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Chapter 2:

1. Use the figures in Table 2.1 to answer the following questions.

a. For which decade did federal government current expenditures rise more, the 1980s   
 or the 1990s?

b. During the period 1995 to 2005 which grew faster: federal government current   
 expenditures or state and local government current expenditures?

c. Compute the rate of growth in state and local government current expenditures for the   
 periods 1995 to 2000 and 2000 to 2005 and explain whether there has been a   
 significant change.

Answer:

a. Federal current expenditure increases:

1980s: 1990s:

1259.2/589.5 = 2.14 1871.9/1259.2 = 1.49

Since federal expenditures rose 114% in the 1980s and 49% in the 1990s, the

correct answer is the 1980s.

b. Federal: State and local:

2573.1/1614.0 = 1.59 1704.5/ 982.7 = 1.73

Since federal current expenditures rose 59% from 1995 to 2005 and state and

local current expenditures rose 73%, the correct answer is state and local current expenditures.

c. State and local current expenditures:

1995-2000: 2000-2005:

1281.3/982.7 = 1.30 1704.5/1281.3 = 1.33

The rate of increase in state and local government expenditure growth was about the same during the period 2000-05 as it was during 1995-2000, increasing   
slightly from a 30% growth rate to 33%.

2. Use the figures in Table 2.3 to answer the following questions.

a. For which five-year period listed in the table was the rate of growth of federal   
 government expenditures greatest?

b. For which five-year period listed in the table was the rate of growth of state and local   
 government expenditures greatest?

c. For which five-year period listed in the table was the rate of growth in grants to state   
 and local governments greatest?

Answers:

a. 1965 to 1970

|  |  |
| --- | --- |
| Period | Rate of Growth |
| 1960-65 | 1.266 |
| 1965-70 | 1.403 |
| 1970-75 | 1.252 |
| 1975-80 | 1.190 |
| 1980-85 | 1.253 |

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|  |  |
| --- | --- |
| 1985-90 | 1.128 |
| 1990-95 | 1.135 |
| 1995-2000 | 1.067 |
| 2000-05 | 1.219 |
| 2005-2009 | 1.254 |

b. 1965-70

|  |  |
| --- | --- |
| Period | Rate of Growth |
| 1960-65 | 1.393 |
| 1965-70 | 1.543 |
| 1970-75 | 1.328 |
| 1975-80 | 1.118 |
| 1980-85 | 1.173 |
| 1985-90 | 1.253 |
| 1990-95 | 1.189 |
| 1995-2000 | 1.199 |
| 2000-05 | 1.179 |
| 2005-2009 | 1.079 |

c. 1965-70

|  |  |
| --- | --- |
| Period | Rate of Growth |
| 1960-65 | 1.679 |
| 1965-70 | 2.197 |
| 1970-75 | 1.694 |
| 1975-80 | 1.127 |
| 1980-85 | 0.868 |
| 1985-90 | 1.175 |
| 1990-95 | 1.464 |
| 1995-2000 | 1.235 |
| 2000-05 | 1.295 |
| 2005-09 | 1.220 |

3. Use the figures in Table 2.4 to answer the following questions.

a. For the period 1970-2005 compute the rate of growth in federal receipts (as a percent   
 of GDP) for each five year period. Identify the five-year time period over which   
 receipts grew fastest as a percent of GDP.

b. For the period 1980-2005 compute the rate of growth in federal debt (as a percent of   
 GDP) for each five year period. Identify the five-year period over which federal debt   
 grew fastest as a share of GDP.

Answers:

a. 1995 to 2000

|  |  |
| --- | --- |
| Period  ending | Rate of Growth |
| 1975 | 0.942 |
| 1980 | 1.061 |

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|  |  |
| --- | --- |
| 1985 | 0.932 |
| 1990 | 1.017 |
| 1995 | 1.022 |
| 2000 | 1.120 |
| 2005 | 0.840 |

b. 1980 to 1985

|  |  |
| --- | --- |
| Period  ending | Rate of Growth |
| 1985 | 1.311 |
| 1990 | 1.276 |
| 1995 | 1.199 |
| 2000 | 0.855 |
| 2005 | 1.108 |

4. Use the figures in Table 2.5 to answer the following questions.

a. For which five-year period listed in the table was the rate of growth of federal   
 government expenditures per capita greatest?

b. For which five-year period listed in the table was the rate of growth of state and local   
 government expenditures per capita greatest?

c. For which five-year period listed in the table was the rate of growth in grants to state   
 and local governments per capita greatest?

Answers:

a. 1970-75

|  |  |
| --- | --- |
| Period | Rate of Growth |
| 1960-65 | 1.261 |
| 1965-70 | 1.623 |
| 1970-75 | 1.640 |
| 1975-80 | 1.605 |
| 1980-85 | 1.544 |
| 1985-90 | 1.260 |
| 1990-95 | 1.203 |
| 1995-2000 | 1.095 |
| 2000-05 | 1.311 |
| 2005-10 | 1.401 |

b. 1965-70

|  |  |
| --- | --- |
| Period | Rate of Growth |
| 1960-65 | 1.388 |
| 1965-70 | 1.785 |
| 1970-75 | 1.740 |
| 1975-80 | 1.508 |
| 1980-85 | 1.446 |
| 1985-90 | 1.399 |
| 1990-95 | 1.260 |
| 1995-99 | 1.231 |

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c. 1965-70

|  |  |
| --- | --- |
| Period | Rate of Growth |
| 1960-65 | 1.679 |
| 1965-70 | 2.536 |
| 1970-75 | 2.219 |
| 1975-80 | 1.521 |
| 1980-85 | 1.069 |
| 1985-90 | 1.313 |
| 1990-95 | 1.551 |
| 1995-99 | 1.267 |

5. Find the state of your residence in Table 2.7. Note where it ranks in total taxes per capita and   
 state taxes per capita.

a. Can you explain why your state ranks as it does? Are there particular features of your   
 state’s economy that affect its ranking?

b. Find the ranking for a neighboring state in Table 6. Explain why there may be   
 similarities or differences between your home state and the neighbor state.

c. If you are originally from a state other than your current state of residence, look up   
 both states in Table 2.7 and see if you can explain, based on your knowledge of the   
 two states, why their rankings may differ.

Answers:

a. Answer will vary.

b. Answer will vary.

c. Answer will vary.

6. Use the GDP deflator reported in table below to convert the nominal expenditure per capita   
 figures in Table 2.5 into real terms, answering the following questions.

|  |  |
| --- | --- |
| Year | GDP Deflator  (2005 = 100) |
| 1960 | 18.604 |
| 1965 | 19.919 |
| 1970 | 24.317 |
| 1975 | 33.563 |
| 1980 | 47.751 |
| 1985 | 61.576 |
| 1990 | 72.201 |
| 1995 | 81.536 |
| 2000 | 88.647 |
| 2005 | 100.000 |
| 2010 | 110.654 |

a. Explain how real per capita federal expenditures changed over the period 2000 to   
 2010. Compare this to the change in nominal per capita federal expenditures.

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b. Explain how real per capita state and local government expenditures changed over the   
 period 1995 to 2005. Compare this to the change in nominal per capita state and local   
 government expenditures.

c. Explain how real per capita grants to state and local governments changed over the

period 1980 to 1990. Compare this to the change in nominal per capita grants to state and local governments.

Answers:

b. Real per capita federal expenditures 2000; 6628.90/(88.647/100) = 7,477.86

Real per capita federal expenditures 2010; 12180.60/(110.654/100) = 11,007.83 Real per capita expenditures increased 47%, 11,007.83/7,477.86 = 1.462, while nominal expenditures increased 84%, 12,180.60/6,628.90 = 1.837

c. Real per capita state and local expenditures 1995; 3,686.60/(81.536/100) = 4,521.44   
 Real per capita state and local expenditures 2005; 5,758.60/(100/100) = 5,758.60   
 Real per capita expenditures increased 27%, 5,758.60/4,521.44 = 1.274, while   
 nominal expenditures increased 56%, 5,758.60/3,686.60 = 1.562

d. Real per capita grants 1980; 317.5/(47.751/100) = 664.91   
 Real per capita grants 1990; 445.4/(72.201/100) = 616.89

Real per capita grants fell 7%, 616.89/664.91 = 0.928, while nominal per capita grants rose 40%, 445.4/317.5 = 1.403.

7. Use the population figures reported in table below to convert the real government receipts   
 and expenditures in Table 2.3 into real per capita terms, answering the following questions.

|  |  |
| --- | --- |
| Year | Population of U.S.  (thousands) |
| 1960 | 180,671 |
| 1965 | 194,303 |
| 1970 | 205,052 |
| 1975 | 215,973 |
| 1980 | 227,726 |
| 1985 | 238,466 |
| 1990 | 250,132 |
| 1995 | 266,557 |
| 2000 | 282,385 |
| 2005 | 295,994 |
| 2010 | 308,746 |

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a. Explain how real per capita federal expenditures changed over the period 2000 to   
 2010. Compare this to the change in nominal per capita federal expenditures.

b. Explain how real per capita state and local government expenditures changed over the   
 period 1985 to 1995. Compare this to the change in real state and local government   
 expenditures (not per capita).

c. Explain how real per capita grants to state and local governments changed over the   
 period 1970 to 1980. Compare this to the change in real grants to state and local   
 governments (not per capita).

Answers:

a. Real per capita federal expenditures 2000: 1,000,000\*2,111.60/282,385 = 7,477.73   
 Real per capita federal expenditures 2010: 1,000,000\*3,398.60/308,746 = 11,007.75   
 Real per capita change: 11,007.75/7,477.73 = 1.472, or a 47.2% increase   
 Nominal change: = 83.7% (from Table 2.5)

So real per capita expenditures increased 47% while nominal per capita expenditures increased 84%

b. Real per capita state and local expenditures 1995: 1,000,000\*1,205.30/266,557 =   
 4,521.73

Real per capital state and local expenditures 1985: 1,000,000\*809.1/227,726 =   
3,392.94

Real Percentage change: 4,521.73/3,392.94 = 1.333, or a 33.3% increase Nominal change: 76.3% (from Table 2.5)

So real per capita expenditures increased 33% while nominal per capita expenditures increased 76 %

c. Real per capita grants 1980: 1,000,000\*151.3/227,726 = 664.39

Real per capita grants 1970: 1,000,000\*79.3/205,052 = 386.73

Real Percentage change: 664.39/386.73 = 1.718, or a 71.8% increase Nominal Percentage change: 237.4% (from Table 2.5)

So real per capita grants increased 72% while nominal per capita grants increased   
237%

8. Use the information in the following table on receipts by the federal and state/local

governments to support your evaluation of the following proposition: *During the period 2000 to 20010 federal government receipts grew more in real terms than state and local government receipts.*

|  |  |  |  |
| --- | --- | --- | --- |
| Fiscal  Year | Federal government  receipts  (billions of current  dollars) | State and local  government receipts  (billions of current  dollars) | *GDP* deflator  (2005 = 100) |
| 2000 | 2,057.1 | 1,322.6 | 88.648 |
| 2010 | 2,416.4 | 2,142.7 | 110.654 |

Answer: This proposition is false because real federal receipts fell by 6% while real state and local receipts grew by 30%.

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Fiscal  Year | Federal government  receipts  (billions of constant  dollars) | Rate of growth | State and local  government receipts  (billions of constant  dollars) | Rate of growth |
| 2000 | 2,320.53 |  | 1,491.97 |  |
| 2010 | 2,183.74 | -6% | 1,936.40 | +29.7% |