WORKING PAPERS

RESEARCH DEPARTMENT

WORKING PAPER NO. 12-23/R

A NARRATIVE ANALYSIS OF POST-WORLD WAR II CHANGES IN FEDERAL AID

Gerald Carlino
Federal Reserve Bank of Philadelphia

Robert Inman
Wharton School, University of Pennsylvania

May 2013

RESEARCH DEPARTMENT, FEDERAL RESERVE BANK OF PHILADELPHIA

Ten Independence Mall, Philadelphia, PA 19106-1574 • www.philadelphiafed.org/research-and-data/

A NARRATIVE ANALYSIS OF POST-WORLD WAR II CHANGES IN FEDERAL AID

Gerald Carlino
Federal Reserve Bank of Philadelphia

and

Robert Inman
Wharton School, University of Pennsylvania

May 2013

ABSTRACT

Because of lags in legislating and implementing fiscal policy, private agents can often anticipate future changes in tax policy and government spending before these changes actually occur, a phenomenon referred to as fiscal foresight. Econometric analysis that fails to model fiscal foresight may obtain tax and spending multipliers that are biased. One way researchers have attempted to deal with the problem of fiscal foresight is by examining the narrative history of government revenue and spending news. The Great Recession and efforts by the federal government through the American Recovery and Reinvestment Act of 2009 (ARRA) to stimulate the economy returned fiscal policy, and in particular the role of state and local governments in such policies, to the center of macro-economic policymaking. In a companion paper, we use federal grants-in-aid to state and local governments to provide an evaluation of the effectiveness of the ARRA. The purpose of this paper is to develop narrative measures of the federal grants-in-aid programs beginning with the Federal Highway Act of 1956 through the ARRA of 2009**.** The narrative measures we develop will be used as instruments for federal grants-in-aid in our subsequent analysis of the ARRA.

The views expressed here are those of the authors and do not necessarily represent the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System. This paper is available free of charge at www.philadelphiafed.org/research-and-data/publications/working-papers/.

In a recent paper, Leeper, Walker, and Yang argue that economic agents can often anticipate fiscal policy actions.[1] Because of lags in legislating and implementing fiscal policy, private agents can often anticipate future changes in tax policy and government spending before these changes actually occur, a phenomenon referred to as fiscal foresight. Econometric analysis that fails to model fiscal foresight may obtain tax and spending multipliers that are biased. One way researchers have attempted to deal the problem of fiscal foresight is by examining the narrative history of government revenue and spending news. Using information obtained from the legislative record, Ramey has constructed a series for exogenous federal government spending shocks based on the narrative record for defense spending.[2] Ramey shows that shocks to the series based on professional forecasts and shocks to the series based on the narrative approach Granger-cause the VAR shocks, indicating that the VAR shocks may miss the timing of the news. Following a similar approach, and paralleling their earlier work on changes in monetary policy, Romer and Romer were able to document federal tax policy changes.[3]

The Great Recession and efforts by the federal government through the American Recovery and Reinvestment Act of 2009 (ARRA) to stimulate the economy returned fiscal policy, and in particular the role of state and local governments in such policies, to the center of macro-economic policymaking. The striking features of this legislation are its scale and its reliance upon state and local governments for implementing central government macro-economic fiscal policy. In a companion paper we use federal grants-in-aid to state and local governments to provide an evaluation of the effectiveness of the ARRA.[4] The purpose of this paper is to develop narrative measures of the federal grants-in-aid programs beginning with the Federal Highway Act of 1956 through the ARRA of 2009**.** The narrative measures we develop will be used as instruments for federal grants-in-aid in our subsequent analysis of the ARRA.

Beginning in the early 1950s the federal government assumed a more important role in the financing of state and local government programs. Prior to this time the federal government's only significant assistance for state and local government activities was funding for state lower income assistance and unemployment insurance, hereafter UI.[5] Since 1950, there have been 17 significant new federal programs funding state and local governments, including the most recent

---

[1] E.M. Leeper, T.B. Walker, Shu-Chun Susan Yang, "Fiscal Foresight and Information Flows," IMF Working Paper No. 12/153, June 2012

[2] See Valerie Ramey, "Identifying Government Spending Shocks: It's All in the Timing," *Quarterly Journal of Economics*, 126, 2011, pp. 1- 50.

[3] See Christina Romer and David Romer, "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks," *American Economic Review*, 100, 2010, pp. 763-801.

[4] See G. Carlino and R. P. Inman, "Macro-Economic Fiscal Policy in Federal Economies: State as Agents," unpublished manuscript, 2012.

[5] We will not consider changes in the financing of UI. While states may adopt supplemental payments to UI, their primary role is to administer and fund a largely federally mandated program.

expansion of federal support under the ARRA of 2009.[6] In addition we also include as "federal aid" the states' settlement with U.S. tobacco companies, known as the Master Settlement Agreement, for a payment of $206 billion over a 25-year period to help cover the states' costs for tobacco-related illnesses. The settlement payments may be allocated to any state activity, much like federal revenue sharing.[7]

Only new programs are considered in this narrative analysis as "unanticipated" changes in federal support for state and local governments. We assume that each of the new programs listed here was not funded by decreases in other federal aid to state/local governments but rather by increases in federal taxes or federal debt or by a reduction in other (nonaid) federal programs. Thus, new expenditures on these new programs are therefore additional funding to the state and local sectors.

In addition, federal aid programs to state or local governments are treated as a combined transfer of resources to a single state and local government sector. In most cases, federal aid is paid directly to the state government, and the state has the option of passing the aid through to local governments. In some instances, however, local governments do receive direct federal support (Urban Renewal, Model Cities, and General Revenue Sharing). In these cases we assume that state governments see through the fiscal "veil" and adjust their subsequent funding of local programs in response.[8]

Not included in our analysis of new federal aid are all changes in the federal tax code that impact state revenues. Many states collect their state income taxes using the federal income tax definition of taxable income. Thus, changes in tax exemptions or tax deductions impact the state tax base and thus state tax revenues. These effects were most pronounced with the Tax Reform Act of 1986, which eliminated many deductions in the federal income tax base. The consequence was to significantly increase the common income tax base and, thus, state tax revenues collected at existing rates.[9] The reason for excluding these policy changes here is that the resulting changes in state revenues arise from transfers between residents within the state. Our focus here is on "unexpected" changes in revenues to the residents of a state from those

---

[6] Strictly speaking, ARRA funding for the state and local sectors is not a "new program," since it uses existing federal programs to channel significant increases in federal support for the state and local sectors. The magnitude of federal support is "new," however, and therefore, we include the program in our analysis. See R.P. Inman, "States in Fiscal Distress," *Federal Reserve Bank of St. Louis: Regional Economic Development*, 6, 1, 2010.

[7] One might think of such payments as beginning with a tax on tobacco company profits and the revenue from that tax is then re-allocated as state grants-in-aid; see p. 19.

[8] For evidence on this point, see S. Craig and R. P. Inman, "Federal Aid and Public Education: An Empirical Look at the New Fiscal Federalism," *Review of Economics and Statistics*, 64, November, 1982.

[9] For an interesting analysis of how these revenue shocks impacted state budgets, see H. Ladd, "State Responses to the TRA86 Revenue Windfalls: A New Test of the Flypaper Effect," *Journal of Policy Analysis and Management*, 12, Winter 1993.

"outside" the state.[10]

Two final decisions are required when specifying the level and timing of new aid to the state and local sectors.

1. *Level of Aid*: For all new programs we will assume that the level of "new money" assigned to the program is the appropriated funding for the first full fiscal year of the program's implementation. Program funding for any future fiscal year after initial approval and funding is subject to future budgetary decisions of Congress.[11] The municipal bond market typically refuses to lend states money against this future stream of program aid for just this reason.[12] In this respect, our specification of narrative state aid follows that in Romer and Romer's study of the impact of shocks to taxation on economic outcomes.[13] There are three exceptions to our "first-year-only" specification for the level of the expenditure shock:

    The Loss of General Revenue Sharing: This is an announcement by President Reagan in November 1983 to phase out general revenue sharing by FY 1987. We measure this as a one-time loss in fiscal wealth in Quarter 4, 1983; see pages 15-16 below.

---

[10] Of course, state residents do contribute to the funding of aid programs in their state through current or future federal taxes. So in the aggregate, residents in "all" state and local governments do pay for "all" federal aid. This is a Ricardian equivalence argument. If such programs are to have any effect on the real economy – such as an increase in household wealth – we will need a non-Ricardian "wedge" in some form. Three such wedges are possible: 1) Residents do not live forever and have no bequest motive so that federal aid can be an intergenerational transfer; 2) Aid is fully funded within the current generation, but it is a transfer from richer national taxpayers to credit-constrained poorer households through state and local government spending; or 3) State residents suffer from a fiscal illusion of "universalism," whereby each state views all federal programs in its state as costing (approximately) 1/50th of the true program costs. Each of these specifications would allow new federal aid programs to be seen as "new wealth" by state residents.

[11] While new programs often have authorized funding for perhaps up to five years, appropriated funding is decided each year. Authorizations are not binding commitments to spend resources and may be "held off" if the budget committees in Congress feel that this is appropriate. Only appropriations lead to new money for the states and appropriations are annual. See Allen Schick, *The Federal Budget: Politics, Policy, and Process*, Brookings Institution Press, 3rd ed., Chapters 8 and 9, but particularly p. 205.

[12] The municipal bond market will lend money in anticipation of future federal aid within the fiscal year, however, once federal funding is assured. Such notes are called revenue anticipation notes, or RANs. In this sense, state and local governments are credit constrained in their access to future years' payments from any new federal aid program. For evidence that state and local governments are credit constrained, see Douglas Holtz-Eakin, Harvey Rosen, and Schuyler Tilly, "Intertemporal Analysis of State and Local Government Spending: Theory and Tests," *Journal of Urban Economics*, 38, 1994, pp. 159-174.

[13] See Romer and Romer, op. cit. An alternative approach to measuring the fiscal shock of spending is presented in Ramey, op. cit.

The Emergency Jobs Act of 1983: This program was a commitment of federal aid for capital spending by state and local governments for two years. Since the program was budgeted for two years and was specified for capital spending, long-term debt could be issued in anticipation of second-year funding; see pages 16-17 below.

1998 Tobacco Settlement: In contrast to politically decided federal aid, tobacco settlement payments are the result of binding legal agreements. States have borrowed successfully against their future tobacco settlement payments. Therefore, we use the full discounted present value of all future settlement payments as our specification of new wealth to the state and local sector; see pages 19 -20.

2. *Timing of Aid*: We specify three dates at which state and local officials could begin budgeting in anticipation of the new federal assistance: (i) the date of introduction as legislation; (ii) the date of passage if introduced by the President or the date of signing if there is a risk of a veto; and finally, (iii) the date of first federal funding.[14] As stressed by Ramey, the timing of how aid is received will be important for inferences of the effects of policy on public- and private-sector decisions.[15] We recommend either of three approaches for allocating an "aid shock" to the relevant quarters when estimating models of state and local fiscal behavior and the impact of aid on the macro economy.[16] In the discussion below, the dating of quarters is based on calendar accounting – Q1 is January-March, Q2 is April-June, Q3 is July-September, and Q4 is October-December – but the discussion is "timed" to the state and local sectors' fiscal year, specified as Q3 and Q4 in calendar year t, and Q1 and Q2 in calendar year $t + 1$.

---

[14] In reporting our results, we recognize that beginning in FY 1977, the federal fiscal year shifted from a July 1 to June 30 fiscal year to an October 1 to September 30 fiscal year. For all years up to FY 1977, the first quarter of the fiscal year funding will be calendar Q3. For all fiscal years including and after FY 1977, the first quarter of the fiscal year will be calendar Q4.

[15] Ramey, op. cit.

[16] A fourth alternative is to adopt the date that legislation is first introduced or discussed. Our discussion below provides the political history for each program and appropriate references. In contrast to private firms and households reacting to "defense news" as in Ramey (2011), state governments cannot borrow against *proposed* federal legislation because of borrowing constraints imposed by the municipal bond market. States do have their own savings accounts, but those funds are typically earmarked for specific tasks (pension funds, bond funds). There are "rainy day funds," but those funds are relatively new and small relative to many aid shocks, and typically constrained to be used only in the event of "fiscal crises." Finally, unconstrained households could save or borrow against future service and tax changes because of aid shocks *if* citizens trusted state and local government officials to implement their preferred fiscal policies. It seems more appropriate from a political economy perspective to assume that most households are "rationed" against the fiscal choices of their elected representatives. We therefore work within the financial and budgetary constraints of the state and local sector.

APPROACH 1: This approach follows Romer and Romer's specification for shocks to federal tax policy and assigns the aid shock to only that quarter in which aid is first received.[17] This approach recognizes the municipal bond market constraint that state and local governments cannot borrow against future aid payments until those payments are viewed as fully secure. All fiscal responses by state and local governments are assumed to occur in the quarter when the funds arrive.

APPROACH 2: Adopt the first date of federal funding as the "funding date" for intergovernmental aid but then annualize the data for the remaining quarters in the fiscal year in which the aid is first received. This approach is consistent with the annualized treatment of federal aid in NIPA and other federal reporting of intergovernmental transfers. Implicitly, this approach assumes that once aid is secured, state and local governments can save that aid for spending or tax relief in subsequent quarters, with all behavioral adjustments occurring within the fiscal year in which aid is first received.

APPROACH 3: This approach recognizes the borrowing constraint imposed by the bond market and also the institutional constraints imposed by state and local budgetary rules for the allocation of fiscal resources within a given fiscal year. Once the budget is set (typically at the start of Q3), it remains in force for the remainder of the state or local government's fiscal year, continuing through Q4, then Q1, and Q2 of the subsequent calendar year. Unanticipated federal aid received after the start of the fiscal year may be spent on additional government spending, but it typically cannot be returned through changes in state tax rates (though lump-sum rebates are possible). Once approved, rates must remain in force for the full fiscal year. Budgetary rules therefore mean that a fiscal shock in a current fiscal year (say in Q3, Q4, Q1, or Q2) can affect spending but not tax revenues. Tax changes must wait until the subsequent fiscal year. Under Approach 3, the annualized federal aid shock is extended into the next fiscal year as well to allow for adjustments to annualized state and local tax revenues as well as spending.

In summary, the measured shock in federal aid will be allocated under each of the three approaches as:

APPROACH 1: The shock to fiscal aid is allocated only to the quarter in which the aid is first received.

---

[17] Romer and Romer, op.cit. See also Alan Auerbach and Douglas Gale, "Activist Fiscal Policy," *Journal of Economic Perspectives*, Fall 2010, references in footnote 3.

APPROACH 2: The shock to fiscal aid is allocated to the quarter in which the aid is first received and, on an annualized basis, to all subsequent quarters in that same fiscal year. For example, a shock to aid that is first received in Q4 is also allocated to Q1 and Q2 in that fiscal year.

APPROACH 3a: Aid is approved within a fiscal year but payment is not received until some date in the subsequent fiscal year. In this case, state and local governments can plan spending and tax decisions for next year's budget knowing they will have access to funds. The institutional constraint is no longer binding. The borrowing constraint still applies, but the bond market knows funds will be paid. In this case, the annualized value of the shock to aid is allocated to Q3 and Q4 as well as Q1 and Q2 in the fiscal year in which funds are received. All fiscal adjustments are assumed to occur in this fiscal year.

OR:

APPROACH 3b: Aid is approved within a fiscal year and is paid during that fiscal year. The borrowing constraint is relaxed at the date of program approval, but the institutional constraint remains on tax policy for this fiscal year. In this case, all quarters of that state and local fiscal year after the date of passage are credited with the annualized value of the aid shock and all quarters of the subsequent fiscal year as well. For example, the aid program is approved in Q4 (say, December) of a fiscal year and funding begins in Q1 (say, in February) of the next calendar year. Both approval and funding occur with the fiscal year. In this case Q4, Q1, and Q2 of the year of program approval are credited with the annualized value of the aid shock, as well as Q3 – Q1 of the subsequent fiscal year. This specification allows for both the borrowing and institutional budget constraints in state and local funding.

FINAL COMMENT: All program funding levels are reported as total aid in nominal dollars. Users should adopt their own deflation convention.

NEW AID PROGRAM NARRATIVES AND FUNDING

Federal Highway Act of 1956 (National Interstate and Defense Highway Act): The act was signed into law by President Eisenhower on June 29, 1956. In his January 7, 1954 State of the Union Address, President Eisenhower spoke forcefully on behalf of a national system of highways as "vital" for the safety and economic prosperity of U.S. citizens. Congress had held extensive hearings in 1953 and responded with the passage of the Federal Aid Highway Act in 1954. The 1954 bill authorized $175 million for an interstate system of highways, to be planned federally but constructed by state governments with expenses shared at the rate of 60 percent federal, 40 percent state. The bill was signed on May 6, 1954. For Eisenhower, this was only a

beginning. He appointed a committee headed by General Lucius D. Clay to consider and propose an expanded program. The Clay Committee's report was delivered to Congress on February 22, 1955. Motivated in part by the Clay report, the Senate and House developed their own plans during this period. States would be responsible for building the highways, but the federal government would finance construction at the rate of $.90 for every dollar of state spending. This program became the first significant open-ended matching rate program for federal aid to the states. The capital portion of the program would be financed by gasoline taxes that would accumulate in the Highway Trust Fund.[18] Tolls could be used to finance maintenance expenditures at the discretion of the states. The bill was signed on June 29, 1956. Construction began in September 1957.

> *Starting Date*: Four alternative dates might be used to represent the date when state governors could begin to anticipate significant federal assistance for the construction of state highways: Approval date of the first federal highway program (Federal Aid Highway Act): May 6, 1954; Proposal date for the current highway program: February 22, 1955; Passage date: June 29, 1956; Initial funding date: September 1957.
>
> *Anticipated Funding*: Proposed highways and state expenditures required federal approval before funds could be sent to the states. Applications were submitted in 1956 and 1957 with requests for funding. Actual funding occurred after federal approval, typically in 1958. We therefore adopt FY 1958 funding as our level of program spending. Funding in FY 1958 begins in the fall of 1957. These funds were to begin disbursement in FY 1958, beginning in July 1, 1957 (Q3 1957) and ending on June 30, 1958 (Q2 1958). The aggregate funding over the year was $1.518 billion.
>
> *Starting Date and Funding*:

APPROACH 1: Q3, 1957: $1.518 billion.

APPROACH 2: Q3, 1957 to Q2, 1958: $1.518 billion.

APPROACH 3a: Q3, 1957 to Q2, 1958: $1.518 billion.

Sources: "Federal-Aid Highway Act of 1956: Creating the Interstate System," *Public Roads*, Vol. 60, No. 1, Federal Highway Administration, and for funding Office of the President, Bureau of the Budget, *Budget of the United States Government: Special Analyses of Federal Aid to State and Local Governments.*

---

[18] We will assume that state governors treat the gasoline tax paid by their states as a "sunk cost" for the purposes of state policy rather than a state-specific cost that should be "offset" against state intergovernmental highway grants. For the purposes of state budgeting, *federal* highway taxes are assumed to be exogenous.

Urban Renewal: Federal government funding for state and local government renewal of urban areas was initially approved in the Housing Act of 1949. The act authorized $500 million in intergovernmental aid over a five-year period, beginning FY 1950. Initial appropriations based on applications from cities and states never exceeded $12 million in any one fiscal year, however. This modest funding changed with the passage of the Housing Act of 1954, introducing major federal funding for public housing constructed by state and local governments. State and local governments were required to submit an application and detailed plans before federal funding could be authorized. Program support was by matching aid, but the local share could be met by the value of private land seized by eminent domain. Thus, no local taxes were required. A major increase in urban renewal funding for cities and states occurred with passage of the Housing and Urban Development Act of 1968. Again applications for funding are required. Urban renewal funding increased from $475 million in FY 1968 before passage to $1.054 billion in FY 1970 after passage – a net increase in funding of $579 million.

Starting Date: Two possible "announcement dates" may be used for the Housing Act of 1954 and two dates for the Housing and Urban Development Act of 1968. One is the date of passage of each piece of legislation – August 2, 1954 and August 1, 1968 respectively – and the other is the date of project approval and initial funding, set at the start of the respective fiscal years – July 1, 1958 for FY 1959 funding and July 1, 1969 for FY 1970 funding.

Anticipated Funding: Since federal funding levels are typically negotiated for each project, we assume that the new funding only became known at the time of project approval. The level of new funding is equal to the difference between FY 1958 and FY 1959 for the Housing Act of 1954 (= $41 million = $76 m. - $35 m.) and to the difference between FY 1968 funding and FY 1970 funding for the Housing and Urban Development Act of 1968 (= $579 million = $1054 m. - $475 m.).

Starting Date and Funding: New funding of $41 million is assigned to the Housing Act of 1954 and $579 million to the Housing and Urban Development Act of 1968.

APPROACH 1: Q3, 1958: $41 million.

APPROACH 2: Q3, 1958 to Q2, 1959: $41 million.

APPROACH 3a: Q3, 1958 to Q2, 1959: $41 million.

APPROACH 1: Q3, 1969: $579 million.

APPROACH 2: Q3, 1969 to Q2, 1970: $579 million.

APPROACH 3a: Q3, 1969 to Q2, 1970: $579 million.

Sources: J. Q. Wilson (ed.), *Urban Renewal: Record and the Controversy*, MIT Press, Chapter 4, “Federal Urban Renewal Legislation,” pp. 71-125, and for funding, *The Statistical Abstract, 1959*, “Federal Aid to State and Local Governments: 1953 to 1959,” p. 403, and *The Statistical Abstract, 1970*, “Federal Aid to State and Local Governments: 1964 to 1970,” p. 409.

Elementary and Secondary Education Act (ESEA) of 1965: In anticipation of his election as President in November 1964, then President Lyndon Johnson established 13 policy task forces, including one for education. The education task force developed the central provisions of the Elementary and Secondary Education Act (ESEA) of 1965. All work of the task force was confidential. The legislation was unveiled on January 12, 1965 and submitted to Congress on that date. The final version of the bill was approved just three months later on April 9, 1965, with no amendments, and signed by President Johnson on April 11, 1965 (with his first grade teacher on the podium).

Starting Date: There are three possible starting dates for ESEA: Date of proposal (January 12, 1965), date of passage and final approval (April 11, 1965), and date of initial funding (July 1, 1965).

Anticipated Funding: Initial funding beginning in the summer of 1965 was $900 million for FY 1966, followed by $1.4 billion for FY 1967 and all subsequent years. The bill has been renewed every five years up to FY 2001, when it was allowed to lapse but then re-structured as the No Child Left Behind Act.

Starting Date and Funding: Since the Democrats had significant majorities in both chambers and the bill was a top priority for the President, we assume for the narrative analysis that the starting date was the date of initial federal funding, July 1, 1965. For the level of anticipated funding we use the bill’s full funding of $1.4 billion per year rather than the transition year funding of $900 million.

APPROACH 1: Q3, 1965: $1.4 billion.

APPROACH 2: Q3, 1965 to Q2, 1966: $1.4 billion.

APPROACH 3a: Q3, 1965 to Q2, 1966: $1.4 billion.

Sources: H. D. Graham, *The Uncertain Triumph: Federal Education Policy in the Kennedy and Johnson Years*, University of North Carolina Press, pp. 61-79, and for funding, *The Statistical Abstract, 1970,* “Federal Aid to State and Local Governments: 1964 to 1970,” p. 409.

Medicaid: Medicaid as low-income health care insurance was enacted on July 30, 1965

as part of the Social Security Amendment Act that created Medicare. The Medicaid section, known as Title XIX, was carried along as a part of the larger Medicare debate that occupied the attention of Congress for much of the spring of 1965. It was designed to assist lower-income states. The program is a means-tested entitlement program, jointly financed by federal and state funds through a matching grant to the states that choose to participate. Matching rates are inversely related to state income. The highest rate is 0.80 (Mississippi) and the lowest rate is 0.50 (California, Connecticut, Delaware, Illinois, Minnesota, New Hampshire, New Jersey, New York, and Washington). All states except Arizona joined with the passage of the act; Arizona joined the program in 1982. Each state designs and administers its own program. Since states had to design their own programs before receiving federal funding and federal funding was paid in response to actual state outlays, the observed Medicaid expenditures by the federal government do not appear on the federal budget until 1968.

> *Starting Date*: There are three possible starting dates for Medicaid: Date of proposal (February 1965), date of passage (July 30, 1965), and the earliest date for expected state receipt of federal funding (July 1, 1967).
>
> *Anticipated Funding*: Federal funding for the new programs began in the fall of 1967. Initial funding in FY 1967 was $1.173 billion, rising to $1.805 billion in FY 1968, and $2.612 billion in FY 1969 as more states joined the program.
>
> *Starting Date and Funding*: Since this is a "project" grant requiring federal approval, we assume that the first date of full funding would be July 1, 1967. Funding levels therefore equal $1.805 billion for FY1968, budgeted for by the states in the spring of 1967. We make no allowances for discounting.

APPROACH 1: Q3, 1967: $1.805 billion.

APPROACH 2: Q3, 1967 to Q2, 1968: $1.805 billion.

APPROACH 3a: Q3, 1967 to Q2, 1968: $1.805 billion.

Sources: Theodore Marmor, *The Politics of Medicare*, Aldine, 1973, and for funding, *The Statistical Abstract, 1970,* "Federal Aid to State and Local Governments: 1964 to 1970," p. 409.

Model Cities: The idea for a Model Cities program arose in response to criticism of federal urban renewal programs. In 1965, President Johnson appointed a task force to suggest alternatives to urban renewal. The favored proposal entailed coordinated funding and planning for city economic development through "demonstration cities." In January 1966 Johnson proposed to Congress a new urban program that would concentrate federal resources to improve urban living and economic opportunities. Congress objected to the original level of funding ($3 billion) and the length of the program (six years). A compromise was reached for a $1.5 billion program for three years. The program was approved in April 1966. Funding was to be by

competitive project grants, with the deadline for a first round of funding of December 1, 1967. A total of 193 communities applied and 75 grants were approved. A second competition with a deadline of April 15, 1968 received 164 applications and again 75 grants were approved.

> *Starting Date*: Three dates are possible starting dates for the Model Cities program: Date of proposal (January 1966), date of passage (April 1966), and date for full program awards and funding over subsequent fiscal years beginning in July 1, 1970.
>
> *Anticipated Funding*: Given all successful project grants, a total of $1.5 billion was to be allocated. Actual funding levels over the life of the program were $320 million in FY 1971, $492 million in FY 1972, $586 million in FY 1973.
>
> *Starting Date and Funding*: For the narrative analysis we assume that the starting date was the first year of full funding (July 1, 1970) and equaled the full amount of awards of $1.5 billion scheduled over the next three fiscal years. We make no allowance for discounting.

APPROACH 1: Q3, 1970: $1.5 billion.

APPROACH 2: Q3, 1970 to Q2, 1971: $1.5 billion.

APPROACH 3a: Q3, 1970 to Q2, 1971: $1.5 billion.

Sources: James Sundquist, *Making Federalism Work: A Study of Program Coordination at the Community Level*, Brookings Institution, pp. 79-85, and for funding, *The Statistical Abstract, 1976,* "Federal Aid to State and Local Governments: 1965 to 1974," p. 249.

State and Local Fiscal Assistance Act (General Revenue Sharing): President Nixon first proposed the idea for General Revenue Sharing (GRS) on August 8, 1969 as part of a reform of federal aid to state and local governments, called the "New Federalism." Congress was initially unenthusiastic and did not begin serious consideration of the measure until after the State of Union address of 1972. Congressional deliberations were not resolved until the fall of 1972. On October 12, 1972, Congress gave final approval for a bill providing significant new funding involving general purpose grants with no formal requirements for spending this aid on particular program objectives – what public finance economists call "lump-sum" transfers. President Nixon signed the bill on October 20, 1972. Beginning in December 1972 the first checks were mailed to some 38,000 general purpose state and local governments. The initial authorization was for $30.2 billion for the budget years FY 1972 to FY 1976.[19]

[19] The best political history of General Revenue Sharing is found in S. Beer, "The Adoption of General Revenue Sharing: A Case Study in Public Sector Politics," *Public Policy*, 24, pp. 127-196.

Starting Date: Three alternative dates might be used: Date of proposal, August 8, 1969; date of passage, October 12, 1972; or date of initial funding, December 1972.

Anticipated Funding: The five-year funding authorization was set at $30.2 billion, with funding beginning in December 1972 as part of the FY73 appropriation of $6.636 billion.

Starting Date and Funding: We adopt the first date for funding of December 1972 as the "announcement date" and assign the level of first year funding of $6.636 billion to that starting date.

APPROACH 1: Q4, 1972: $6.636 billion.

APPROACH 2: Q4, 1972 to Q2, 1973: $6.636 billion.

APPROACH 3b: Q4, 1972 to Q2, 1974: $6.636 billion

Sources: Lawrence Brown, James Fossett, and Kenneth Palmer, *The Changing Politics of Federal Grants,* Brookings Institution, pp. 21 -27, and for funding, *The Statistical Abstract, 1976,* "Federal Aid to State and Local Governments: 1965 to 1976," p. 262.

Public Works Employment Act of 1976 (PWEA): The recession of 1973-75 had significant adverse effects on the revenues of state and local governments. With state income tax revenues, and to a lesser extent state sales tax revenues, tied to the previous year's economic performance, state and local governments faced significant potential revenue declines for their fiscal years 1976 and 1977. Congress responded by passing the Public Works Employment Act (PWEA) of 1976. PWEA was introduced as legislation on April 12, 1976 in the Senate and finally approved by both the House and Senate on June 23, 1976. Title I of PWEA specified funding for state and local government public works. Title II of PWEA specified additional funding within general revenue sharing as anti-recession fiscal assistance. President Gerald Ford vetoed the bill on July 6, 1976 but the veto was overridden by the Senate on July 21, 1976 and by the House on July 22, 1976 and became law on that date. Receipt of state aid was dependent on the national unemployment rate exceeding 6.5 percent for Title I and 6 percent for Title II, with states qualifying for Title II funding if their own unemployment rate exceeded 4.5 percent at the time of aid.

Starting Date: Four alternative starting dates for potential funding of Title II are the proposal date for the legislation: April 12, 1976; initial passage of the bill by both the House and Senate: June 23, 1976; the date of the successful override of President Ford's veto: July 22, 1976; and finally, the date of initial funding for Title II, which corresponded to the date of final approval. Title I funding is for capital projects. Funding did not appear on the federal ledger until Q2 1977, but

state and local governments applied and had access to those funds over the course of the fiscal year, Q3 1976 to Q2 1977.

Anticipated Funding: Authorization for Titles I and II of PWEA was $2.0 billion and $1.25 billion, respectively. All funds were allocated. Total allocation was $3.25 billion.

Starting Date and Funding: As a supplement to revenue sharing, Title II funding was available immediately upon final approval of the legislation. Title I funding was available with project approval though budgeted for Q3 1976.

APPROACH 1: Q3, 1976: $3.25 billion.

APPROACH 2: Q3, 1976 to Q2, 1977: $3.25 billion.

APPROACH 3a: Q3, 1976 to Q2, 1977: $3.25 billion.

Sources: Advisory Commission for Intergovernmental Relations, *Countercyclical Aid and Economic Stabilization*, Policy Report A-69, pp. 15-16 and General Accounting Office, *Review of Projects Funded Under the Local Public Works Program*, CED-78-140, August 4, 1978.

Economic Stimulus Appropriations Act of 1977 (ESAA): Soon after his election as President, Jimmy Carter introduced legislation to further assist state and local governments whose revenues were still recovering from the 1973-75 recession. On March 15, 1977, ESAA was approved by the House and on May 2, 1977 by the Senate. Final approval of a compromise bill occurred on May 5, 1977. ESAA was signed into legislation on May 13, 1977. The act allocated an additional $4 billion to PWEA, Title I for funding of state and local government capital spending.

Starting Date: Three alternative starting dates for potential funding of ESAA are date of introduction as legislation in the House: March 15, 1977; passage of the bill by both the House and Senate and then Presidential signing: May 13, 1977. Since funding rules and the grant application process were in place, there were no further delays to the payment of funds.

Anticipated Funding: Authorization was for $4 billion of funding, of which $3.7 had been allocated by March 1978. We assign all $4 billion in authorizations as the anticipated funding.

Starting Date and Funding: As a supplement to PWEA, Title I funding, we use as our announcement date May 13, 1977, and $4 billion as the level of funding.

APPROACH 1: Q2, 1977: $4 billion.

APPROACH 2: Q2, 1977: $4 billion.

APPROACH 3b: Q2, 1977 to Q2, 1978: $4 billion.

Source: Advisory Commission for Intergovernmental Relations, *Countercyclical Aid and Economic Stabilization*, Policy Report A-69, pp. 15-16.

Tax Reduction and Simplification Act of 1977, Title 6 (Intergovernmental Antirecession Act of 1977) (IARA): In parallel legislation to ESAA, IARA was designed to add $2.25 billion to the funding for general revenue sharing as a further supplement to Title II of PWEA. The bill was introduced in the House on February 16, 1977 and approved by the House and Senate on May 16, 1977. The bill was signed by the President on May 23, 1977.

> *Starting Date*: Three alternative starting dates for potential funding of ESAA are the date of introduction as legislation in the House: February 16, 1977; passage of the bill by both the House and Senate followed by Presidential signing: May 23, 1977.
>
> *Anticipated Funding*: Authorization was for $2.25 billion of funding.
>
> *Starting Date and Funding*: As a supplement to PWEA Title II funding, we use as our announcement date May 23, 1977, and $2.25 billion as the level of funding.

APPROACH 1: Q2, 1977: $2.25 billion.

APPROACH 2: Q2, 1977: $2.25 billion.

APPROACH 3b: Q2, 1977 to Q2, 1978: $2.25 billion.

Source: Advisory Commission for Intergovernmental Relations, *Countercyclical Aid and Economic Stabilization*, Policy Report A-69, pp. 15-16.

Re-authorization of Comprehensive Employment and Training Act of 1973 (CETA): The original CETA legislation was signed into law by President Nixon in 1973. It was one of the President's block grant initiatives designed to combine many existing grant programs to states, here for labor training and job placement, into a single larger program of comparable funding but with greater state discretion. There was no new money to states with the original passage of the CETA legislation. This was not the case with the re-authorization of the legislation on June 15, 1977. In response to the lingering adverse effects of the 1973-75 recession on state and local budgets, Congress approved and President Jimmy Carter signed legislation that extended CETA funding for one more year. The authorization was for $6.6 billion of new funding.

Starting Date: The starting date is the date of authorization of June 15, 1977.

Anticipated Funding: Authorization was for $6.6 billion of funding.

Starting Date and Funding: We use as our announcement date, June 15, 1977, and $6.6 billion as the level of funding.

APPROACH 1: Q2, 1977: $6.6 billion.

APPROACH 2: Q2, 1977: $6.6 billion.

APPROACH 3b: Q2, 1977 to Q2, 1978: $6.6 billion.

Source: Advisory Commission for Intergovernmental Relations, *Countercyclical Aid and Economic Stabilization*, Policy Report A-69, p. 17.

COMMENT: Since four new or re-authorized programs are all assigned announcements dates within Q2, 1977, in our empirical analysis of the effects of aid we will use the combined funding for this date:

APPROACH 1: Q2, 1977: $12.85 billion (= $4.0 b. + 2.25 b. + $6.6 b.)

APPROACH 2: Q2, 1977: $12.85 billion (= $4.0 b. + 2.25 b. + $6.6 b.)

APPROACH 3b: Q2, 1977 to Q2, 1978: $12.85 billion (= $4.0 b. + 2.25 b. + $6.6 b.)

Discontinuation of State and Local Fiscal Assistance Act (General Revenue Sharing): The election of President Ronald Reagan brought into question the value of General Revenue Sharing (GRS) for state and local governments. Republican control of the Senate gave Reagan a veto-proof position, which he used to cut the state portion of revenue-sharing money, keeping only funding for local governments. Reagan's first budget for FY 1982, proposed in February 1981, offered $40 billion in spending cuts, including the entire $2.283 billion previously paid to states as part of GRS. The budget was approved in September 1981 and funding was cut beginning October 1, 1981. The local government lobby was sufficiently strong that the local share of GRS was protected in the FY 1982 budget. The 1980 act renewing local funding did specify $1 billion for countercyclical aid for states if a trigger mechanism equal to two quarters of decline in real GDP occurred. The trigger mechanism was never implemented. We first specify the loss in state GRS funding.

Starting Date: Three alternative dates might be used: date of proposal, February 1981; date of passage, September 1981; or date of initial funding loss, October 1981.

Anticipated Funding: The $2.283 billion *loss* in state GRS funding was felt fully in FY 1982.

Starting Date and Funding: We adopt as the starting date the first date at which funding to the states was suspended: October 1, 1981. The loss in state GRS funding was $2.283 billion.

APPROACH 1: Q4, 1981: - $2.283 billion.

APPROACH 2: Q4, 1981 to Q2, 1982: - $2.283 billion.

APPROACH 3b: Q4, 1981 to Q2, 1983: - $2.283 billion.

The final renewal of GRS occurred as part of the budgeting process of 1983. That budget, passed in November 1983 specified three more years of local government GRS funding and then the end of local GRS funding beginning in FY 1987. The anticipated loss to local governments in that year was the annual budgeted level of funding for FY 1983-1986, equal to $4.567 billion. This loss could be fully anticipated as of November 1983.

Starting Date: Three alternative starting dates might be used: date of proposal, February 1983; date of passage, November 1983; or date of initial funding loss, October 1, 1986.

Anticipated Funding: The $4.567 billion *loss* in state GRS funding was felt fully in FY 1987.

Starting Date and Funding: We adopt November 1983 as the starting date for the loss in local government GRS funding of $4.567 billion to begin on October 1, 1986. Because of the certainty of cuts and the long lead time before funding is cut, we do allow for discounting. We discount the loss from October 1986 to November 1983 at the municipal bond interest rate for 1983 of 9.47 percent. The corresponding discount factor will be: $.762 = (1/1.0947)^3$.

APPROACH 1: Q4, 1983: - $3.481 billion = .762 x (-$4.567 billion).

APPROACH 2: Q4, 1983 to Q2, 1984: - $3.481 billion = .762 x (-$4.567 billion).

APPROACH 3b: Q4, 1983 to Q2, 1985: - $3.481 billion = .762 x (-$4.567 billion).

Sources: Lawrence Brown, James Fossett, and Kenneth Palmer, *The Changing Politics of Federal Grants,* Brookings Institution, pp. 100; Congressional Research Services, Library of Congress, “General Revenue Sharing: Background and Analysis,” May 23, 2003, pp. 15-17; and for funding, *The Statistical Abstract, 1987*, “Federal Aid to State and Local Governments: 1970

to 1987," p. 260, and Congressional Research Services, Library of Congress, "General Revenue Sharing: Background and Analysis," May 23, 2003, p. 17.

Emergency Jobs Act of 1983 (EJA): From July 1981 to November 1982 the U.S. economy experienced one of its worst economic recessions since World War II. National unemployment rates were at the highest levels in 40 years. In February 1983 Congress responded by introducing legislation to provide employment opportunities, primarily through funding to state and local governments**.** Legislation was approved by the House and Senate on March 24, 1983**,** and signed into law by President Reagan on March 24, 1983. Funding for state and local governments, primarily for infrastructure spending, began in the fall of 1983 as part of FY 1984. Funding in FY 1984 totaled $4.381 billion and funding in FY 1985 added an additional $4.487 billion. Total funding over the two fiscal years equaled $8.868 billion.

> *Starting Date*: Three alternative starting dates could be used for the program: the date of introduction of the legislation: February 1983; the date of final enactment: March 24, 1983; or the date of initial funding: October 1, 1983. We adopt the date of initial funding.
>
> *Anticipated Funding*: Federal support under EJA for state and local governments was allocated equally over two fiscal years. We use total funding, without allowance for discounting, as our measure of total federal support for the state/local sector under EJA: $8.868 billion.
>
> *Starting Date and Funding*: We adopt October 1, 1983 as the starting date, and funding is set equal to $4.381 billion accessible in the first fiscal year of the program and $4.381 accessible in the second fiscal year of the program.

YEAR 1: 1983-84

APPROACH 1: Q3, 1983: $4.381 billion.

APPROACH 2: Q3, 1983 to Q2, 1984: $4.381 billion.

APPROACH 3a: Q3, 1983 to Q2, 1984: $4.381 billion

YEAR 2: 1984-85

APPROACH 1: Q3, 1984: $4.487 billion.

APPROACH 2: Q3, 1984 to Q2, 1985: $4.487 billion.

APPROACH 3a: Q3, 1984 to Q2, 1985: $4.487 billion

Source: General Accounting Office, *Emergency Jobs Act of 1983: Funds Spent Slowly, Few Jobs Created*, December, 1986, GAO/HRD-87-1.

Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA): The central aims of PRWORA were to create improved incentives and opportunities for welfare recipients to find work, to give states greater latitude in their policies toward achieving this objective, and to transform federal funding from an entitlement (matching aid) program called Aid to Families with Dependent Children (AFDC) to a discretionary program funded by annual appropriations decided by Congress and paid as a fixed (lump-sum) grant to states. Ideas for this reform began in the winter of 1995 within the newly elected, more conservative House of Representatives led by Speaker Newt Gingrich. On March 24, 1995 the first version of PRWORA was passed by the House. The initial version of the legislation made significant cuts in federal support for state welfare spending, and the Senate resisted the legislation. A new bill based on Senate and House compromises was approved in January 1996 but was vetoed by President Clinton because of the large cuts in program support for children in poverty. With the presidential election of 1996 looming, President Clinton wanted to make good on his 1992 pledge to "to reform welfare as we know it." The Republican House also wanted reform. The states wanted more flexibility in spending federal money. The Senate was therefore eager for reform. A compromise bill was fashioned, passing the House on July 18, 1996 and the Senate on July 23. Reconciliation of the two bills occurred on August 22, 1996 and the final version was signed by President Clinton on the same day. A central component of the reform was to remove entitlement for welfare payments to the poor (and thus to the states that administered the programs) and to support states with a new block grant called Temporary Assistance for Needy Families (TANF). Funding began October 1, 1996 for FY 1997.

> *Starting Date*: Three alternative dates might be used: date of initial House proposal, March 24, 1995; date of passage, August 22, 1996; or date of initial funding, October 1, 1996. However, the first full year of TANF support began on October 1, 1997 for FY 1998. We adopt October 1, 1997 as our starting date.
>
> *Anticipated Funding*: PRWORA funding substituted a lump-sum grant (TANF) for a matching aid grant (AFDC) beginning FY 1997. Nominal TANF funding in that year was $9.726 billion. Full TANF funding began on October 1, 1997 for FY 1998. Funding in that year was $13.284 billion. AFDC funding was reduced at the same time from $14.499 billion in FY 1996 (the last year of the program) to zero since that date. For purposes of estimating the net gain in lump-sum funding to the states from this policy change, we subtract the level of AFDC funding in FY 1996 – viewed as an "as if lump-sum transfer" sufficient to sustain state welfare spending at the date – from the level of TANF funding received beginning FY 1997 and thereafter. The net effect is a small loss in overall federal assistance. Under these assumptions, the net level of real federal aid support for state welfare activities is estimated as -$4.992 billion in FY 1997, -$1.710 billion in FY 1998, -1.153 billion in FY1999, and $-.409 billion in FY2000. The

difference turns positive from FY 2001-03, but after that date (under reauthorization of TANF as part of the Deficit Reduction Act of 2005) it returns to being a net fiscal loss for the states.

Starting Date and Funding: We adopt October 1, 1997 as the "full funding" starting date for the substitution of TANF for AFDC financing of welfare funding. We assume that states anticipate the revenue loss to be the difference in the first full year of TANF funding: -$1.710 billion for FY 1998.[20]

APPROACH 1: Q3, 1997: - $1.710 billion.

APPROACH 2: Q3, 1997 to Q2, 1998: - $1.710 billion.

APPROACH 3a: Q3, 1997 to Q2, 1998: - $1.710 billion.

Sources: Michael Katz, *In the Shadow of the Poorhouse: A Social History of Welfare in America (Revised and Updated)*, pp. 326-331, and for funding, *The Statistical Abstract, 1999*, "Federal Aid to State and Local Governments: 1970 to 1999," p. 314, and U.S. Department of Health and Human Services, Administration for Children and Families, *TANF Financial Data Archives*, various years.

States' Master Settlement Agreement with U.S. Tobacco Companies: On November 23, 1998 46 states reached an agreement with the major U.S. tobacco companies to settle the states' lawsuits regarding expenditures the states had incurred under their Medicaid programs for tobacco-related illnesses. The four states not included in outside the Master Settlement Agreement (MSA) – Florida, Minnesota, Mississippi, and Texas – agreed to separate settlements with the tobacco companies in 1997 and 1998. The first suit was filed by Mississippi in the spring of 1996. In June 1997, the National Association of Attorneys General petitioned Congress for a global resolution. The first settlement was reached by Mississippi on June 20, 1997. The global MSA was signed by all parties on November 23, 1998. The agreements were to give the states a fixed lump-sum "grant" that the state could spend as it wished, although the hope by the health-care community was that a sizable portion of the aid would be spent on tobacco awareness programs and preventive health care. This has not proven to be the case.[21] Proceeds from the settlement have been allocated to general government functions or saved as contributions to the states' rainy day funds. Some states have chosen to borrow against future payments from the settlement for current expenditures. The total (nominal) payment over the 27 years of the agreement is set at $206 billion. Initial payments were made in calendar 1998 (FY

[20] An alternative expected funding loss to be assigned to Q3 1996 would be the loss in that first fiscal year FY 1997 of TANF funding equal to -$4.992 billion.

[21] See M. Singhal, "Special Interest Groups and Allocation of Public Funds," *Journal of Public Economics*, 92, 3-4, 2008, pp. 548-564, and the United States General Accounting Office, *Tobacco Settlement: States Use of the Master Settlement Agreement Payments*, June 2001, GAO-01-851.

1999) to the amount of $2.4 billion to the 46 MSA states and $1.708 billion to the four states outside the settlement. Calendar 1999 payments (FYs 1999 and 2000) were 0 to the 46 MSA states and $1.372 billion to the four non-MSA states. In calendar 2000 (FYs 2000 and 2001) the full schedule of payments began averaging $6.8 billion a year for the next 25 years to the 46 MSA states and $1.3 billion a year to the four non-MSA states. The full payment schedule to the states was known at the time of settlement. The present value of the total stream of payments discounted at the investment grade municipal bond rate of 5.12 percent in 1998 is $118.28 billion.

Starting Date: Three alternative starting dates might be used: The date of the first suit in March 1996, the date of the first agreement June 20, 1997, and the date of the final MSA on November 23, 1998.

Anticipated Funding: The full stream of funding was known to each state by the date of the MSA. After the two transition years – 1998 and 1999 – full payments of $7.86 billion were made in calendar year 2000, encompassing both FY 1999 and FY 2000. Since the full schedule of payments is known and legally binding, also relevant is the present value of the stream of all future payments equal to $118.28 billion.

Starting Date and Funding: We adopt FY 1999 as the starting date for the receipt of tobacco settlement funding. Because of the contractual, rather than political, nature of this outside assistance, we adopt the discounted present value of all current and future settlement payments of $118.28 billion.

APPROACH 1: Q4, 1998: $118.28 billion.

APPROACH 2: Q4, 1998 to Q2, 1999: $118.28 billion.

APPROACH 3b: Q4, 1998 to Q2, 2000: $118.28 billion.

Sources: *Tobacco Settlement: States' Use of Master Settlement Agreement Payments*, General Accounting Office, GAO-01-851, June, 2001; "Funds, by State, From Settlement Agreement Reached in November, 1998 by 46 State Attorneys General and the Tobacco Industry – An Opportunity for New Funds for Aging Programs," Center for Social Gerontology, Inc., Ann Arbor, Michigan.

No Child Left Behind Act of 2001 (NCLB): The Elementary and Secondary Education Act (ESEA) first passed in 1965 has been the staple of federal government support for K-12 education. The legislation and funding are typically renewed every five years. President George W. Bush undertook a major reform of this legislation, with additional funding, in the No Child Left Behind Act of 2001. The bill was first introduced in the House on March 22, 2001 and was passed by both the House and the Senate on June 6, 2001. Conference committee deliberations

continued through the fall, and the final version of the bill was approved by both chambers on December 18, 2001. The bill was signed into law by President Bush on January 1, 2002. The legislation added almost $1 billion for a new reading initiative and an additional $1 billion for instruction in math and reading for lower income students. This additional funding of $1.993 billion was incorporated into the FY 2003 budget, approved for October 1, 2002.

Starting Date: Three alternative starting dates might be used: date the legislation was first introduced in Congress (March 22, 2001), the date of final passage (December 18, 2001) since the President's signature was assured, or the date of budget approval (October 2002).

Anticipated Funding: The new anticipated funding was for the reading initiative and additional funding for lower income students totaling $1.993 billion in the first year of the new programs.

Starting Date and Funding: While passage of the legislation occurred on December 18, 2001, funding levels were not assured until the start of the FY 2003. This date is October 1, 2002. The new funding totaled $1.993 billion.

APPROACH 1: Q3, 2002: $1.993 billion.

APPROACH 2: Q3, 2002 to Q2, 2003: $1.993 billion.

APPROACH 3a: Q3, 2002 to Q2, 2003: $1.993 billion.

Source: Patrick McGuinn, *No Child Left Behind and the Transformation of Federal Education Policy, 1965-2005*, University Press of Kansas, 2006, Chapter 9.

Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRR): The Jobs Growth and Tax Relief Reconciliation Act of 2003 appropriated $5 billion for each of the federal fiscal years, 2003 and 2004, to be paid as fiscal assistance for lagging state revenues following the recession of 2001. State and local revenues from income taxation, and to a lesser extent sales taxation, are tied to the previous year's economic activity. As a consequence, state governments suffer a revenue decline for one or two years after a recession has ended. JGTRR was introduced into the House on February 27, 2003 and obtained final passage by the House and the Senate on May 23, 2003 as a way to help states cover their revenue shortfalls. President Bush signed the legislation on May 28, 2003. The first payments to states were made in June 2003 as part of FY 2003 totaling $5 billion. The second payments, again for $5 billion in total, were to be available on October 1, 2003 as part of FY 2004. Funds were distributed by a strict formula based on state population.

Starting Date: Three alternative starting dates for potential funding of JGTRR are the date of introduction as legislation in the House: February 27, 2003;

passage of the bill by both the House and Senate and signing by the President: May 28, 2003; or date of first appropriation of funding in FY 2003: June 2003.

Anticipated Funding: Total authorization was for $10 billion of funding to be paid over FYs 2003 and 2004.

Starting Date and Funding: We adopt as our announcement date the date of first funding, June 2003. Funding is specified as $10 billion on this date for a two-year period. No allowance is made for discounting.

APPROACH 1: Q2, 2003: $10 billion.

APPROACH 2: Q2, 2003: $10 billion.

APPROACH 3b: Q2, 2003 to Q2, 2004: $10 billion.

Source: General Accounting Office, *Federal Assistance: Temporary State Fiscal Relief*, 2004, GAO-04-736R, pp. 9-10.

American Recovery and Reinvestment Act of 2009 (ARRA): On January 26, 2009 President Obama proposed, and the House of Representatives introduced as legislation, an $787 billion economic stimulus bill to promote jobs and investment with the hope of moving the economy out of its deepest recession in 80 years. An important component of this legislation was $239.2 billion in federal aid to state and local governments. Assistance was for maintenance of state support of public education ($89.7 billion, called stability aid), additional funding for state Medicaid programs ($89.5 billion) and family assistance ($26.4 billion), and funding for a variety of state infrastructure projects, primarily transportation and public housing ($33.6 billion).[22] The money is intended to prevent state tax increases or significant cuts in state and local spending, particularly for public employee jobs. The legislation moved quickly through both the House and the Senate. The House passed the bill on January 28, 2009 and the Senate on February 10, 2009. ARRA was signed into law on February 17, 2009. Increases in Medicaid funding is to be done by a temporary increase in state matching rates for health care spending for eligible low-income residents. We assume that eligible residents are exogenously determined by existing state laws (assumed in place and not amended over the three years of additional funding) and the performance of the state's economy during the recession.[23] Finally, while the ARRA

[22] In addition to the $239.2 billion in state aid, the federal government also provided the states with $60.9 billion in extra assistance for the states' unemployment insurance funds. We have not included this funding in federal aid to state and local governments. In our empirical analysis of aid's effects on GDP, we count federal support for UI transfers as transfers by the federal government – through the states – directly to individuals. Since Congress had extended the benefits of the UI program beyond the usual weeks of eligibility, state funds were running deficits. The $60.9 billion allocated to states through ARRA was meant to cover this gap.

[23] See R.P. Inman, "States in Fiscal Distress," *Federal Reserve Bank of St. Louis: Regional Economic*

funding to states is program specific, the assistance may be assumed to be fully fungible once the money is received by the states.[24] Eighty-five percent of the funds are scheduled to be disbursed over three fiscal years, beginning in FY 2009.

> *Starting Date*: Three alternative starting dates might be used: the date of introduction of the legislature in the House: January 26, 2009; the date of final passage of the bill: February 10, 2009; or the date when funding was first disbursed to the states: April 2009.
>
> *Anticipated Funding*: The planned full stream of funding was known to each state by the date of final passage. Disbursement was to be sequenced over the three fiscal years, FY 2009 - 2011, as $57.4 billion in FY 2009, $114.4 billion in FY 2010, and $67.4 billion in FY 2011.
>
> *Starting Date and Funding*: We adopt the date of initial funding for ARRA as our starting date and use funding levels paid under the transfer programs (Medicaid, family assistance, and stability aid) during 2009, Quarter 2 as the initial funding shock for ARRA. Project aid for highway spending and public housing required federal approval of proposed projects. The initial date of funding for this assistance was assigned to 2010, Quarter 1.

General Aid for Medicaid and Stability Aid

APPROACH 1: Q2, 2009: $37.03 billion.

APPROACH 2: Q2, 2009: $37.03 billion

APPROACH 3b: Q2, 2009 to Q2, 2010: $37.03 billion
Project Aid for Transportation and Public Housing:

APPROACH 1: Q1, 2010: $18.753 billion.

APPROACH 2: Q1, 2010 to Q2, 2010: $18.753 billion.

Development, 6, 1, 2010.

[24] A point stressed to state budget officials by Federal Funds Information for States (FFIS) in their February 2009 State Policy Report (27, 3, p. 4) commenting on ARRA:

> The flexible portion of ARRA is most useful to states, as they can use it for balancing their state budgets. . . . FFIS estimates that these provisions will increase federal Medicaid grants to the states by more than $80 billion over 27 months, *freeing up significant state resources for other programs and activities* (Italics added).

We have assumed full fungibility in our treatment of ARRA assistance in our narrative analysis.

APPROACH 3b: Q1, 2010 to Q2, 2011: $18.753 billion.

COMMENT: An alternative specification could use the present value of all ARRA funding for all three fiscal years, discounted back to Q2 2009. Using the investment grade municipal interest rate of 4.16 percent in April 2009 would give a present value of proposed funding for FY 2009-2010 of $190.81 billion.

Sources: Congressional Research Service, *American Recovery and Reinvestment Act of 2009: Summary and Legislative History*, April 20, 2009, R40537, and for funding.

Table 1 provides a summary of the data from the narrative record under each of the three approaches for specifying unanticipated changes in federal aid to state and local governments. Table 1 shows the aggregation of all programs whose spending occurs in the same time period. All data are reported in billions of nominal dollars.

ADDENDUM: Is Federal Aid Expected in Downturns?

While the federal government has no formal obligation to assist state and local governments during economic downturns, Congress has often been responsive to the collective plea of the state/local sector for fiscal assistance, at least since the 1973-75 recession. Assistance has typically taken the form of supplemental funding for already existing federal programs that aid the sector. This was true following the recessions of 1973-75 (PWEA, ESSAA, and CETA funding), 1981-82 (EJA), 2001 (JGTRR), and most recently the recession of 2007-2009 (ARRA). The only recession that did not lead to federal assistance was the recession of 1990-91.

Such consistent congressional responses to the state/local sector's requests for assistance during or just after recessions raise the concern that this assistance might not be truly unexpected and therefore not exogenous. If governors were to anticipate federal assistance in a year following a national recession, what level of assistance might they expect based on this historical record? Prior to 1970, congressional decision-making was dominated by relatively strong political parties. Budgetary decisions were made by the chairmen of the Senate Finance Committee and the House Ways and Means Committee. Although there were four recessions from 1948 to 1970, none generated any federal assistance to state governments to help close state deficits. This "top-down" structure to fiscal policy changed with the congressional elections of 1974 and the declining importance of political parties as the basis for selecting and electing members to Congress. Members of Congress now run as independent political agents whose re-election prospects are no longer tied to performance against a party agenda but rather to an explicit ability to meet the needs of local constituents, including state political leaders.[25] After 1974, members pressed for the expansion of the key budgetary committees to ensure member influence over fiscal policy. While it was still possible to resist requests from a single state or local government for assistance (i.e., a "bailout"), as illustrated by the famous example of President Ford's denial of aid to New York City during its fiscal crisis of 1975, when all state and local governments ask for assistance, the congressional response may well be to oblige. The result has been the emergence of post-recession aid beginning with the recession of 1975. After 1975, therefore, governors might have come to expect some form of a federally funded "recession bailout." If so, then unexpected aid – the narrative "shock" – should be the deviation in recession assistance from an expected level of funding.

Given the limited number of observations since the emergence of a locally biased Congress in 1974, there are three ways in which recession-based federal aid might be specified:

The first is to assume that such aid is perfectly anticipated. In this case, the four recession programs should be omitted from the list of narrative (exogenous) aid programs – that is, aid for the recessions of 1973-75 (PWEA, ESSAA, and CETA funding), 1981-82 (EJA), 2001

[25] For a political economy model of congressional budgeting that illustrates these points, both formally and empirically, see R. Inman and M. Fitts, "Political Institutions and Fiscal Policy: Evidence from the U.S. Historical Record," *Journal of Law, Economics, and Organization*, Supplemental Issues, December 1991.

(JGTRR), and 2007-2009 (ARRA).

A second strategy might assume that governors plan on assistance from the federal government equal to their expected annual state deficits at the trough of the recession. Estimates of expected deficits are available from the NASBO survey.[26] For the 1973-75 recession we do not have estimates of expected state deficits, however. Since this is the first fiscal year after the localization of congressional budgeting, it is reasonable to assume that governors had no reason (yet) to expect recession aid.[27] If so, then the recession-based assistance paid in Q2 1977 through PWEA, ESSAA, and CETA funding was fully unanticipated. For all subsequent recessions, unanticipated (narrative) federal aid is computed as the difference between aggregate recession aid for each recession and the aggregate level of anticipated state deficits for the year of the trough of the recession; see Table A-1 below.

TABLE A-1: Federal Aid Responding to Recession Years

RECESSION YEARS	CIVILIAN UE RATE (Trough) (1)	STATE DEFICITS (Nominal Dollars) (2)	FEDERAL AID (Nominal Dollars) (3)	UNANTICIPATED FEDERAL AID (Nominal Dollars) (4) = (3) – (2)
1973-1975	8.5%	-	$14.85 Billion	$14.85 Billion
1981-1982	9.7%	$.596 Billion	$8.68Billion	$8.084 Billion
1991	6.8%	$6.062 Billion	0	-$6.062 Billion
2001	5.5%	$9.809Billion	$10 Billion	$.0191 Billion
2007-2009	9.5%	$29.578Billion	$55.783 Billion	$26.205Billion

A third strategy might assume that only the first recession would involve unanticipated recession aid. This strategy would count the funding in Q2 1977 as unanticipated aid (= $14.85 billion) but all subsequent recession-related aid as fully anticipated.

Analyses might test for robustness of results using each of the three strategies for federal aid during economic downturns.

---

[26] Since state income and business taxation is based on the prior year's economic activities, state tax revenues typically lag the trough of the recession by one to two fiscal years. In each instance, state deficits are measured as the change in the states' overall general fund balance over the fiscal year. Fiscal years for each recession are recession year 1975 (data not available); FY 1982 for recession year 1982; FY 1991, for recession year 1991; FY 2002, for recession year 2001; and FY 2009, for recession year 2009. Source: NASBO, *The Fiscal Survey of the States*, various years.

[27] A Tobit regression relating the levels of narrative aid per capita to lagged values of the national unemployment rate (UE) for the sample period 1948-1975 showed no statistically significant relationship between UE and levels of aid.

Table 1				
year	qtr	approach 1	approach 2	approach 3a or 3b
1947	1	0	0	0
1947	2	0	0	0
1947	3	0	0	0
1947	4	0	0	0
1948	1	0	0	0
1948	2	0	0	0
1948	3	0	0	0
1948	4	0	0	0
1949	1	0	0	0
1949	2	0	0	0
1949	3	0	0	0
1949	4	0	0	0
1950	1	0	0	0
1950	2	0	0	0
1950	3	0	0	0
1950	4	0	0	0
1951	1	0	0	0
1951	2	0	0	0
1951	3	0	0	0
1951	4	0	0	0
1952	1	0	0	0
1952	2	0	0	0
1952	3	0	0	0
1952	4	0	0	0
1953	1	0	0	0
1953	2	0	0	0
1953	3	0	0	0
1953	4	0	0	0
1954	1	0	0	0
1954	2	0	0	0
1954	3	0	0	0
1954	4	0	0	0
1955	1	0	0	0
1955	2	0	0	0
1955	3	0	0	0
1955	4	0	0	0
1956	1	0	0	0
1956	2	0	0	0
1956	3	0	0	0
1956	4	0	0	0
1957	1	0	0	0
1957	2	0	0	0
1957	3	1.518	1.518	1.518 (a)

Table 1: Continued				
1957	4	0	1.518	1.518 (a)
1958	1	0	1.518	1.518 (a)
1958	2	0	1.518	1.518 (a)
1958	3	0.41	0.041	0.041 (a)
1958	4	0	0.041	0.041 (a)
1959	1	0	0.041	0.041 (a)
1959	2	0	0.041	0.041 (a)
1959	3	0	0	0
1959	4	0	0	0
1960	1	0	0	0
1960	2	0	0	0
1960	3	0	0	0
1960	4	0	0	0
1961	1	0	0	0
1961	2	0	0	0
1961	3	0	0	0
1961	4	0	0	0
1962	1	0	0	0
1962	2	0	0	0
1962	3	0	0	0
1962	4	0	0	0
1963	1	0	0	0
1963	2	0	0	0
1963	3	0	0	0
1963	4	0	0	0
1964	1	0	0	0
1964	2	0	0	0
1964	3	0	0	0
1964	4	0	0	0
1965	1	0	0	0
1965	2	0	0	0
1965	3	1.4	1.4	1.4 (a)
1965	4	0	1.4	1.4 (a)
1966	1	0	1.4	1.4 (a)
1966	2	0	1.4	1.4 (a)
1966	3	0	0	0
1966	4	0	0	0
1967	1	0	0	0
1967	2	0	0	0
1967	3	1.805	1.805	1.805 (a)
1967	4	0	1.805	1.805 (a)
1968	1	0	1.805	1.805 (a)
1968	2	0	1.805	1.805-(a)
1968	3	0	0	0
1968	4	0	0	0

Table 1: Continued				
1969	1	0	0	0
1969	2	0	0	0
1969	3	0.579	0.579	0.579-(a)
1969	4	0	0.579	0.579-(a)
1970	1	0	0.579	0.579-(a)
1970	2	0	0.579	0.579-(a)
1970	3	1.5	1.5	1.5-(a)
1970	4	0	1.5	1.5-(a)
1971	1	0	1.5	1.5-(a)
1971	2	0	1.5	1.5-(a)
1971	3	0	0	0
1971	4	0	0	0
1972	1	0	0	0
1972	2	0	0	0
1972	3	0	0	0
1972	4	6.636	6.636	6.636-(b)
1973	1	0	6.636	6.636-(b)
1973	2	0	6.636	6.636-(b)
1973	3	0	0	6.636-(b)
1973	4	0	0	6.636-(b)
1974	1	0	0	6.636-(b)
1974	2	0	0	6.636-(b)
1974	3	0	0	0
1974	4	0	0	0
1975	1	0	0	0
1975	2	0	0	0
1975	3	0	0	0
1975	4	0	0	0
1976	1	0	0	0
1976	2	0	0	0
1976	3	3.25	3.25	3.25 (a)
1976	4	0	3.25	3.25 (a)
1977	1	0	3.25	3.25 (a)
1977	2	12.85	16.1	16.1 (a,b)
1977	3	0	0	12.85 (b)
1977	4	0	0	12.85 (b)
1978	1	0	0	12.85 (b)
1978	2	0	0	12.85 (b)
1978	3	0	0	0
1978	4	0	0	0
1979	1	0	0	0
1979	2	0	0	0
1979	3	0	0	0
1979	4	0	0	0
1980	1	0	0	0

Table 1: Continued				
1980	2	0	0	0
1980	3	0	0	0
1980	4	0	0	0
1981	1	0	0	0
1981	2	0	0	0
1981	3	0	0	0
1981	4	-2.283	-2.283	-2.283 (b)
1982	1	0	-2.283	2.283 (b)
1982	2	0	-2.283	2.283 (b)
1982	3	0	0	2.283 (b)
1982	4	0	0	2.283 (b)
1983	1	0	0	2.283 (b)
1983	2	0	0	2.283 (b)
1983	3	4.381	4.381	4.381 (a)
1983	4	-3.481	0.90	0.90 (a)
1984	1	0	0.90	0.90 (a)
1984	2	0	0.901	0.90 (a)
1984	3	4.487	4.487	1.006 (a,b)
1984	4	0	4.487	1.006 (a,b)
1985	1	0	4.487	1.006 (a,b)
1985	2	0	4.487	1.006 (a,b)
1985	3	0	0	0
1985	4	0	0	0
1986	1	0	0	0
1986	2	0	0	0
1986	3	0	0	0
1986	4	0	0	0
1987	1	0	0	0
1987	2	0	0	0
1987	3	0	0	0
1987	4	0	0	0
1988	1	0	0	0
1988	2	0	0	0
1988	3	0	0	0
1988	4	0	0	0
1989	1	0	0	0
1989	2	0	0	0
1989	3	0	0	0
1989	4	0	0	0
1990	1	0	0	0
1990	2	0	0	0
1990	3	0	0	0
1990	4	0	0	0
1991	1	0	0	0
1991	2	0	0	0

Table 1: Continued				
1991	3	0	0	0
1991	4	0	0	0
1992	1	0	0	0
1992	2	0	0	0
1992	3	0	0	0
1992	4	0	0	0
1993	1	0	0	0
1993	2	0	0	0
1993	3	0	0	0
1993	4	0	0	0
1994	1	0	0	0
1994	2	0	0	0
1994	3	0	0	0
1994	4	0	0	0
1995	1	0	0	0
1995	2	0	0	0
1995	3	0	0	0
1995	4	0	0	0
1996	1	0	0	0
1996	2	0	0	0
1996	3	0	0	0
1996	4	0	0	0
1997	1	0	0	0
1997	2	0	0	0
1997	3	-1.71	-1.71	-1.71 (a)
1997	4	0	-1.71	-1.71 (a)
1998	1	0	-1.71	-1.71 (a)
1998	2	0	-1.71	-1.71 (a)
1998	3	0	0	0
1998	4	118.28	118.28	118.28 (b)
1999	1	0	118.28	118.28 (b)
1999	2	0	118.28	118.28 (b)
1999	3	0	0	118.28 (b)
1999	4	0	0	118.28 (b)
2000	1	0	0	118.28 (b)
2000	2	0	0	118.28 (b)
2000	3	0	0	0
2000	4	0	0	0
2001	1	0	0	0
2001	2	0	0	0
2001	3	0	0	0
2001	4	0	0	0
2002	1	0	0	0
2002	2	0	0	0
2002	3	1.993	1,993	1.993 (a)

Table 1: Continued				
2002	4	0	1.993	1.993 (a)
2003	1	0	1.993	1.993 (a)
2003	2	10	11.993	11.993 (a,b)
2003	3	0	0	10 (b)
2003	4	0	0	10 (b)
2004	1	0	0	10 (b)
2004	2	0	0	10 (b)
2004	3	0	0	0
2004	4	0	0	0
2005	1	0	0	0
2005	2	0	0	0
2005	3	0	0	0
2005	4	0	0	0
2006	1	0	0	0
2006	2	0	0	0
2006	3	0	0	0
2006	4	0	0	0
2007	1	0	0	0
2007	2	0	0	0
2007	3	0	0	0
2007	4	0	0	0
2008	1	0	0	0
2008	2	0	0	0
2008	3	0	0	0
2008	4	0	0	0
2009	1	0	0	0
2009	2	37.03	37.03	37.03 (b)
2009	3	0	0	37.03 (b)
2009	4	0	0	37.03 (b)
2010	1	18.753	18.753	55.783 (b)
2010	2	0	18.753	55.783 (b)
2010	3	0	0	18.753 (b)
2010	4	0	0	18.753 (b)
2011	1	0	0	18.753 (b)
2011	2	0	0	18.753 (b)