

## Federal R&D Expenditures Related to Budget Functions, 1960-72

Relative to other types of Federal expenditures taken as a whole, those for research and development have experienced a significant reduction in priority since the mid-1960's. The ratio of R&D expenditures to total Federal outlays rose from 8.5 percent in fiscal year 1960 to a high point of 12.4 percent in fiscal year 1965. Since then, however, the ratio has decreased each year; the 7.4 percent ratio estimated for 1972 is the lowest in the entire 1960-72 period.

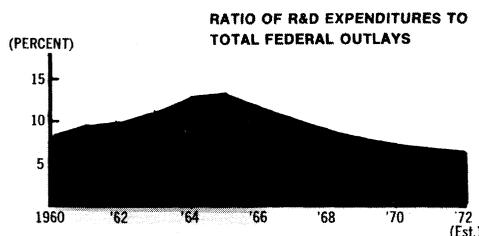
Within the 12 Federal budget functions (interest excluded), the ratio of R&D expenditures to total outlays varies widely since the applicability of R&D programs to the various functional areas obviously differs. Also, within the Federal R&D total the shares of the various functions show a wide range of difference.

The ratio of **national defense** R&D expenditures to total national defense outlays is estimated at 12 percent in 1972—a ratio higher than that for any other function except space, but still a notable decrease from the high of 16 percent in 1964. / The national defense share of total Federal R&D expenditures has shown the largest relative decrease of any function—from 87 percent in 1960 to about 57 percent in 1972.

The ratio of **space** R&D expenditures to total space outlays has always been high, since, by definition, virtually all such activities are classified as research and development. In the 1970-72 period it is 99 percent. /

The rate of R&D growth for space research and technology in 1960-66 was by far the highest of any category. Thereafter this category declined in actual dollars and is the only one with smaller R&D expenditures in 1972 than in 1966. Its share of the R&D total is expected to be 20 percent in 1972—down from 36 percent in 1966.

**Health** R&D expenditures are estimated at 8 percent of total health outlays for 1972, compared with 30 to 40 percent in the 1960 to 1966 period. This does not reflect a decline in R&D programs, but the rapid increase in other support programs, notably Medicare and Medicaid. / Health has reflected growth rates above the Federal R&D average throughout the 1960-72 period. Its portion of the Federal R&D total was 4 percent in 1960 and is estimated at almost 9 percent in 1972.



For **commerce and transportation** the R&D share is also growing, from 2 percent of total outlays for this function in 1960 to an estimated 7 percent in 1972. / The growth rate of R&D expenditures for the 1960-72 timespan was even higher than that for health. Their share of the Federal R&D total shows a rise from 1 percent to 5 percent in that time.

**Education and manpower** has recently shown a tendency for its R&D expenditures ratio to rise—from a low point of 5 percent in 1966 to an estimated 7 percent in 1972. / R&D increased from 1 percent of the Federal R&D total in 1960 to an estimated 4 percent in 1972.

Within the **natural resources** category total the R&D ratio is estimated at 7 percent for 1972. This ratio has ranged from a low of 5 percent in 1961 to a high of 10 percent to 12 percent between 1968 and 1971. / This category has shown R&D growth above the Federal average since 1966. Its share of the Federal R&D total until 1969 was 1 percent; in the current (1970-72) period it is 2 percent.

R&D expenditures as a percent of total outlays for **agriculture and rural development** are estimated for 1972 at 4 percent, compared with 3 percent in 1960. / Although Federal R&D support in this category has continued to grow steadily throughout the 1960-72 period, its share in the Federal R&D total is expected to be less than 2 percent in 1972.

R&D expenditures for **community development and housing** represented an estimated 3 percent of that function's total outlays in 1972. For each of the other functions—**international affairs and finance, veterans benefits, general government, and income security**—R&D expenditures represented less than 1 percent of total estimated outlays for 1972. / The R&D program conducted within each of these other functions represent 1 percent or less of the expected Federal R&D total for 1972.

Distribution of Federal R&D expenditures by function	Federal R&D expenditures by function			Federal R&D expenditures by function			Federal R&D expenditures for each function as a percent of total Federal outlays for each function		
	1960	1966	1972 (Est.)	1960	1966	1972 (Est.)	1960	1966	1972 (Est.)
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>7,300.5</b>	<b>14,970.2</b>	<b>15,703.9</b>	<b>8.5</b>	<b>11.8</b>	<b>7.4</b>
National Defense	86.5	52.7	57.3	6,317.8	7,887.9	8,998.1	86.4	90.4	98.7
Space Research and Technology	4.7	35.8	19.8	346.6	5,360.6	3,109.4	13.8	13.9	11.6
Health	3.8	5.0	8.5	277.5	753.7	1,348.4	36.7	29.6	8.4
Commerce and Transportation	1.2	1.6	4.9	85.1	241.5	761.5	1.8	3.4	7.0
Education and Manpower	0.9	1.5	3.9	68.6	231.8	611.2	6.2	5.4	6.9
Natural Resources	1.0	1.0	1.8	73.6	150.7	280.6	7.4	7.5	6.6
Agriculture and Rural Development	1.4	1.3	1.7	105.2	196.6	262.2	3.2	5.3	4.5
Community Development and Housing	—	0.3	0.9	—	51.0	141.7	—	1.9	3.2
Income Security	0.1	0.3	0.5	14.6	38.4	62.0	0.1	0.4	0.8
Veterans Benefits	0.2	0.3	0.4	7.7	39.7	72.2	0.3	0.6	0.6
International Affairs & Finance	*	0.1	0.2	2.2	16.3	33.4	0.1	0.1	0.8
General Government	*	*	0.1	1.3	1.7	23.4	*	0.1	0.1

\* Less than 0.05 percent