

TRACING FEDERAL DOLLARS: EVIDENCE AND
ISSUES SURROUNDING THE REGIONAL DISTRIBUTION
OF EXPENDITURES AND REVENUES

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SUMMARY

Considerable interest has been focused recently on the regional distribution of federal expenditures and revenues. Studies in both popular and academic journals have attempted to trace federal spending patterns across regions **and--in** some **cases--have** compared federal expenditures made in a region to federal revenues drawn from the area. All such studies suffer, however, from inherent limitations.

FINDINGS OF STUDIES THAT TRACE EXPENDITURES AND REVENUES

Studies that examine the geographic allocation of federal fiscal activity vary in the data sources used, the proportion of federal spending and taxing traced, and the time periods **examined.**

Regional Spending Patterns

Although studies that trace the regional allocation of federal expenditures vary **considerably**, several findings emerge across studies. First, regardless of the expenditure groupings or **time** periods examined, per-capita spending in the Far West is always reported above the national average, while spending

in the Great Lakes region consistently falls **below** the national **average.**¹

Second, when expenditures per dollar of personal income are observed, slightly **different patterns** emerge. The South is found to rank consistently first in spending per dollar of personal income; the West **also** is recorded above the national **average.** **The Great Lakes** region continues to lag in expenditures per dollar of personal income.

Third, while **most** expenditure groups **display** some **per-capita** differences across regions, defense **contracts--which** are concentrated in **the West** and **South--are reported** to vary widely between regions. As much as 50 percent of Defense Department contracting **is** estimated to be **subcontracted,** however, and the geographic distribution of **subcontractors** may or may not reflect the distribution of prime contractors. **Per-capita** direct loans for housing and housing **loan** guarantees are also **skewed--being** heavily allocated in the West and **South--and** reflect the patterns of population growth and migration.

1. Some regional classifications vary slightly **from** study to study. The Appendix contains a list of states included within regions.

Regional Spending and Taxing Patterns

Few studies have attempted to compare **regional** expenditure patterns to regional revenue collection patterns. The major **finding** of such studies is that over time the ratios of federal expenditures to revenues have become more similar across regions. A study by the **General** Accounting Office (GAO), which **compared grants-in-aid** distributed in a region to the personal income taxes collected **there**, found for **1969** that the ratio of grants to taxes **ranged** from 0.68 to 2.02, with only five out of nine regions **falling** within 25 percent of an equal balance. For 1975, the **ratios** were reported to **range** from **0.78** to 1.43, with eight out of nine regions falling between 0.75 and 1.25. Similarly, a forthcoming study by the Advisory **Commission** on Intergovernmental Relations (ACIR) finds that the ratio of all federal expenditures to all revenues ranged from 0.75 to 1.51 in 1952; the range declined to 0.74 to **1.14** by the 1974-76 period. The **ACIR** study attributed this convergence **primarily** to the growing equality of **per-capita** income among regions.

LIMITATIONS OF STUDIES OF **FEDERAL** EXPENDITURES AND REVENUES

The usefulness of **studies** that trace the regional allocation of federal expenditures and revenues is limited in at least three ways. First, the data available to apportion federal expenditures and revenues among regions at best only approximate the true distribution. Second, even if data accurately described **the** origin and destination of federal

funds, the **impact of** federal spending and taxing varies widely both between and within regions. **Finally,** such studies ignore the policy context in which federal expenditures and revenue collections are made.

Data used to track federal expenditures and revenues have several **shortcomings.** **Numerous assumptions** must be made to assign federal dollars to geographic places; while some of these assumptions probably produce fairly accurate **descriptions,** **others** are questionable. Available data do **not** consistently classify **similar** activities from year to year; in some cases, **programs** are inconsistently aggregated even within one year. Finally, data sources **that** trace the same types **of** federal fiscal behavior often disagree on the amounts of such activity.

Even if data could accurately identify the regional **allocation of** federal dollars, **the** impact of expenditures and revenues undoubtedly varies by program **and** by region. A dollar of welfare spending in a region probably has **a** different effect than a dollar **of** capital improvements in that region. The effects of any **single** program may **also** vary across regions; for example, capital spending in a region will produce different impacts depending on the structure of the **area's** economy. Similarly, the impact of federal taxing probably varies across tax types and **regions;** for **example,** a dollar of income tax

collected in one region may reduce savings while a dollar taxed **elsewhere** may **affect** consumption.

Finally, studies that examine only the **per-capita** or **per-income distribution** of federal expenditures and revenues across regions implicitly assume that these are appropriate criteria for **judging** federal fiscal activity. But federal expenditures and revenue collections are designed to further policy and program objectives, **and** such objectives may not necessarily be reflected in equal **per-capita** spending and taxing.

CHAPTER I. INTRODUCTION

Interest in the geographic origin and destination of federal dollars has recently been spurred by a number of **studies--reported** in both the popular and academic **press--that** have attempted to document regional patterns of federal taxing and spending behavior. Studies that trace the geographic patterns of federal taxing and spending have several inherent shortcomings. First, the data available to identify the geographic location of expenditures and revenues at best only approximate the actual sources and destinations of federal funds. Second, the effects of federal spending and taxing between and within regions of the country vary considerably across activities; even if data could accurately identify the origin and destination of dollars, determining the impact of such activity would be nearly impossible. Finally, examining where all federal dollars in the aggregate come from and go to ignores the specific policy goals that individual spending and taxing activities are designed to serve.

This paper summarizes the available evidence on the geographic distribution of federal expenditures and revenues and discusses the strengths and limitations that underlie this evidence. Chapter II describes the data sources available to

track federal expenditures and the findings of **studies** that have attempted to do so. Chapter **III** adds the conclusions of **studies** that have attempted to compare the origin of federal revenues **and the** destination of federal expenditures. Chapter IV discusses **some** of the problems inherent in all studies that attempt to track federal expenditures or revenues and their limitations **in** evaluating federal **fiscal** activity.

CHAPTER II. REGIONAL PATTERNS OF FEDERAL EXPENDITURES

Several recent studies have attempted to document the regional distribution of federal expenditures. The studies vary in the type of federal expenditures that they monitor, in the time period and geographic units of analysis selected, and in the **conclusions** that they reach. **The findings** of all such studies are limited, **however**, by **the** quality of **available** data, which only approximate **the** actual geographic distribution of federal **expenditures**.

This chapter first **examines** the **data** sources available to track federal expenditures and discusses their **inherent** limitations. **Then** presented are the findings **of studies** that examine the regional patterns of federal **expenditures**.

LIMITATIONS OF DATA THAT TRACE FEDERAL EXPENDITURES

Several agencies within the federal **government** monitor the geographic **distribution** of federal **expenditures**. Some of these **monitoring** programs **track** only expenditures made by one **agency**, such **as** the Financial Assistance by Geographic Area series maintained by the Department of Health, Education and Welfare.

Others track **expenditures** across the entire federal government and **document** virtually all federal spending. The two sources most commonly used to trace federal expenditures are: the Geographic **Distribution** of Federal Funds (formerly **called** Federal Outlays) developed by the Community Services Administration (CSA), and Federal Aid to **States** (PATS) produced by the Department of **the** Treasury.

Although the CSA data base is the most comprehensive source available **to** trace **expenditures--documenting** the location of **virtually** all federal expenditures by state, county, and city over **25,000--the** data have several limitations. Possibly the most **serious** of these **weaknesses** are **the assumptions** made in many cases to apportion federal expenditures by place. In 1975, agency records could trace to the county level less than one-fourth of total expenditures **reported** by CSA. More than 20 different procedures were used to apportion **the** remaining 75 percent of federal **expenditures**. These procedures range from allocating funds on **a per-capita** basis, to assigning them to the state capital, to tracing them to a prime contractor. Although many of these assumptions probably yield fairly accurate results, the Congressional Budget Office (CBO) has estimated that the reporting methodology for 31 percent of all federal

spending is **open** to serious **question**.¹ The Defense **Department** alone **estimates** that although CSA assigned \$60 billion of contract work to the place of prime contract, as much as 50 percent of that total was subsequently **subcontracted**.² In large part because of this **problem**, defense spending comprised 40 percent of the unreliable data identified by CBO.

A second shortcoming of CSA **data** is that the basis for reporting **expenditures varies** across programs. Most agencies report their **obligations**, which in the **federal** accounting system mean **funds** legally set aside to be spent. **However**, because obligations in any one year may **result** in spending over a period of **several following years**, the **CSA** data may not accurately reflect actual federal spending in any one year. Further, not all agencies report obligations; some use expenditures, costs, or appropriations as their reporting basis. **This means** that the

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1. The Congressional Budget Office, Troubled Local Economies and the Distribution of Federal Dollars, 1977, p. 53.
 2. Cited in I.M. Labovitz, Federal Expenditures and Revenues in Regions and States 1952-1976, forthcoming publication of the Advisory Commission on Intergovernmental Relations, August 1979 draft, pp. 105-106. Original source is Roger F. Riefler, "Regional and Industrial Impact of Defense **Contracts**" (unpublished paper for Western Economic Association, Boulder, Colorado, August 24, 1967).

annual expenditures reported by CSA represent a composite of federal activity.³

Finally, CSA classifies federal spending as "grant **funds**," "other funds," and "indirect **support**," but these categories may be inconsistently used within and between years. Grants are meant to include all project and formula awards made by the federal **government** and other funds to cover contracts and direct loans. Indirect support is meant to include the market value of donated property and **commodities**, the face **value** or contingent liabilities for guaranteed and **insured loans**, and interest on the public debt. Agencies, when reporting to CSA, are required to classify all their **expenditures**, but various agencies may treat similar types of spending differently. Further, the **programs included** in the major **classifications vary** from year to year, limiting the usefulness of the CSA **data** for comparing spending patterns over time.

The **Treasury data (FATS)**, in contrast to the CSA data, records only grants-in-aid expenditures of **the** federal government. **Payments that are classified as grants** include direct

3. This report refers to CSA data as "**expenditures**," which include records of costs, **appropriations**, obligations, and outlays. CSA does not explain in all cases how these **categories** vary from one another.

cash grants to state and **local** governments to assist in the provision of **services** and the **federal** share of individual-assistance programs administered by state and local governments. **Treasury** compiles these data from records of checks issued by **federal** agencies, so only actual outlays are counted. **Treasury** **groups** these expenditures into more than 90 program clusters and **reports** the distribution of **each** category by state. In 1978, the **most** recent year for which FATS data are available, grants-in-aid totaled \$77.9 **billion**, or 17 percent of total federal **outlays**.

If two studies **were** to **use** the CSA and FATS data to examine the distribution of federal **grants-in-aid--the only type of spending** common to **both--they** would likely arrive at differing conclusions because of differences in the data sources alone. In fiscal year 1977, **estimates** of grants-in-aid calculated from **CSA** put the national total of such payments at \$91.4 billion while the total **reported** in FATS was **\$66.1 billion**.⁴ Although **the** totals reported in FATS and CSA varied greatly, the percentage of **total** grants-in-aid allocated to each region was fairly **constant between** the two sources.

4. Thomas J. Anton, Jerry P. **Cawley**, and Kevin L. Kramer, Who **Knows** Where the Money Goes; A Comparison of Data Sources for Monitoring Federal Expenditure (The University of Michigan, Ph.D. Program in Urban and Regional Planning, 1979) Table 1.

PRINCIPAL FINDINGS OF RECENT STUDIES

Several recent **studies** have attempted to measure the regional distribution of federal **expenditures**.⁵ These studies differ in the data sources employed, the proportion of all outlays and federal **economic** activities considered, the definition of regions, and the years covered. **All of** these differences create serious problems when comparing findings.

The principal **recently-completed** and forthcoming **studies**--summarized in **Table 1**--include the following:

- o The Regional Distribution of Federal Grants-in-Aid, a 1977 Academy for Contemporary Problems study by Charles **Vehorn** using Federal Aid to States data to **examine** the distribution of grants-in-aid to state and local governments in fiscal years 1970 and 1975.
- o Changing Patterns of Federal Aid to State and Local Governments: 1969-1975, a General Accounting Office study employing the FATS data and examining grants-in-aid in fiscal years 1969 and 1975. In addition, this **study** analyzed regional differences in the balance between expenditures and **revenues**.⁶
- o Federal Spending in States and Regions: Patterns of Stability and Change, a 1979 paper by Thomas Anton, Jerry Cawley, and Kevin Kramer of the University of Michigan. This **study** used **CSA** data to examine the distribution of most **non-defense** direct federal spending, direct loans, and loan **guarantees** in fiscal years 1975 and 1978.

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5. Some **studies** have reported results by state. Data for tracing federal **expenditures--and revenues--become** less **reliable**, however, when smaller geographic units are examined, **and so this paper presents** only regional **aggregations**.
 6. All findings describing the regional distribution of revenue collections are discussed in Chapter III.

TABLE 1. CHARACTERISTICS OF SELECTED STUDIES OF THE REGIONAL DISTRIBUTION OF FEDERAL EXPENDITURES AND REVENUES

Study	Fiscal Years Covered	Expenditures Included	Revenues Included	Data Sources
Vehorn	1970 and 1975	Grants-in-aid	----	Federal Aid to States (FATS)
General Accounting Office	1969 and 1975	Grants-in-aid	Personal Income Tax Collections	FATS, Internal Revenue Service
University of Michigan	1975 and 1978	All except Defense outlays, interest payments on the public debt, and "non-domestic-influence" expenditures. Direct loans and loan guarantees included and separately identified.	----	Community Services Administration (CSA)
Department of Agriculture	1976	All except interest payments on public debt, civil service retirement and disability payments, and "non-domestic-policy-oriented" expenditures. Direct loans and the volume of loan guarantees included in aggregate figures but not separately identified.	----	CSA
<u>National Journal</u>	1975	All except interest payments on public debt.	All	CSA, Tax Foundation

(continued)

TABLE 1. CHARACTERISTICS OF SELECTED STUDIES OF THE REGIONAL DISTRIBUTION OF FEDERAL EXPENDITURES AND REVENUES

Study	Fiscal Years Covered	Expenditures Included	Revenues Included	Data Sources
Advisory Commission on Intergovernmental Relations	Five periods between 1952 and 1976	All	All	Expenditures from BEA (Transfers to individual, civilian and military payroll, interest payments on public debt), FATS (grants-in-aid), Defense Department (contract awards). Revenues from Internal Revenue Service and agency records , distributed using various incidence assumptions.
Congressional Budget Office	1975	All except loan guarantees and surplus-commodity-distributions . Analysis repeated excluding CSA data considered questionable .	----	CSA

- o Federal Outlays in Fiscal 1976: A Comparison of Metropolitan and Nonmetropolitan Areas, a Department of Agriculture report using CSA data and examining a still-wider range of expenditures and federal credit activities.
- o "Federal Spending: The North's Loss is the Sunbelt's Gain," by staff of The National Journal. This study employed CSA data to track nearly all fiscal year 1975 expenditures. The report also examined the regional distribution of revenue collections.
- o Federal Expenditures and Revenues in Regions and States, 1952-1976, a forthcoming Advisory Commission on Intergovernmental Relations study by I.M. Labovitz, employing a variety of data sources to measure the distribution of virtually all federal expenditures and revenues during five periods between fiscal years 1952 and 1976.
- o Troubled Local Economies and the Distribution of Federal Dollars, a Congressional Budget Office study using 1975 CSA data to examine the distribution of most federal expenditures across regions and between jurisdictions with differing rates of growth and levels of personal income.

Vehorn and GAO Studies

The studies by Charles Vehorn⁷ and the General Accounting Office (GAO)⁸ are the most limited in scope of recent analyses of the regional distribution of federal expenditures. Both consider only grant-in-aid payments to state and local

7. Charles Vehorn, The Regional Distribution of Federal Grants-in-Aid (Columbus, Ohio: Academy for Contemporary Problems) 1977.
8. The General Accounting Office, Changing Patterns of Federal Aid to State and Local Governments; 1969-75, 1977.

governments, using FATS data to examine changing expenditure **patterns** during the **1970s**. Because of the similarity in the data used and the **time** periods covered, the two reports reach **similar** conclusions.

The Vehorn and GAO studies both **reported** that **average** per-capita **grants-in-aid** among regions varied **across** a fairly narrow range in 1975. On a per-capita basis, Vehorn found grant-in-aid **expenditures** in the four principal Census regions ranging from **15 percent** below the national average to 12 percent above (see Table 2). The **range** among nine smaller **regions**, as reported by GAO, was from 16 percent above the national per **capita average** to 16 **percent** below (see Table 3). The pattern **differs**, however, when viewed in terms of federal **grant-in-aid** dollars received **per** dollar of personal income. Vehorn found **that--while** only the Northeast and West received per-capita grants above the national **average--the** South led in grants per dollar of income and the **Northeast** and West were also above **average**.

The Vehorn and GAO **studies** both report differing **distributional** patterns for different types of **grants-in-aid**. The largest single class of expenditures **identified--public**

TABLE 2. REGIONAL DISTRIBUTION OF FEDERAL GRANTS-IN-AID TO STATE AND LOCAL GOVERNMENTS, PER-CAPITA AND PER \$1,000 OF PERSONAL INCOME AS REPORTED BY CHARLES VEHORN: FISCAL YEAR 1975, IN DOLLARS

Expenditure Measure by Region ^a	All	Selected Types of Grants-in-Aid ^c				
	Grants-in-Aid Examined ^b	Public Welfare	Revenue Sharing	Highways and Transportation	Education	Regional Development
Average Grants-in-Aid Per-Capita						
Northeast	260	116.18	32.00	23.49	21.66	19.79
North Central	198	76.85	26.67	23.27	17.93	11.66
South	220	75.35	27.86	26.94	23.53	13.89
West	246	85.91	29.34	34.77	23.22	10.50
U.S. Average	233	87.99	28.76	26.64	22.10	14.42
Average Grants-in-Aid Per \$1,000 in Personal Income						
Northeast	44	19.74	5.43	3.99	3.68	3.36
North Central	35	13.78	4.78	4.16	3.22	2.09
South	46	15.74	5.82	5.63	4.92	2.90
West	44	15.27	5.22	6.18	4.13	1.87
U.S. Average	43	16.28	5.32	4.93	4.09	2.67

SOURCE: Charles Vehorn, The Regional Distribution of Federal Grants-in-Aid. (Columbus, Ohio: Academy for Contemporary Problems, 1977).

- a. North Central region is labeled Midwest in Vehorn report but directly corresponds to the Census North Central regional designation and has, therefore, been **re-labeled** for purposes of comparability with other studies. See Appendix for **listing** of the states **included** within each region.
- b. Grants-in-aid data are derived from Treasury Federal Aid to States report.
- c. Public **welfare** grants include public assistance **payments** such as Aid to Families with Dependent Children. Regional Development grants include such programs as the Community Development Block Grant **program**. Separately identified spending categories do not **sum** to the total of **all** expenditures examined.

TABLE 3. PER-CAPITA REGIONAL DISTRIBUTION OF FEDERAL GRANTS-IN-AID TO STATE AND LOCAL GOVERNMENTS AS REPORTED BY THE GENERAL ACCOUNTING OFFICE, FISCAL YEARS 1969 AND 1975: IN DOLLARS

Region ^a	Average Grants-in-Aid Per Capita ^b		Percent Change 1969 - 1975
	Fiscal Year 1969	Fiscal Year 1975	
New England	100	246	146
Middle Atlantic	96	265	177
East North Central	75	192	156
West North Central	94	212	125
South Atlantic	92	222	141
East South Central	125	237	90
West South Central	106	206	94
Mountain	137	256	87
Pacific	114	243	113
U.S. Average	98	228	132

SOURCE: General Accounting Office, Changing Patterns of Federal Aid to State and Local Governments: 1969-75, 1977.

- a. See Appendix for **listing** of states included in each region.
- b. **Grants-in-Aid** data are derived from Treasury Federal Aid to States reports. Average **per-capita** dollar **amounts** for **fiscal year** 1975 are reported in the General Accounting Office study; figures for fiscal year 1969 are derived, based on **information** presented in the report.

assistance or public welfare **payments--was** also found to be distributed **most** unevenly, **with** average per-capita **payments**, as reported by the GAO, ranging **from** 40 percent below the national mean in the Mountain states to 48 percent above the national average in the Middle Atlantic region. Other expenditures found to vary widely among regions on a per-capita basis included highway and transportation **outlays--generally** favoring the West and, especially, the Mountain **states--and** regional development spending, which **was** heavily weighted **toward** the **Northeast**.

Both studies **report** that differences among regions diminished somewhat over the early 1970s. Vehorn found **that** during the **1970-1975** period, the range in per-capita **grant-in-aid receipts** among the **four** principal Census regions decreased **from** between 26 above the national average and 26 percent below to between 15 percent below and 12 percent above the national **mean**. **The** GAO reported **a** similar pattern among nine smaller regions, with the range narrowing from between 23 **percent below** and 40 percent above the national average to between 16 percent below and 16 percent above the national mean.

The University of Michigan Study

A recently completed **study** by a **team** of researchers at the University of **Michigan**⁹ used CSA data to examine the regional **distribution** of some 70 percent of all direct federal expenditures in fiscal years 1975 and 1978 as well as the distribution of direct loans and loan guarantees. Among direct **spending** programs, the study excluded only Defense Department **outlays**, interest on the **public debt**, and certain expenditures classified by the authors as "non-influence" (principally foreign payments). The inclusion of direct loans and loan guarantees as well as outlays moves this study **beyond** the scope of **most** other **efforts** but renders some of the aggregate **findings** difficult to interpret. **The** findings summarized **below**, therefore, **describe the** distribution of non-loan expenditures, direct **loans**, and loan guarantees separately.

The **University** of Michigan study reported that fiscal year 1978 per-capita non-defense **expenditures--exclusive** of direct **loans--ranged** from 12 percent below the national average in the East North Central and West South Central regions to **20** percent

9. **Thomas Anton, Jerry Cawley, Kevin Kramer, Federal Spending in States and Regions: Patterns of Stability and Change** (Ann Arbor, Michigan: **The University of Michigan**, Ph.D. Program in Urban and Regional Planning, 1979).

above the national average in the Mountain **states**--a slightly wider range than **reported for 1975** (see Table 4). Expenditures classified as direct payments to **individuals**--the largest single **category**--were found to be the most evenly distributed in both years. **Formula-allocated grants** and assistance payments were reported **as** more unevenly distributed and weighted **somewhat** toward the Northeast **and** West on a **per-capita** basis. Non-formula-allocated **grants** were found to be still **more** unevenly distributed, with fiscal year 1978 per-capita expenditures ranging from 20 percent less than the national **average** in the **West** South Central region to 46 percent greater than the **national average** in **New England** states. The residual category of "other assistance" was found **to** be the most unevenly distributed of all **domestic** non-loan expenditures **and** heavily **favoring Mountain** states on a **per-capita** basis in both years **examined**.

Direct loan expenditures were reported to have grown rapidly from 1975 to **1978** **and** to have been **very** unevenly distributed in both periods. **In 1975, direct loans** were **estimated** to **average** \$8 per person nationally; for 1978, the University of Michigan reported **a** national average of **\$45** per capita. As of fiscal year 1978, per-capita direct-loan expenditures ranged from less than one-fourth of the national **average** in the

TABLE 4. **PER-CAPITA** REGIONAL DISTRIBUTION OF SELECTED FEDERAL **EXPENDITURES** AND CREDIT ACTIVITIES AS REPORTED BY ANTON: FISCAL YEARS 1975 AND 1978, IN DOLLARS

Time Period Covered and Regions ^a	All Non-Loan Expenditures Examined ^b	Type of Non-Loan Expenditure ^c				Direct Loans	Guaranteed Loans
		Direct Payments	" Formula Grants	Project Grants	Other		
Fiscal Year 1975							
New England	997	433	238	84	242	5	62
Mid-Atlantic	1,060	470	244	78	268	3	53
East North Central	905	401	203	60	239	3	76
West North Central	993	478	206	56	252	10	149
South Atlantic	1,006	452	215	69	270	9	140
East South Central	1,040	448	246	53	193	11	130
West South Central	890	419	222	42	207	15	135
Mountain	1,171	416	272	73	410	12	217
Pacific	1,097	439	250	68	340	8	130
U.S. Average	1,004	439	228	65	272	8	110
Fiscal Year 1978;							
New England	1,438	761	324	143	210	18	102
Mid-Atlantic	1,475	798	333	105	240	11	102
East North Central	1,259	665	256	100	238	22	145
West North Central	1,396	814	250	84	248	217	323
South Atlantic	1,465	758	266	89	352	39	252
East South Central	1,524	723	305	92	405	49	250
West South Central	1,262	690	267	79	227	63	282
Mountain	1,720	728	329	111	553	59	541
Pacific	1,574	752	338	101	383	24	245
U.S. Average	1,430	740	293	98	298	45	217

(continued)

TABLE 4. Continued

SOURCE: **Thomas Anton, Jerry Cawley, Kevin Kramer, Federal Spending in States and Regions: Patterns of Stability and Change** (Ann Arbor, Michigan: The University of Michigan, Ph.D. Program in **Urban and Regional Planning**, 1979).

- a. See Appendix for listing of states included within each region.
- b. Study includes all expenditures except Defense Department **outlays**, interest payments on the public debt, and outlays identified as not domestic-policy oriented.
- c. Direct payments are funds paid to individuals, and non-governmental organizations, **including** social security, income assistance, medicare, and unemployment insurance payments. Formula grants are those funds distributed among **jurisdictions** in accordance with fixed allocation formulae and include **General** Revenue Sharing and **Medicaid**. Project grants include funds distributed to jurisdictions based on criteria **defined** in law but interpreted through the discretion of federal managers. Other domestic outlays include all expenditures included in the study but not separately classified; this category is dominated by salaries and expenses paid to federal employees.

Mid-Atlantic states to nearly five times the national average in **the** West North Central region. The more than five-fold reported increase in such expenditures between fiscal years 1975 and 1978 **and** the apparent inconsistencies in **CSA's** recording of loan transactions for any **one year**, however, render these results especially suspect.

The University of Michigan **study** also found loan guarantees to be very unevenly distributed. As of fiscal year 1978, the per-capita dollar volume of such guarantees was reported as ranging from less than one-half the national average in the New England and **Mid-Atlantic** states to two and one-half times the national average in the Mountain region. **This pattern--similar to the 1975 distribution--likely reflects** in large part the geographic distribution of federal home-loan insurance written, itself largely a function of the **rate** of new construction.

Department of Agriculture Study

A Department of Agriculture (USDA) **study**¹⁰ of fiscal year 1976 expenditures examined a somewhat larger proportion of all

10. U.S. Department of Agriculture, Federal Outlays in Fiscal 1976: A Comparison of Metropolitan and Non-Metropolitan Areas, 1978.

outlays and **considered** loan guarantees and other **non-expenditure items** included in **the CSA data** as well. **Among** direct expenditures, the **USDA** report excluded only interest payments on the public **debt**, civil service retirement and disability **benefits**, and certain expenditures judged not to be **domestic-policy** oriented. Because most of **the findings are** reported only for the **total of direct** outlays and **other** federal activities together, the results are particularly difficult to interpret.

The **USDA study** reported above-average levels of federal activity per-capita in the West and South and below-average levels **of activity** in the Northeast and North Central regions (see **Table 5**). Much of the interregional variation was attributed **to above-average** defense and space-related spending in the West **and** South—a pattern **that** likely reflects, in part, the location of prime defense contractors and that may or may not **mirror the** eventual distribution of payments through **subcontractors**. **Federal** housing-related activity was also found **to** be heavily concentrated in the **West** and South. Most of that activity, however, consisted of loan guarantees, and it is unlikely that the same uneven distribution would hold for direct housing-related **outlays** alone. Human resource development

TABLE 5. **PER-CAPITA** REGIONAL DISTRIBUTION OF SELECTED FEDERAL EXPENDITURES AND CREDIT ACTIVITIES AS REPORTED BY THE DEPARTMENT OF AGRICULTURE: FISCAL YEAR 1976, IN DOLLARS

Region, by Type of County ^a	All Federal Activities Examined ^b	Type of Activity ^c					
		Human Resource Development	Defense and Space	Community/ Industrial Development	Housing	Agriculture Natural Resources	Other
<u>Northeast</u>	1,323	813	302	131	41	9	27
Metropolitan Counties	1,350	820	324	131	40	7	29
Non-Metropolitan Counties	1,162	773	175	132	47	22	12
<u>North Central</u>	1,192	734	223	116	67	35	19
Metropolitan Counties	1,230	743	262	112	76	13	25
Non-Metropolitan Counties	1,111	714	140	124	47	81	5
<u>South</u>	1,599	771	463	163	104	51	46
Metropolitan Counties	1,777	787	584	167	132	35	72
Non-Metropolitan Counties	1,306	745	264	157	58	79	4
<u>West</u>	1,887	788	678	135	176	79	32
Metropolitan Counties	1,956	792	779	111	195	45	36
Non-Metropolitan Counties	1,624	773	293	227	103	210	18
U.S. Average	1,476	774	399	138	92	42	32

(continued)

TABLE 5. Continued

SOURCE: U.S. Department of Agriculture, Federal Outlays in Fiscal 1976: A Comparison of Metropolitan and Non-metropolitan Areas, 1978.

- a. See Appendix for a list of the states included within each region. Metropolitan counties are those that are part of Census Standard Metropolitan Statistical Areas; all other counties are classed as **non-metropolitan**.
- b. Federal activities examined include all direct expenditures **and** obligations identified in the CSA data except interest payments on the public debt, civil service retirement and disability payments, and certain other **outlays** classified as not **domestic-policy** oriented. Federal activities also include the dollar value of direct loans and the dollar value or contingent liability of loan guarantees.
- c. **Human** resource development activities include public assistance payments and health payments and services. Defense and space outlays include Defense contracts and Defense payroll. Community and industrial development activities include Economic Development Administration outlays, physical disaster loans, community action programs, **and** business and industrial development loans. Housing activities included **veterans'** guaranteed and insured loans, mortgage **insurance** for homes and rental **housing** assistance. Agriculture and natural resource activities include federal reclamation projects, commodity **loans** and forest protection and utilization.

activities--the largest single category **identified--were** found to vary least among regions on a per-capita basis.

Within each region, the average level of federal activity per-capita in metropolitan counties was found to exceed the level for **non-metropolitan** counties, **with** defense and space-related outlays accounting for **the** bulk of the intraregional differences.

National Journal Study

The National Journal studyll of **fiscal** year 1975 expenditures considered all **CSA** outlay data except interest payments on the federal debt. **Examining** that aggregate for eight geographic **areas, the National Journal** reported per-capita spending ranging from 25 percent below **the** national average in the Great Lakes states to 24 **percent** above the national average in the Pacific region (see Table 6). Per-capita spending in all other regions was found to be within 14 percent of the national **average.**

Among specific **types** of expenditures, payments to prime defense contractors **were** shown to **be** most unevenly distributed,

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11. "Federal Spending: The **North's** Loss is the **Sunbelt's** Gain," National Journal, vol. 8, no. 26 (July 26, 1976).

TABLE 6. **PER-CAPITA** REGIONAL DISTRIBUTION OF **SELECTED** FEDERAL EXPENDITURES AS REPORTED BY THE NATIONAL JOURNAL; FISCAL YEAR 1975, IN DOLLARS

Region ^a	All Federal Expenditures Examined ^b	Selected Expenditures ^c				
		Retirement Programs	Defense Contracts	Defense Salaries	Welfare Programs	Highway/Sewers
New England	1,470	402	382	70	118	48
Mid-Atlantic	1,325	403	175	55	143	36
Great Lakes	1,064	359	96	52	101	54
Great Plains	1,287	403	177	91	83	60
South Atlantic	1,454	426	161	228	102	57
South Central	1,327	368	168	161	124	46
Mountain	1,615	385	174	214	82	95
Pacific	1,745	398	382	209	132	57
U.S. Average	1,412	392	201	132	115	54

SOURCE: "Federal Spending: The North's Loss Is the Sunbelt's Gain," The National Journal, vol. 8, no. 26 (June 26, 1976).

- a. See Appendix for a list of the states included within each region.
- b. All direct federal expenditures identified in the **CSA** data base are **included** in the National Journal study except for interest payments on the public **debt**.
- c. Retirement programs include the Social Security trust fund. Welfare programs include **Medicaid** and Aid to Families With Dependent Children among other direct **assistance** programs. Separately identified categories do not **sum** to the total of all expenditures **examined**.

ranging from less than one-half the national average per capita in the Great Lakes region to 90 percent greater than the **national** average in the New England and Pacific states. **Per-capita** payments for defense salaries **were** also reported to vary widely, from **60 percent** below the national **average--again** in the Great Lakes **region--to more** than 70 percent above the national mean in the South Atlantic states. **Payments made** under federally-funded retirement programs **varied** least, with **per-capita expenditures** in **every** region within **9** percent of national average.

ACIR Study

A forthcoming Advisory **Commission** on Intergovernmental Relations (ACIR) report by I. M. Labovitz¹² examines the distribution of virtually all federal outlays **for** five periods between fiscal years **1952** and **1976**. **Expenditure** figures in the ACIR study are **derived** from several sources and only minimal reliance is placed on CSA data. State and local **grant-in-aid** figures are taken from FATS; payments **to individuals** are derived from the Survey of Current Business and from special tabulations completed by the **Bureau of Economic Analysis** (BEA); expenditures

12. I. M. Labovitz, Regional Growth: Flows of Federal Funds, 1952-1976, forthcoming report by the Advisory Commission on Intergovernmental Relations.

for defense contracts are based primarily on the Defense Department **report, Military Prime Contract Awards by Regions and States.** The **ACIR** study also includes interest payments on the **public debt**, allocating them among states on the basis of BEA tabulations. **The** scope of the forthcoming ACIR report exceeds that of all recently-completed studies, but the unique data **sources** and analytic techniques employed in apportioning **expenditures make its** results the least comparable with those of other **analyses.**

The ACIR study **concludes** that during the **1974-1976** period, per-capita federal expenditures were greatest in the Far West, New England, and Mideast **regions** and lowest in the Great Lakes and Plains regions (see **Table 7**). **Per-capita** federal expenditures are reported **as** consistently above the national average in the Far **West** and New England for the five periods between 1952 and 1976. **Per-capita** federal expenditures are found to exceed **the** national average for **all but** one period in the Rocky Mountain and Mideast regions. Consistently below-average per-capita expenditures are reported in the Great Lakes and Southeast **regions.**

The ACIR study reveals a somewhat different pattern in the regional distribution of federal expenditures per dollar of

TABLE 7. **PER-CAPITA** REGIONAL DISTRIBUTION OF FEDERAL EXPENDITURES **FOR** SELECTED PERIODS BETWEEN FISCAL YEARS 1952 AND 1976 AS REPORTED BY I.M. **LABOVITZ** (in **Dollars**)^a

Region ^b	Fiscal Years				
	1952	1959- 1961 ^c	1965- 1967 ^c	1969- 1971 ^c	1974- 1976 ^c
New England	443	564	654	968	1,514
Mideast	447	474	539	915	1,513
Great Lakes	413	358	412	631	1,082
Plains	426	403	610	774	1,281
Southeast	357	399	581	829	1,385
Southwest	460	472	658	961	1,390
Rocky Mountain	426	514	690	895	1,444
Far West ^d	563	622	831	1,103	1,675
U.S. Average	430	456	590	863	1,398

SOURCE: I.M. Labovitz, Regional Growth: Flows of Federal Funds, 1952-1976, forthcoming report by the Advisory Commission on Intergovernmental Relations.

- a. Federal expenditure estimates **include** all outlays and obligations including interest payments on the public debt. Several different procedures are used to allocate expenditures among **jurisdictions**, and **the** allocation procedures differ somewhat for the different periods of time **examined**.
- b. See **Appendix** for list of states included in each region.
- c. To account for differences in calendar and fiscal year data sources, Labovitz examined average expenditures over four calendar years.
- d. Because Alaska and Hawaii were not states in some periods, they are **omitted** from regional **totals**.

personal income. The areas found to have received the least amount of federal funds per dollar of personal income during the 1974-1976 period were the same ones that fared least well on a per-capita basis--the Great Lakes and Plains regions. However, the area reported as receiving the greatest amount of federal funds per dollar of personal income--the Southeast--was found to have received slightly below the average amount of funds on a per-capita basis (see Table 8). Four areas--the Southeast, Southwest, Rocky Mountain, and Far West regions--were found to have received consistently above-average amounts of federal funds per dollar of personal income over the five periods examined between 1952 and 1976. The Mideast and Great Lakes regions were reported as having received consistently less than the national average amount of funds per dollar of personal income.

The 1977 CBO Study

A recent study by the Congressional Budget Office (CBO)¹³ used 1975 CSA data to examine the distribution of federal expenditures among regions and between counties with different growth rates and levels of personal income. The CBO study traced all CSA expenditures except those made through surplus

13. The Congressional Budget Office, Troubled Local Economies and the Distribution of Federal Dollars, 1977.

TABLE 8. REGIONAL DISTRIBUTION OF **FEDERAL** EXPENDITURES PER **\$1,000** OF PERSONAL INCOME FOR SELECTED PERIODS BETWEEN FISCAL YEARS 1952 AND 1976 AS REPORTED BY **I.M. LABOVITZ** (in **Dollars**)^a

Region ^b	Fiscal Years				
	1952	1959- 1961 ^c	1965- 1967 ^c	1969- 1971 ^c	1974- 1976 ^c
New England	246	234	209	234	259
Midwest	230	187	167	212	245
Great Lakes	217	155	133	158	184
Plains	269	199	224	216	232
Southeast	304	254	265	270	285
Southwest	310	250	271	286	265
Rocky Mountain	256	250	263	265	270
Far West ^d	274	241	252	261	271
U.S. Total	254	210	206	227	247

SOURCE: **I.M. Labovitz, Regional Growth: Flows of Federal Funds, 1952-1976**, forthcoming report by the **Advisory Commission on Intergovernmental Relations***

- a. Federal **expenditure estimates include** all outlays and obligations including **interest payments** on the public **debt**. Several different procedures are used to **allocate** expenditures among **jurisdictions**, and the allocation procedures differ somewhat for the different **periods** of time **examined**.
- b. See **Appendix** for list of states **included in each** region.
- c. To account **for** differences in calendar and fiscal year data sources, Labovitz examined average expenditures over four calendar years.
- d. Because Alaska and Hawaii were not states in some periods, they are omitted from regional totals.

property distribution programs and guaranteed or insured loan programs, which were considered incompatible with other **types** of expenditures and obligations. Because **of** the questionable nature of **some** CSA data, the CBO study conducted its analysis with and without the less reliable CSA data.

The **CBO** report found that in 1975 per-capita federal expenditures **in** counties varied **little** between **regions** of the country; counties **in** the Plains **states** were reported to receive about 10 percent less **than** the **average per-capita** county payment, while **counties** in the West received above 8 percent of the U.S. per-capita average (see **Table 9**). The CBO study also examined spending patterns across counties of different economic **circumstance**, classifying counties **by the** growth **rates** and **income** levels. Spending in low-growth **counties--which** are concentrated in the **North--was** found to exceed spending in high-growth counties within each region. But federal expenditures were reported to **be less** targeted by income; **spending** in low-income **counties--which** are concentrated in the **South--was** estimated to fall **below** spending in high-income counties across **all** regions. When only the less **questionable** of **the** CSA data were considered, spending in low-growth counties still exceeded spending in high-growth counties but by a smaller

TABLE 9. AVERAGE PER CAPITA FEDERAL EXPENDITURES FOR COUNTIES IN DIFFERENT ECONOMIC **CIRCUMSTANCES** BY REGION AS REPORTED BY THE CONGRESSIONAL BUDGET OFFICE: FOR FISCAL YEAR 1975, IN **DOLLARS**^a

Type of Spending, by Region ^b	All Counties	County Growth Rate ^c		County Income Level ^d	
		Low	High	Low	High
Spending in all Federal Programs					
North	1,420	1,666	884	1,311	1,557
Plains States	1,338	1,606	1,309	1,085	1,476
South	1,606	2,165	1,307	997	2,244
Southwest	1,435	1,587	1,017	1,173	1,336
West	1,623	1,578	1,350	1,085	1,705
U.S. Average	1,494	1,665	1,259	1,059	1,665
Spending in Development Programs					
North	204	228	150	175	227
Plains States	270	318	277	232	291
South	268	355	205	182	367
Southwest	243	232	217	295	198
West	275	196	365	370	261
U.S. Average	240	230	237	216	256

SOURCE: Troubled Local Economies and the Distribution of Federal Dollars (Congressional Budget Office, GPO), 1977.

a. This study included all CSA expenditures except loan guarantee and **surplus** commodity distribution programs.

(continued)

TABLE 9. Continued

- b. The Appendix contains a list of the states included in each region.
- c. A **low-growth** county was one in which earnings increased by less than 39 percent, or **per-capita** income increased by less than 41 **percent**, or population decreased by **more** than 1 percent **from** 1969 to 1974, **placing** it in the bottom 40 percent of U.S. counties: A high-growth county was one in which per-capita income increased by at least 56 **percent**, **earnings** by at least 62 percent, and population by 6.5 percent **from** 1969 to 1974, placing it in the top 40 percent of counties.
- d. A **low-income** county was in the bottom 20 percent of U.S. counties. A high income county was in the top 20 percent of U.S. counties.

amount. Similarly, the spread between **spending** in high-income and **low-income** counties was **found** to be smaller when only the **more reliable** data were examined.

The CBO study also examined federal spending patterns in programs intended to develop the economic strength of a county. Per-capita **development** expenditures, in counties throughout the **country ranged from 15** percent below the national per-capita **average** in the North to 15 percent **above the** national average in the West. Development spending was higher in low-growth than in high-growth counties **in** all regions of the country except the **West**, where spending was nearly twice as high in high-growth counties as it **was** in low-growth **ones**. When classed by income **levels, low-income** counties in **the** North, Plains, **and** South received less per-capita than **high-income** counties, while **low-income counties** in **the** West and Southwest received more per-capita than **high-income** counties. As with federal expending in **general**, examining only the development spending for which CSA data could be considered reliable did not change the relative amounts **spent** in **counties--classed** by income or **growth--but** did **reduce the size** of the per-capita difference between high- and low-growth and high- and low-income counties.

Conclusion

Although these studies vary in the data sources **used**, the **types** of **federal** expenditures traced, and the time periods examined, some common findings emerge. First, **per-capita** expenditures in the West were consistently reported above the national average while spending in **the** North Central region was consistently reported below average. When studies use more disaggregated regional classifications, states in **the** Far West led and those in the Great Lakes region lagged the national **average**.

Second, when regional spending per dollar of income is examined, the Great Lakes region continued to fall **below** the national **average**, while the **South** was consistently recorded as receiving expenditures per **dollar** of income above the national average. The West was also **found** to receive expenditures above the national average but usually **trailed the** South in federal spending per dollar of income.

Third, **of** direct **expenditures**, defense spending **is** among the categories that vary most greatly among regions. Whether accurate reports of subcontracting would change these findings is uncertain. Direct **loans and** loan guarantees are also

unevenly **distributed**, in large part because of **housing finance** activities, **which** respond to **patterns** of population growth and migration.

CHAPTER **III.** REGIONAL PATTERNS IN THE BALANCE BETWEEN FEDERAL EXPENDITURES AND **REVENUES**

Moving a step beyond tracing the distribution of **federal** expenditures, some researchers **have** attempted to compare the pattern of regional **expenditures** to the pattern of federal **revenue** collections. **Such** studies ask whether the federal expenditures **made** in a region are less **than, equal,** or exceed federal revenues collected in that **region--that** is, whether the ratio of expenditures **to** revenues is less than, equal to, or greater than one.

Studies that **attempt** to trace the distribution of federal **revenues in** addition **to** expenditures **are** limited by all of the **constraints** plaguing **analyses** of expenditures alone as well as other data-availability and study-design problems. This chapter **discusses** the **data** and study-design limitations that are **inherent in** any effort to compare federal revenues to federal expenditures and presents the findings of three studies that have attempted to do so.

DATA SOURCES AND STUDY DESIGN ISSUES

Findings of studies that compare revenues and expenditures may be qualified both by the data used to document the movement of funds and by the design of **the** analyses.

Data Sources

Data requirements for such **studies** are enormous. Researchers attempt to account for the geographic **origin and** destination of the **entire** federal **budget--\$494** billion in outlays and \$466 billion in receipts for fiscal **year** 1979. As discussed in Chapter **II**, expenditure **data** sources vary in their coverage of **federal** spending activities **and--when** they **do** cover the **same components--often** disagree on the amount of federal spending.

Problems associated with tracing federal **revenues** to their origins arise **principally** in determining who **actually** pays each of several different types of taxes. Of total 1979 tax receipts, 47 percent came **from** personal income **taxes**, 30 percent from social insurance taxes, 14 **percent** from corporate **income** taxes, and 4 percent from excise taxes (see Table 10). The origin of at least 20 percent of all federal tax **revenue--particularly** corporation income and excise **taxes--is** disputed.

TABLE 10. FEDERAL GOVERNMENT TAX REVENUES BY ORIGIN, FISCAL YEAR 1979

•Tax Source	Volume (Dollars in Millions)	Percent of Total
Individual Income		
Taxes	217,841	47
Social Insurance Taxes	141,591	30
Corporation Income Taxes	65,677	14
Excise Taxes	18,745	4
Estate, Gift, and Customs	12,850	3
Miscellaneous	9,237	2
Total	465,940	100

SOURCE: The Budget of the United States, Fiscal Year 1981.

Several techniques are available for ascribing revenues to **sources** but **no** procedure seems fully satisfactory, **and** differing assumptions about tax incidence affect the conclusions of studies that attempt to identify federal revenue sources. For example, the Internal Revenue **Service** reports the geographic origin of corporate income **taxes--which** account for a large share of the debated **taxes--as** the location from **which** the tax payment was made, generally **the** corporate **headquarters**. But such tax payments often represent corporate **activities in** other parts of the country, **and** **the** full burden of such taxes has

varyingly argued to be borne by consumers, owners of corporate capital, owners of capital in general, or employees. The incidence of excise taxes is also uncertain. Some researchers **claim** that the **burden** falls on consumers of taxed products, while others argue that the tax is actually borne by those who produce **taxed products--the** employees and **the** owners of capital.

Structure of Studies

Studies that examine the balance between revenues and **expenditures** are also limited by the type of analysis they conduct, which usually matches one **year's** revenues to that **year's expenditures** for specific geographic **units**, such as regions or states. Whether federal **expenditures** should equal revenues on a national basis each year is hotly debated, and even less agreement **exists** on the appropriateness of such balance for smaller geographic units.

First, if federal **revenues** and **expenditures** are to balance on a geographic basis, it is not clear at which **level** such equilibrium **should** exist. Should the **flow** of **money** into a region match the revenues collected **there**? Should residents of a state expect their contribution to equal their receipts? If wealthy regions can expect federal expenditures to match their

federal payments, can wealthy individuals make similar demands? No simple means exists to translate **federal** taxing and spending policy into uniform **geographic boundaries**.

Second, even if agreement could be reached on a geographic **level** on which to focus, **difficulties** would **still exist** in determining an appropriate **time** frame. In general, **studies** match the **revenues** collected in one **year--or** at most four **years--to** expenditures **made** in the same period. But differences exist in **the timing of** at **least some** federal expenditures and **revenues**. For example, people may pay social security taxes for **years--contributing** to revenue **collections** from a **state--and** then may retire, thus increasing federal **expenditures**. Studies **that** match short-term **expenditures** and revenues cannot account for **these** long-run **patterns**.

PRINCIPAL FINDINGS OF REGENT STUDIES

The three major studies that attempt **to compare** federal expenditures and **revenues** vary both in **the** share of all expenditures and **revenues examined and** in the time frame considered. A study **completed by** the General Accounting Office (GAO), which tracked **patterns between** 1969 and **1975**, examined only the relationship between federal **grants-in-aid** and personal income tax collections. A second study, prepared by staff of

the National Journal, matched all **federal** expenditures except interest paid on the national debt to federal **tax** collections in 1975. The third **study**, forthcoming by **I.M. Labovitz** for the Advisory **Commission** on Intergovernmental Relations (**ACIR**), traces all **expenditures** and revenues over selected years from 1952 to 1976.

GAO Study

Examining Federal Aid to States data from Treasury and personal income tax **collections** from the Internal Revenue Service, **the GAO found that** from 1969 to 1975 **the** differences between **regions** diminished. In 1969, **grants-in-aid** received **were estimated to** vary from **75** to 125 percent of personal income taxes **paid in five** of nine **regions**. States in **the East North Central** region were reported **to receive** 68 percent as much in grant-in-aid **expenditures as** they paid in personal income **taxes**, while those **in** the East South Central region **were** estimated to receive over twice as much in grants-in-aid as they paid in personal income taxes. **By** 1975, this variation became less marked. States in all regions were estimated, on average, to receive **grants** that totaled **at** least 75 percent of their personal income **taxes**. **Only** in the East South Central **region--which** received 143 percent of its personal income taxes **in grants--did** grant receipts exceed personal income taxes by more than 25 percent. States in four regions **were** shown to receive, on average, 75 to 100 percent of their taxes in grants,

while, in the remaining four **regions**, grants were estimated to range from 100 to 125 percent of personal income tax payments (see Table 11).

National Journal Study

The National Journal study focused on a wider definition of expenditures and revenues but examined regional patterns in 1975 only. As described in Chapter II, the study used CSA data to track all federal expenditures except interest payments on the federal debt. Revenue estimates came from the Tax Foundation, which allocates half of corporate income tax collections among states based on their personal incomes and half among states based on their property income and which assigns excise taxes to consumers of the taxed commodities. The National Journal study allocated the federal deficit among states based on their populations. The study found that, on average, revenues exceeded expenditures in the New England, Mid-Atlantic, Great Lakes, and Great Plains states, while expenditures exceeded revenues in the remaining regions (see Table 12).

ACIR Study

The third study, forthcoming from ACIR, is the most comprehensive both in the expenditures and revenues traced and in the time period examined. As described in Chapter II, expenditure data for this project were collected from a variety of sources. Revenue estimates were made by adjusting Internal

TABLE 11. RATIO OF **GRANT-IN-AID** PAYMENTS TO PERSONAL INCOME TAX COLLECTIONS AS **REPORTED** BY THE GENERAL **ACCOUNTING** OFFICE, FISCAL YEARS 1969 AND 1975

Region ^a	Ratio of Grants-in-Aid to Personal Income Tax Collections	
	1969	1975
New England	0.85	1.03
Mid-Atlantic	0.82	1.0.7
East North Central	0.68	0.78
West North Central	1.12	0.97
South Atlantic	1.08	1.06
East South Central	2.02	1.43
West South Central	1.38	0.98
Mountain	1.71	1.24
Pacific	1.07	0.97

SOURCE: The U.S. General Accounting Office, Changing Patterns of Federal Aid to State and Local Governments: 1969-75, 1977, Appendix II, p. 47.

a. The Appendix lists the states included in each region.

TABLE 12. RATIO OF FEDERAL **EXPENDITURES** TO FEDERAL REVENUES AS REPORTED **BY** THE NATIONAL JOURNAL. FISCAL YEAR 1975

Region ^a	Ratio of Expenditures ^b to Revenues ^c
New England	.96
Mid-Atlantic	.83
Great Lakes	.70
Great Plains	.94
South Atlantic	1.12
South Central	1.17
Mountain	1.30
Pacific	1.17

SOURCE: "Federal Spending: **The North's** Loss Is the Sunbelt's Gain," National Journal. Vol. 8, No. 26 (June 26, 1976), p. 881.

- a. The Appendix lists the **states** included in each region.
- b. Expenditures traced in this study included all expenditures **listed** by the Community **Services** Administration, except interest payments made on the federal debt.
- c. **Revenue** estimates were **made** by the Tax Foundation, which divides corporate tax **incidence** equally between personal and property income and assigns excise taxes to consumers of the taxed good. The deficit was divided **among** states on the basis of **population**.

Revenue Service and federal agency collections data to approximate the actual incidence of **tax** collections. **Half** of corporate income **collections** from 1952 to **1972** were divided **among** regions on the basis of their retail **sales** and half were divided on the basis of dividends received by individuals. From 1974 to 1976, half of **all** corporate income taxes was distributed on the basis of **retail** sales; **one-quarter** was allocated based on the value of corporate stock **owned** by **individuals** with more than \$60,000 in gross **assets**, and the balance was apportioned on the basis of dividends **received** by individuals. All excise taxes were assigned to **consumers**.

The principal finding **of** the **ACIR study** is that, **on average**, ratios **of expenditures** to revenues **are** becoming more similar **across** regions. In 1952, **states** in the **Mideast** region **received** federal **expenditures** equal to 75 percent of their revenues, **while states** in the Southeast and Southwest received expenditures amounting to **over 125** percent of their taxes. In two regions the ratio of expenditures **to** revenues was between **0.75** and 1.00; three regions had **ratios** between 1.01 and 1.25. By 1976, the ratios of expenditures to revenues **in** all regions ranged from 0.74 to **1.14** (see Table 13). The study concludes **that** the major force moving these ratios toward each other has been the equalization of income between states. With per-capita revenue collections becoming more equal, the disparity in expenditure-to-revenue ratios has been correspondingly reduced.

TABLE 13. RATIO OF ESTIMATED FEDERAL EXPENDITURES RECEIVED^a TO FEDERAL REVENUES^b AS REPORTED BY I.M. LABOVITZ, SELECTED PERIODS BETWEEN FISCAL YEARS 1952 AND 1976

Region ^c	1952	1959-61 ^d	1965-67 ^d	1969-71 ^d	1974-76 ^d
New England	.78	1.07	.95	.95	1.01
Mideast	.75	.83	.75	.89	.99
Great Lakes	.87	.74	.64	.68	.74
Plains	1.20	1.00	1.15	1.01	.98
Southeast	1.51	1.29	1.36	1.24	1.14
Southwest	1.46	1.24	1.37	1.32	1.05
Rocky Mountain	1.20	1.24	1.34	1.23	1.10
Far West ^e	1.12	1.16	1.27	1.18	1.13

SOURCE: I.M. Labovitz, Regional Growth: Flows of Federal Funds, 1952-1976, forthcoming report by the Advisory Commission on Intergovernmental Relations.

- a. All federal expenditures were traced in this study, including payments on the federal debt.
- b. All federal tax revenues were included. Excise taxes in all years were assigned to consumers of taxed goods. For years 1952-72, corporate income taxes were divided equally between retail sales and total dividends. From 1974 to 1976, one-half of corporate taxes were assigned to consumers, one-quarter to corporate stock, and one-quarter to dividends.
- c. The Appendix lists the states included in each region,
- d. To account for differences in calendar and fiscal year data sources, Labovitz examined average expenditures over four calendar years.
- e. Since Alaska and Hawaii were not states throughout the period, they are not part of Far West totals.

Conclusion

Depending on when and how the balance **of federal expenditures** and revenues is examined, regions appear to be faring differently. This is not surprising for at least two **reasons**. First, the studies **have** traced different components of federal expenditures and revenues, have examined different time periods, and have applied different techniques to determine the origin and **destination of** federal funds. Thus at least some of **the** differences **between regions are** simply a function of the differing data **sources and** study structures used **to trace** the **patterns of** federal **expenditures** and revenues. Second, **as** Chapter IV discusses, the policy choices made by **the** federal government mean that the balance of expenditures and revenues will necessarily vary between regions and **over** time.

CHAPTER IV. CONCLUSIONS

As noted at the outset of this paper, although studies have attempted to **trace the** regional patterns of federal expenditures **and** revenues, all **such** analyses are of only limited value in evaluating federal fiscal policy. **First, the data** available to **trace** federal revenues and expenditures have serious shortcomings and, at best, are only a proxy for the geographic origin **and** destination of federal dollars. Second, even if the data **accurately** reflected the geographic distribution of federal **funds, studies employing** such **aggregate** data **could** not describe **the** distribution of actual benefits accompanying federal activities **because** such **benefits** vary with the nature of the activity and **differ** across political boundaries. Third, **because** the distribution of **all** federal **expenditures** and revenues reflects **policy** choices **made** in designing and funding particular programs, studies **that consider** broad spending and taxing aggregates cannot measure the success or failure of specific policies. Further, the objectives served by federal fiscal **policy may** or **may** not be reflected **in** equal per-capita or **per-income spending and** taxing across regions.

DATA LIMITATIONS

As noted throughout this paper, data that track **federal** expenditures **and** revenues are seriously deficient. The data are based on numerous unavoidable, but often questionable, assumptions ascribing the source and destination of federal dollars. These assumptions necessarily render the data suspect and, thus, the conclusions based on the data possibly misleading. Second, **the** data are often aggregated in ways that blur important distinctions between federal activities. Third, available data **sources** are frequently not consistent from year to **year**, confounding efforts to trace accurately **the** changing patterns of federal expenditures and revenues.

THE IMPACT OF FEDERAL EXPENDITURES AND REVENUES

Even if data were available that accurately tracked federal funds from their collection to their expenditure, such data would not describe the impacts of such flows. The effects of **dollars** raised **and spent** by the federal government vary across political units depending on the way in which the funds are **collected** or **used**.

Dollars **spent** in different federal programs will have different **impacts**. Although little firm evidence on the size of such impacts exists, researchers have concluded that "different government programs will have **significantly** different effects on the demand for regional products and hence upon regional

development."¹ A dollar **spent** extending capital infrastructure **in** a region **will** have a different effect than a dollar transferred to a retiree in the same area. Similarly, a dollar spent on infrastructure in one area may have **a** different effect than **a** dollar spent for **the** same purpose in another region, if one region produces all materials **and** labor needed for the project while the other imports such goods. Thus, to treat all federal expenditure activities as having equal weight within and between regions undoubtedly results **in** over- and **under-estimates** of the **impacts** of such activities.

The **taxes** levied to raise federal **funds** also may have **impacts** that vary from place to place. **An additional** dollar of personal income tax raised in one **area** may lessen savings, while an additional tax dollar collected **some** place else may lead to reduced consumption. **Studies** that implicitly assume that the impact of federal revenue collection is constant across regions undoubtedly miss **important** variations in actual effects.

POLICY CONTEXT OF FEDERAL EXPENDITURE AND REVENUE ACTIVITY

Finally, the patterns of federal **expenditure** and revenue activity are not fully meaningful **unless** viewed in the context **of** specific policy choices. Federal expenditure and revenue

1. William H. Oakland, "Alternative Models for Assessing Regional Public Policy Impacts", in W.C. **Wheaton**, (ed.) Interregional Movements and Regional Growth, Paper on Public Economics, Vol. 2 (Washington, D.C.: The Urban Institute, 1979), p. 148.

decisions -are **made** to fulfill particular policy **goals**, and such goals may or may not lead to similar expenditure patterns or similar **balances** between expenditures and revenue collections across regions.

Federal taxes **have** generally been designed to place heavier burdens on those with more resources. Regions **of** the country **vary both** in terms of their per-capita income and accumulated wealth. **Thus**, the taxes collected may be expected to vary across regions as the **resources** available vary. To examine the taxes paid within **a** region without examining the tax base and ability to pay of people **and** businesses **within** the area provides an incomplete **understanding** of federal taxing activity.

Similarly, expenditure activity must be viewed in the context of the specific policy goals that federal **programs** are designed to serve. **For** example, spending in programs designed to alleviate poverty will **vary** across regions as the incidence of poverty varies. Expenditures for **programs** to improve capital infrastructure will be distributed in accordance with the geographic distribution of decaying infrastructure. Given the numerous goals served by federal programs, there is no reason to expect that **federal** spending in a region will **equal--either** in per-capita or personal income **measures--the** spending in any other region.

APPENDIX. STATES INCLUDED IN REGIONAL CLASSIFICATIONS

Studies that trace federal expenditures and/or federal **revenues** usually aggregate state findings into regional patterns. The regional **classification** scheme varies by study, however.

The **classification** used by Vehorn and the U.S. Department of Agriculture is:

Northeast: **Maine**, Vermont, New Hampshire, **Massachusetts**, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey

Midwest or North Central: North Dakota, **South** Dakota, Nebraska, **Kansas**, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Indiana, Michigan, Ohio

South: District of Columbia, West Virginia, Maryland, Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, **Florida**, Louisiana, Texas, Oklahoma, Arkansas, Tennessee, Kentucky, Delaware

West: Washington, Oregon, California, **Idaho**, Nevada, X Montana, Wyoming, Colorado, Utah, Arizona, New Mexico, Hawaii, Alaska

The classification used by the National Journal is:

New England: Maine, New Hampshire, Vermont, **Massachusetts**, Rhode Island, Connecticut

Mid-Atlantic: New York, New Jersey, Pennsylvania

Great Lakes: Ohio, Indiana, Illinois, Michigan, Wisconsin

Great Plains: Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, North Dakota

So. Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida

So. Central: Kentucky, Tennessee, Alabama, **Mississippi**, Louisiana, Arkansas, Oklahoma, Texas

Mountain: Montana, Idaho, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico

Pacific: California, Oregon, Washington, Alaska, Hawaii

The **classification** used by the University of Michigan and the General Accounting Office is:

New **England**: Maine, **New** Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut

Mid-Atlantic: New York, New Jersey, Pennsylvania

East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin

West North **Central**: Minnesota, **Iowa**, Missouri, North Dakota, South Dakota, Nebraska, Kansas

So. Atlantic: Delaware, Maryland, Virginia, West Virginia, North **Carolina**, South Carolina, Georgia, Florida

East South Central: Kentucky, Tennessee, Alabama, Mississippi

West South Central: Arkansas, **Louisiana**, Oklahoma, Texas

Mountain: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada

Pacific: Washington, Oregon, California, Alaska, Hawaii

The Labovitz **classification** is:

New England: **Connecticut**, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Mideast: Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania

Great Lakes: Illinois, Indiana, Michigan, Ohio, Wisconsin

Plains: **Iowa**, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

Southeast: Alabama, Arkansas, Florida, **Georgia**, **Kentucky**, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia

Southwest: Arizona, New Mexico, Oklahoma, Texas

Rocky Mountain: Colorado, Idaho, Montana, Utah, **Wyoming**

Far West: **California**, Nevada, Oregon, Washington

The CBO classification is:

North: Maine, New Hampshire, Vermont, **Massachusetts**, Rhode Island, Connecticut, New Jersey, New York, Pennsylvania, Illinois, Indiana, **Michigan**, **Ohio**, Wisconsin

Plains: **Iowa**, Kansas, **Minnesota**, **Missouri**, Nebraska, North Dakota, South Dakota

Southwest: Oklahoma, **Texas**, New Mexico, Arizona

South: **Delaware**, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, **Virginia**, West Virginia, **Alabama**, Kentucky, Mississippi, Tennessee, Arkansas, Louisiana

West: Colorado, Idaho, Montana, Nevada, Utah, Wyoming, Alaska, California, **Hawaii**, Oregon, **Washington**