenue environment, there can be substantial political headwinds against increasing spending, and so reliance on future federal aid is unlikely to be of great comfort to states. A state considering expanding its income tax would likely want greater assurance of protection against downside risk through clearly defined rules for when and in what amounts bail-outs will occur.

The danger, of course, is that more explicit *ex ante* codification of the federal bail-outs roll risks the same sort of moral hazard problems discussed in connection with a multistate RDF. If you tell states what to do to get money, they are likely to do just that.

The larger point, however, is that viewed through the lens of insurance and risk-pooling, federal bail-outs in recessions are not unfortunate responses to state fiscal weakness, but may be features of an appropriate allocation of risk. Reinsuring tail risk is often the most prudent approach in risk management, particularly where the reinsurer is large enough and adequately capitalized to absorb that risk.²⁶⁶ In that sense there is no better reinsurer than the federal government.

²⁶² Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, Pub. L. No. 111-312, § 601, 124 Stat. 3296, 3297.

²⁶³ Unemployment Compensation Extension Act of 2008, Pub. L. No. 110-449, 122 Stat. 5014.

²⁶⁴ See Super, note 6, at 2611-12 (discussing Medicaid waivers).

²⁶⁵ See Section V.A.

²⁶⁶ See, e.g., Raim & Langford, note 186, at 40-16 (“Facultative reinsurance is commonly purchased for large, unusual or catastrophic risks.”).

VI. CONCLUSION

The basic lesson of fiscal federalism is to have each level of government in a federal system focus on those duties that it can provide most effectively. With respect to the assignment of tax duties, the standard view is that a state cannot effectively perform redistribution and progressive income taxation since the costs are simply too high. But the standard view has largely misidentified the costs, or at least their magnitude. The relevant costs, at least within the range of plausible current policies, are not from tax migration and crippling state tax competition as a result of redistributive policies, but rather from poor risk management—suboptimal insurance against income shocks, both for states and their residents.

With this view of the costs in focus, a different solution than simply trying to wean states off their progressive income taxes becomes clear. If we can create alternative mechanisms for risk pooling and sharing through insurance, then we can allow states the room to employ the redistributive policies that, for normative reasons, they should be employing.

This Article suggests several possibilities for nationalizing the insurance function of progressive income taxation. The purest answer to a problem of risk mitigation is insurance—here, conceived of as a multi-state RDF. But that is not the only option, and a combination of reforms to state borrowing, state RDFs, federal revenue sharing, and federal bail-outs could provide much the same benefits. These options themselves are not new, but the discussion of them within the framework of managing the risk of otherwise-desirable state redistributive programs is. By separating the redistributive function of a progressive income tax from the insurance function, we can see each of these policy options not as particular policies to solve particular problems, but rather as parts of an overall federal/state risk management scheme.

Ultimately, redistribution is a central goal of tax policy, at the state level no less than the federal level, and seeking out new and effective ways to accomplish that task in light of growing income inequality should be central to tax reform efforts. States have stepped into the breach in recent decades—sometimes by choice, sometimes not—but they have thus far paid a heavy price, lacking an ability to manage business cycle revenue swings well. Rather than pushing states to scale back their redistributive efforts, we should be seeking ways to support them, and for them to support themselves.