

# 3 Public Sector Statistics

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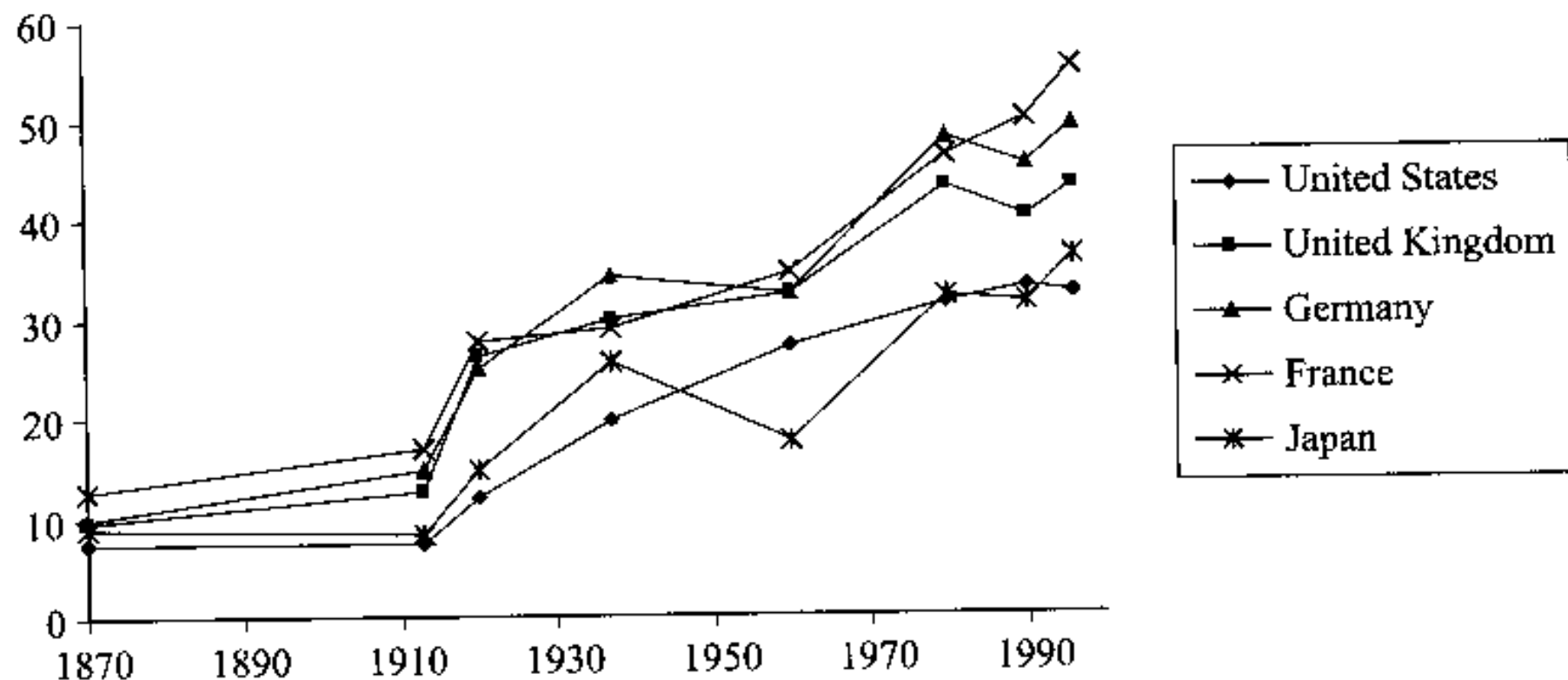
## 3.1 Introduction

- statistical overview of the public sector in modern market economies
  - data on government expenditure and revenue
  - historical perspective
  - insight into current situation
  - extent and range of activities in public sector
  - similarity in public sector in many countries
    - difference in the size of PS between the social-market economies and the free-market economies is rather less than might be imagined
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## 3.2 Historical Development

- historical development of the public sector
    - significant growth
    - government expenditure was small proportion of GDP at the start of 20 century
    - then rose steadily over the next 60 years, leveling out toward the end of the century
  - Figure 3.1
    - total expenditure
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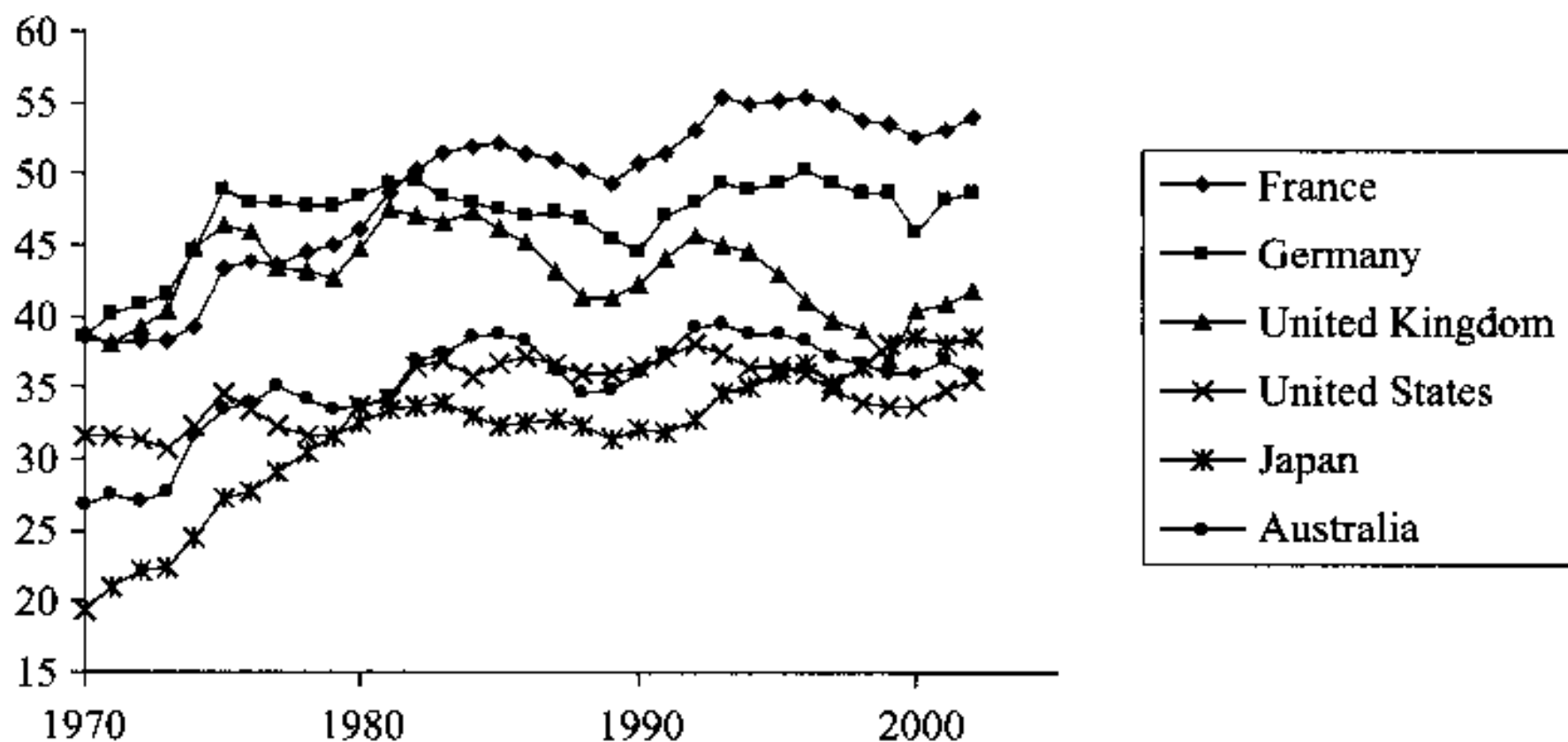


**Figure 3.1**  
Total expenditure, 1870 to 1996 (% GDP)

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## ■ Figure 3.2

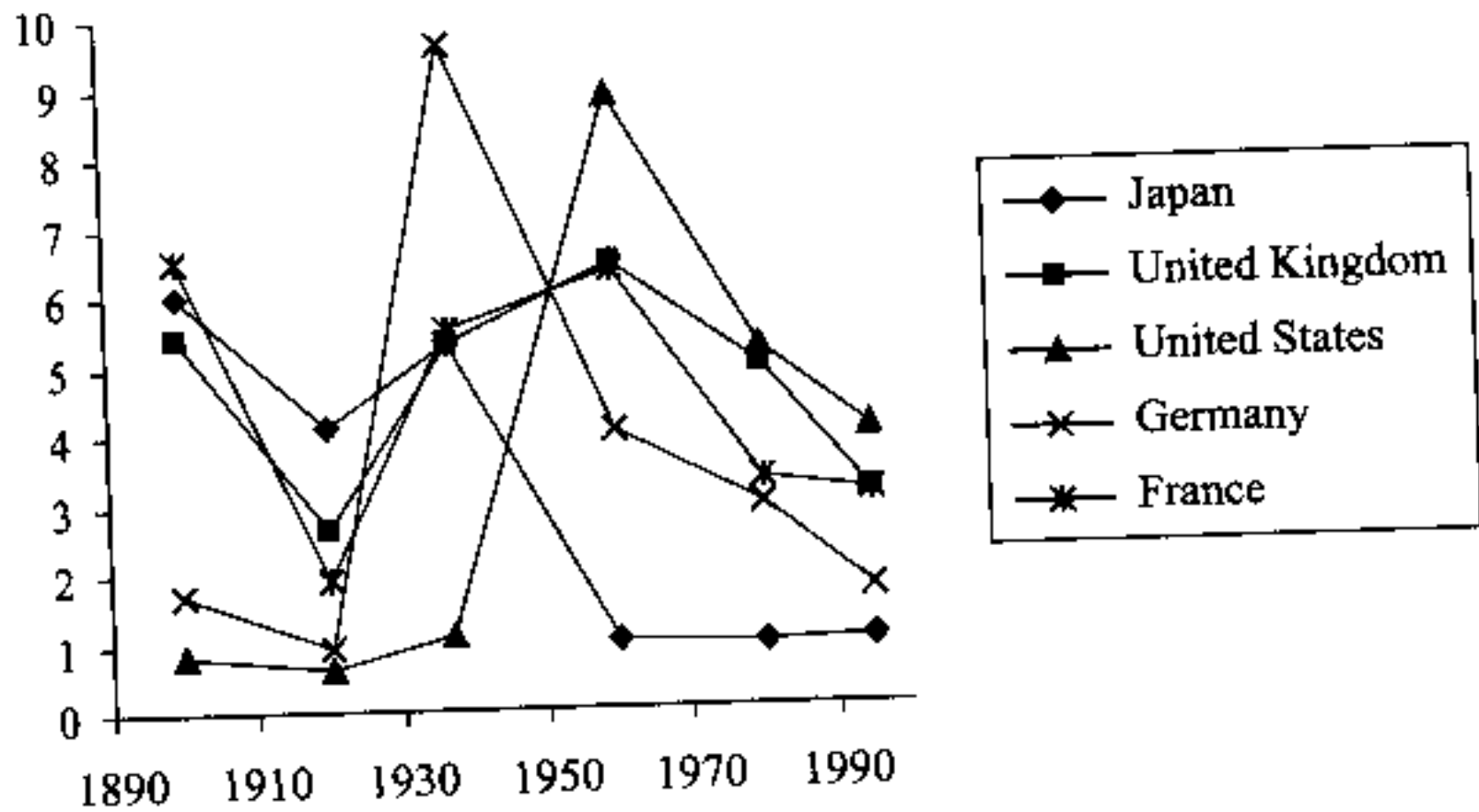
- ❑ a more detailed presentation of the changes in the level of expenditure in the last thirty years
  - ❑ a slowing, or even a stagnation, of the growth in the public expenditure
  - ❑ expenditure is higher in 2002 than in 1970
  - ❑ the increases for UK and US are very small
  - ❑ expenditure in Japan had reached 38.6 percent and almost matched that in UK
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**Figure 3.2**  
Total expenditure, 1970 to 2002 (% GDP)

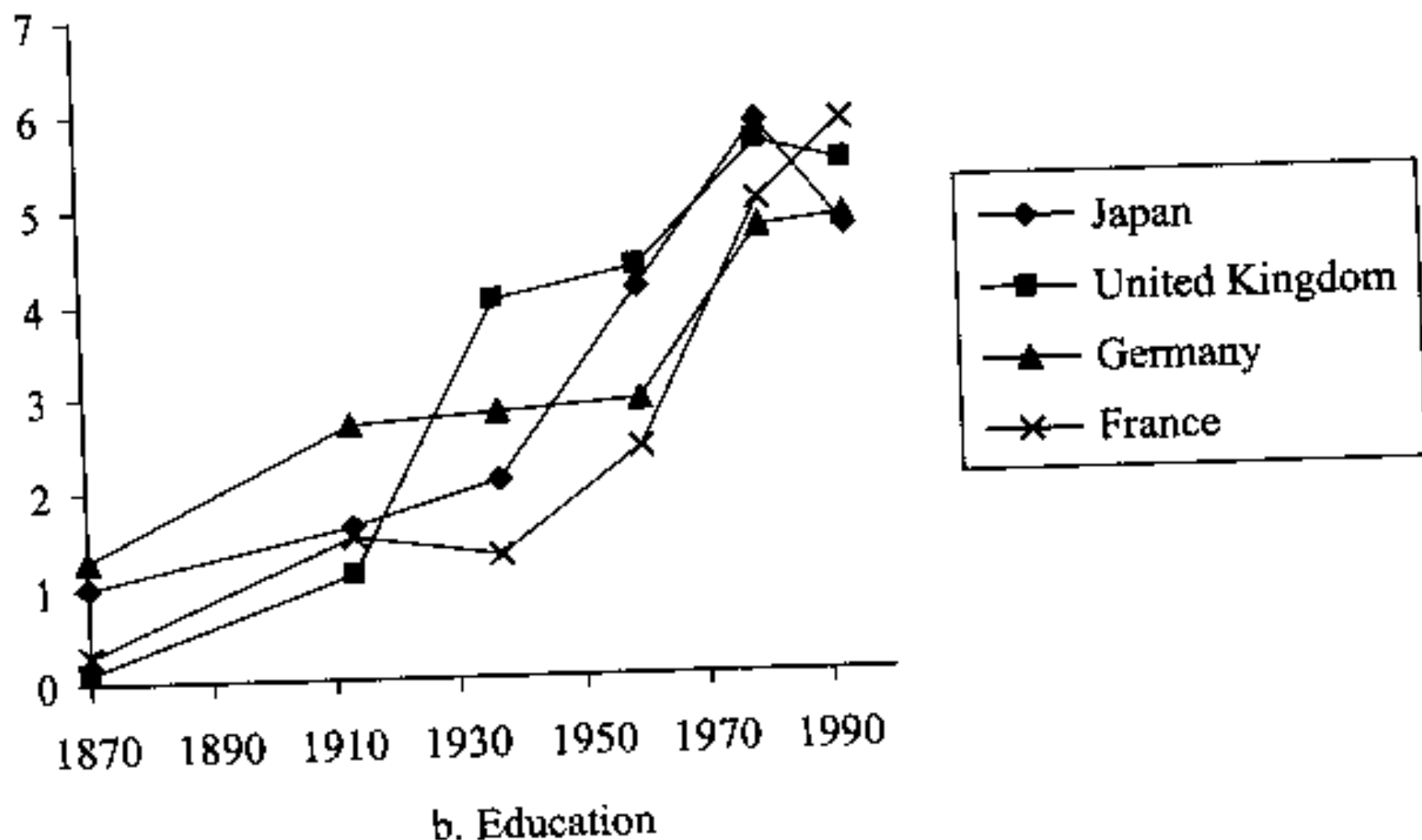
## ■ Figure 3.3

- ❑ path of expenditure in subcategories of public spending during the last century
- ❑ composition of the long-run increase
- ❑ the most marked rises
  - education, health, pensions
- ❑ expenditure on health has risen more quickly than that on education and pensions
- ❑ pensions crisis in many countries
  - basis of this crisis is apparent in Germany and France

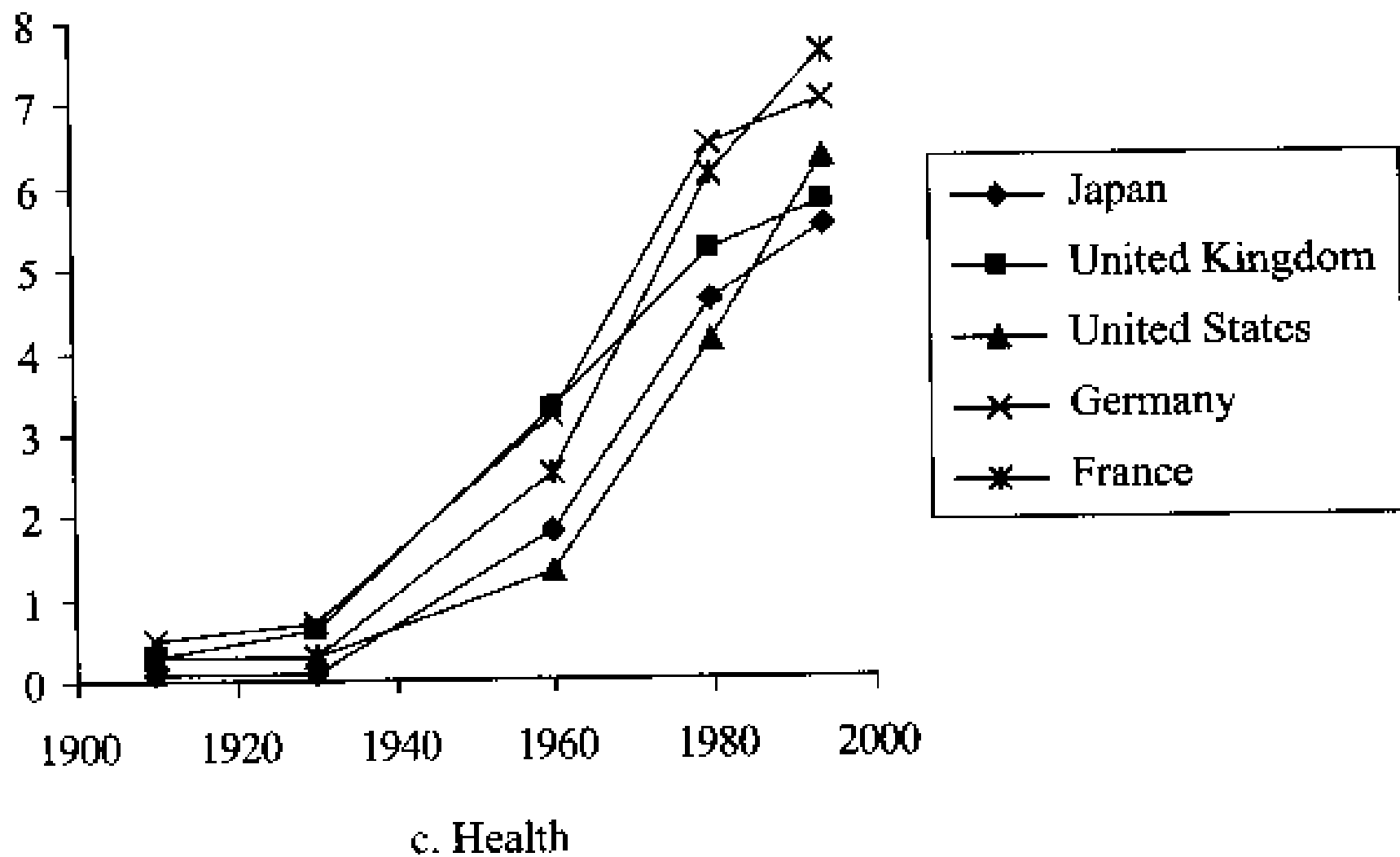


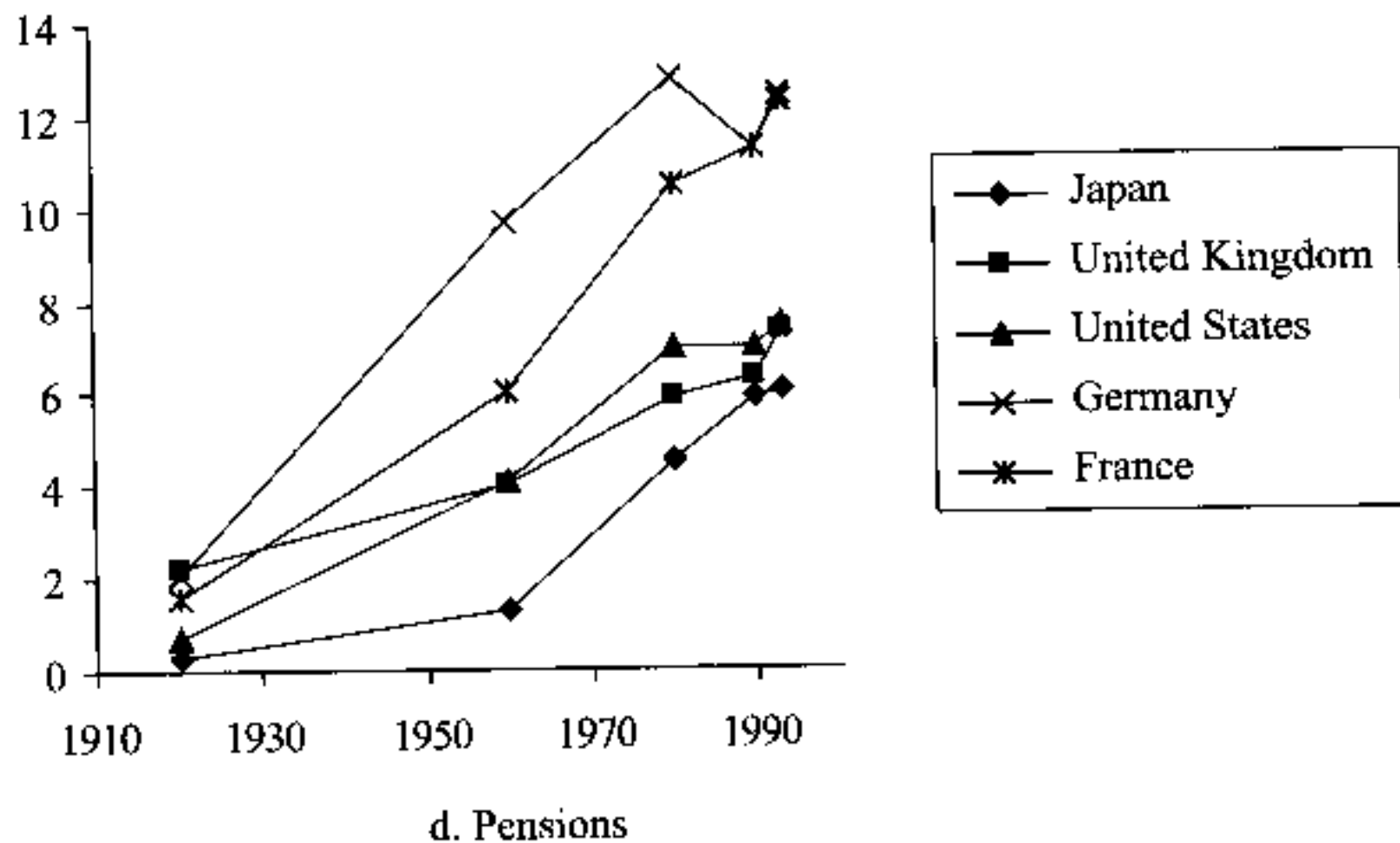
a. Defense





**Figure 3.3**  
Individual expenditure items (% GDP)





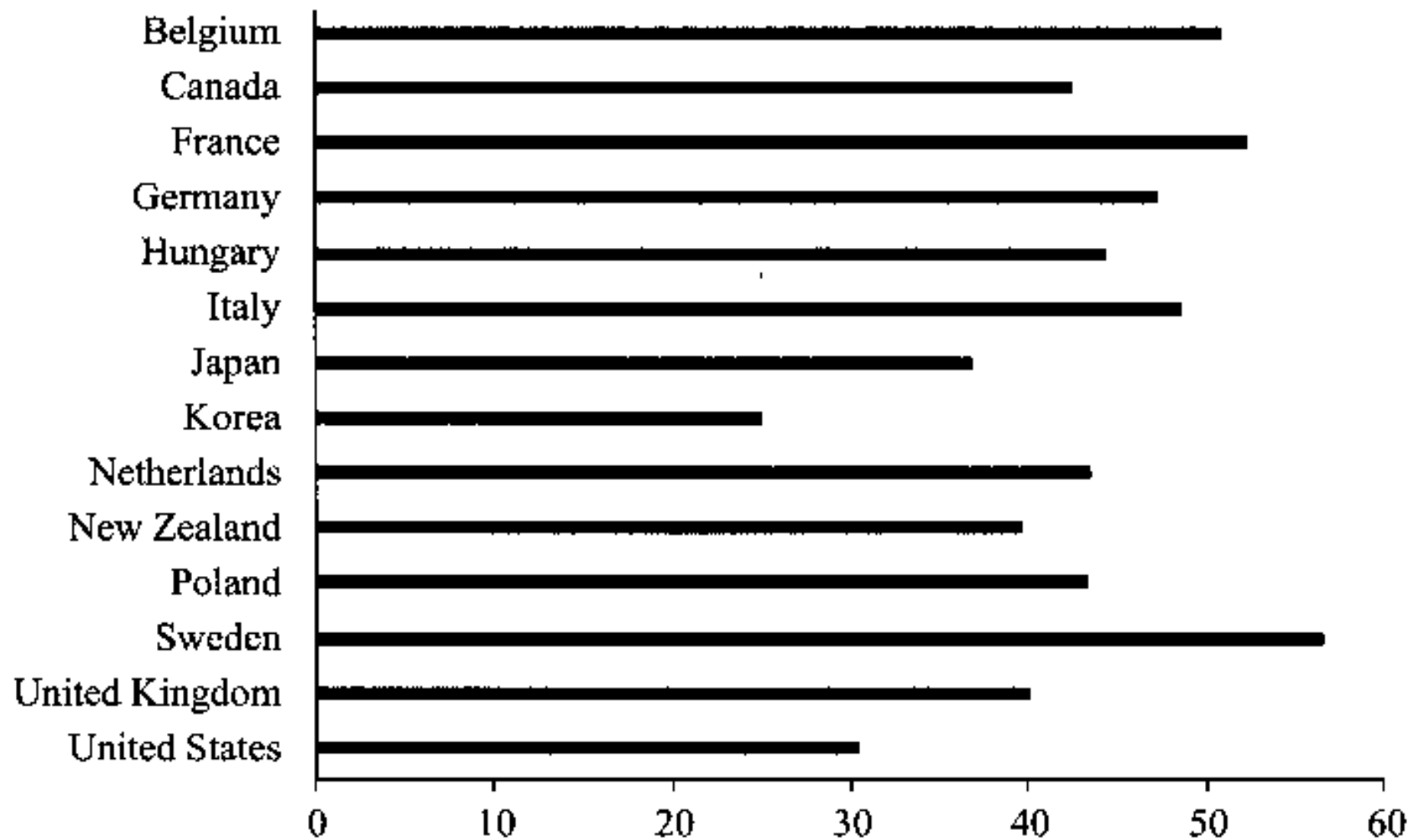
**Figure 3.3**  
(continued)

## ■ Figure 3.4

- ❑ data on public expenditure for a wide range of countries in 1998
- ❑ developed, developing, transition economies
- ❑ public sector is significant in countries across the world
- ❑ Sweden: highest (56.6%)
- ❑ Korea: lowest (30%)

## ■ worth noting

- ❑ data on expenditure underestimate the full influence of the public sector on the economy
- ❑ regulations: no government expenditure or income

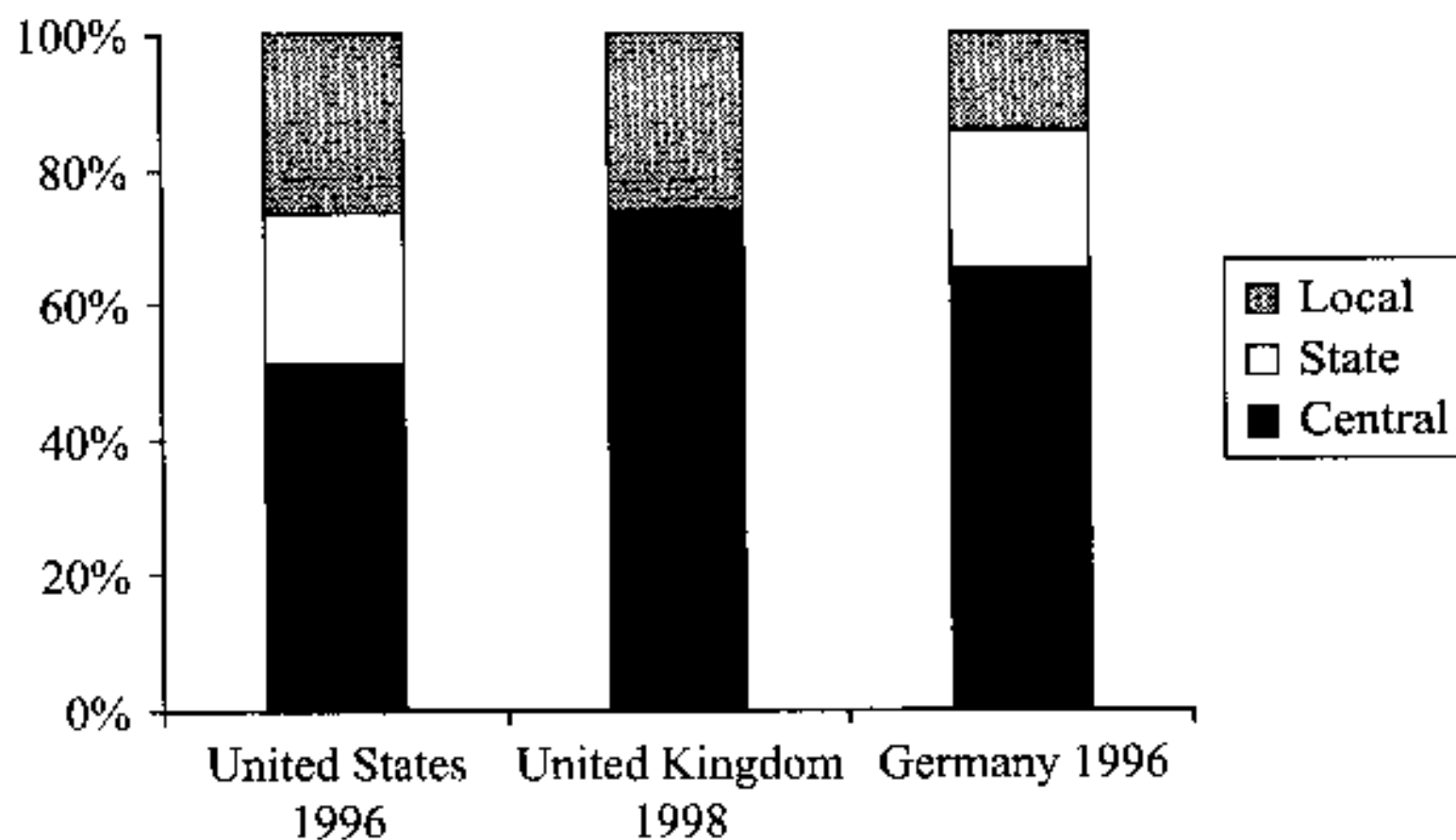


**Figure 3.4**  
Government expenditure, 1998 (% GDP)

## 3.3 Composition of Expenditure

### ■ Figure 3.5

- expenditure between the different level of government
- UK has no expenditure at the state level
- Germany and US are federal countries
- UK is a unitary country
- state level: Germany 20%, US 22%
- local government: Germany 15%, US 26%  
UK 26%

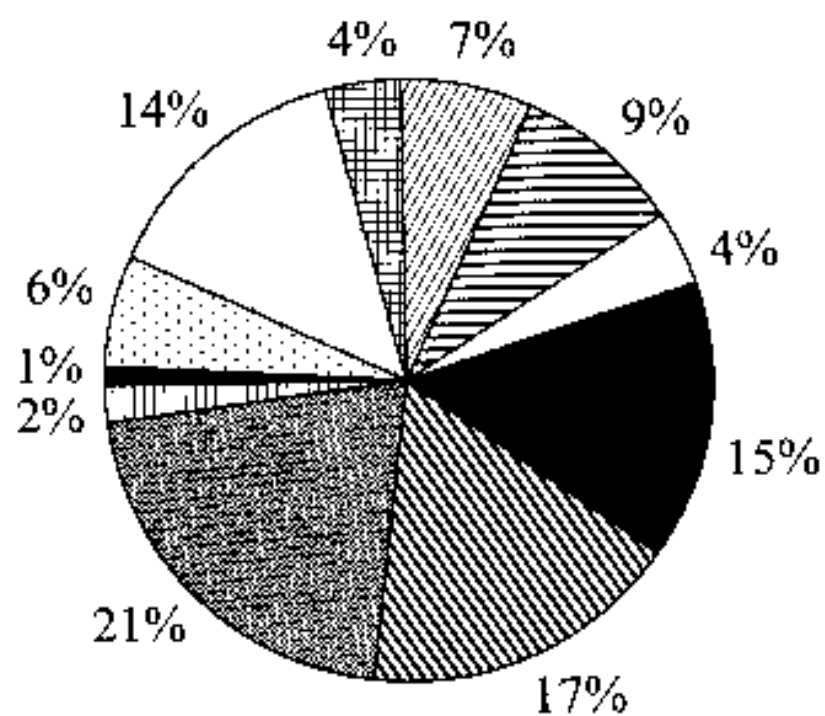


**Figure 3.5**  
Share of expenditure by levels of government

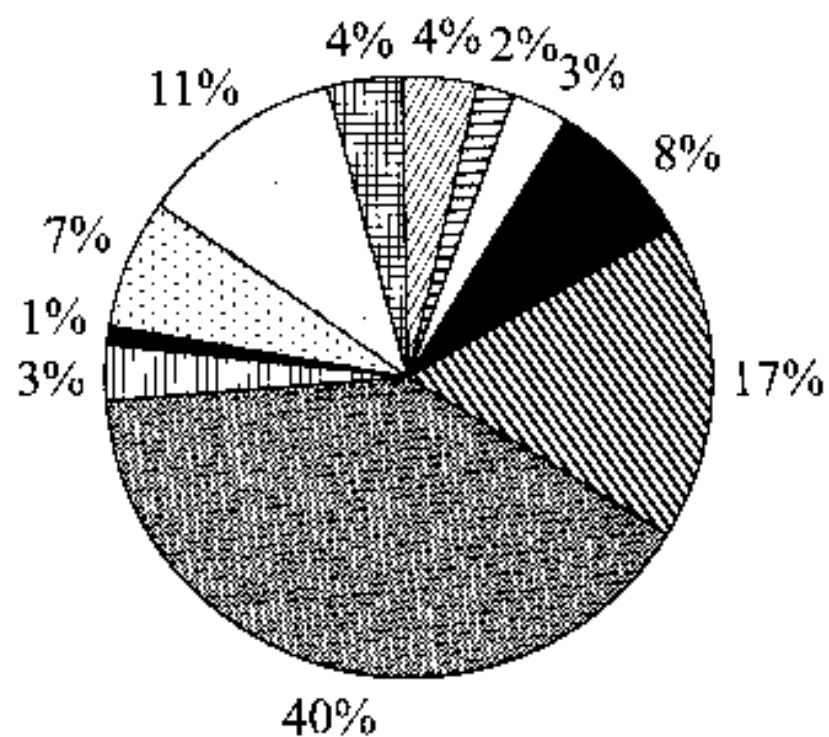
## ■ Figure 3.6

- ❑ consolidated (combined) general spending
- ❑ avoid double counting by subtracting intergovernmental transfers
- ❑ diversity of public sector
- ❑ administrative and governmental costs
  - > general public services
- ❑ health and education: substantial in all three countries, but largely private nature
- ❑ other economic affairs: subsidies to agriculture, energy, mining, manufacturing, construction
- ❑ social security and welfare spending is the largest

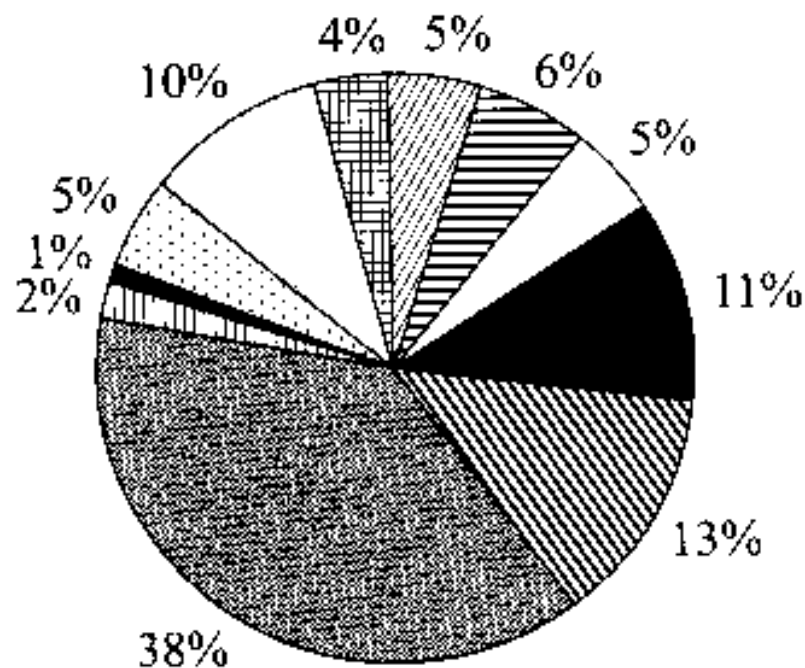















a. United States 1996



b. Germany 1996



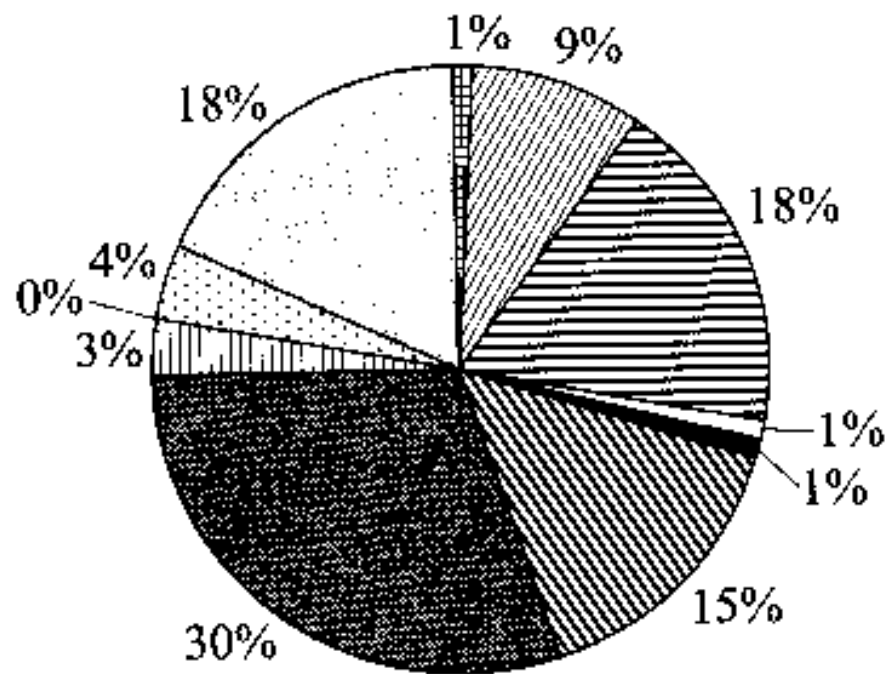
c. United Kingdom 1998

-  General public services
-  Defense
-  Public order and safety
-  Education
-  Health
-  Social security and welfare
-  Housing and community
-  Recreation, culture, etc.
-  Other economic affairs
-  Other
-  Transport and communication

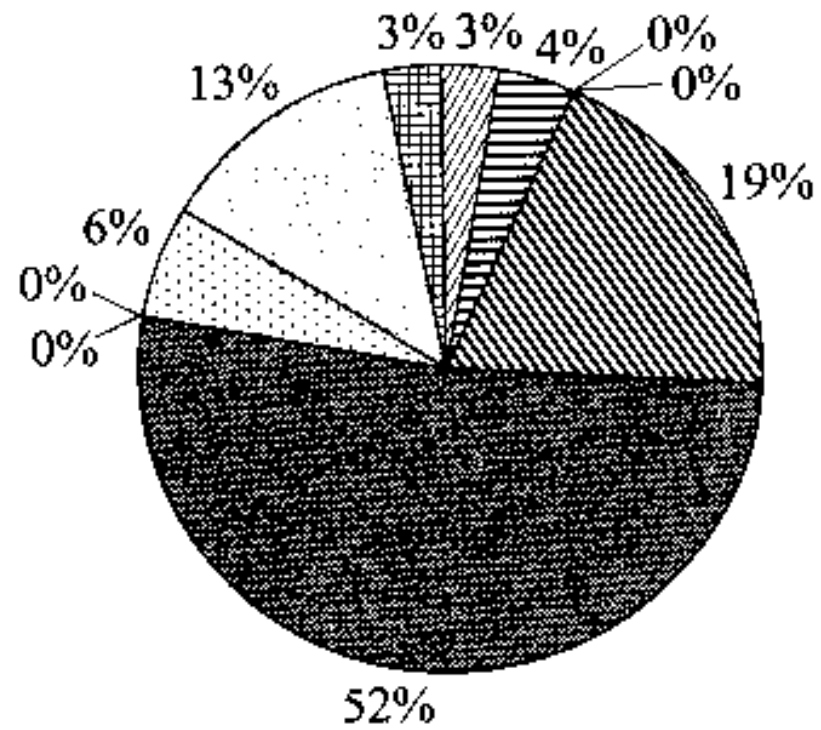
**Figure 3.6**  
Composition of consolidated general spending

## ■ Figures 3.7~3.9

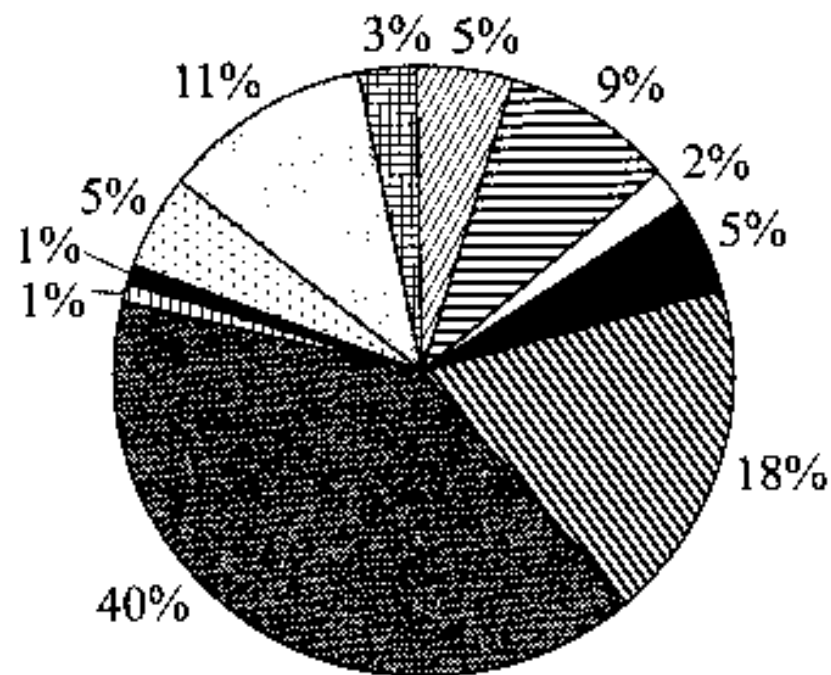
- ❑ allocation of spending responsibilities between different tiers of government in US, UK, Germany
- ❑ defense is allocated to the central government
- ❑ distributive functions tend to be concentrated centrally
- ❑ education is largely to lower levels, either the states or to local government
- ❑ health spending: central and lower levels
- ❑ spending at the lower level
  - not= financed from taxes levied locally
- ❑ incentives of lower tiers to spend














a. United States 1996

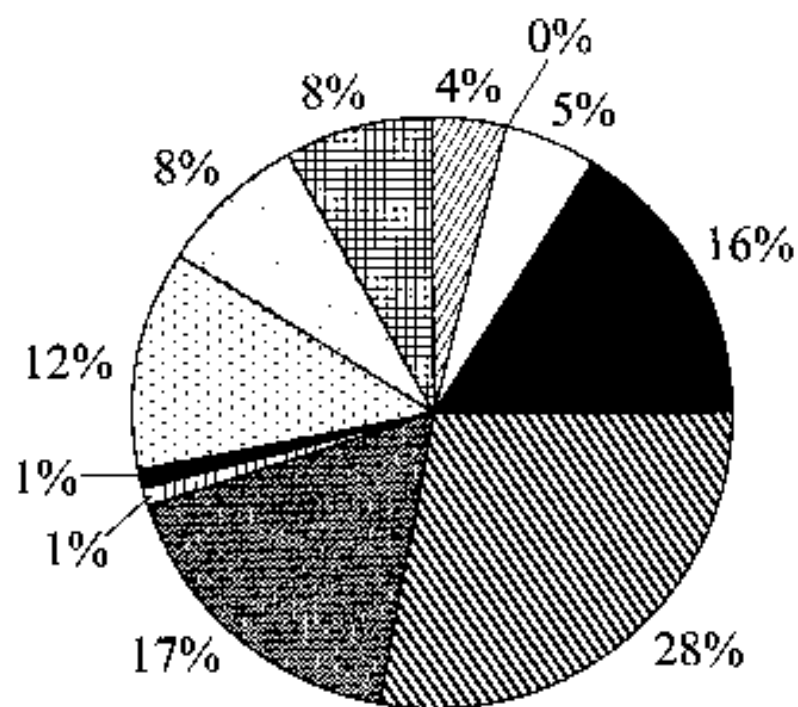


b. Germany 1996

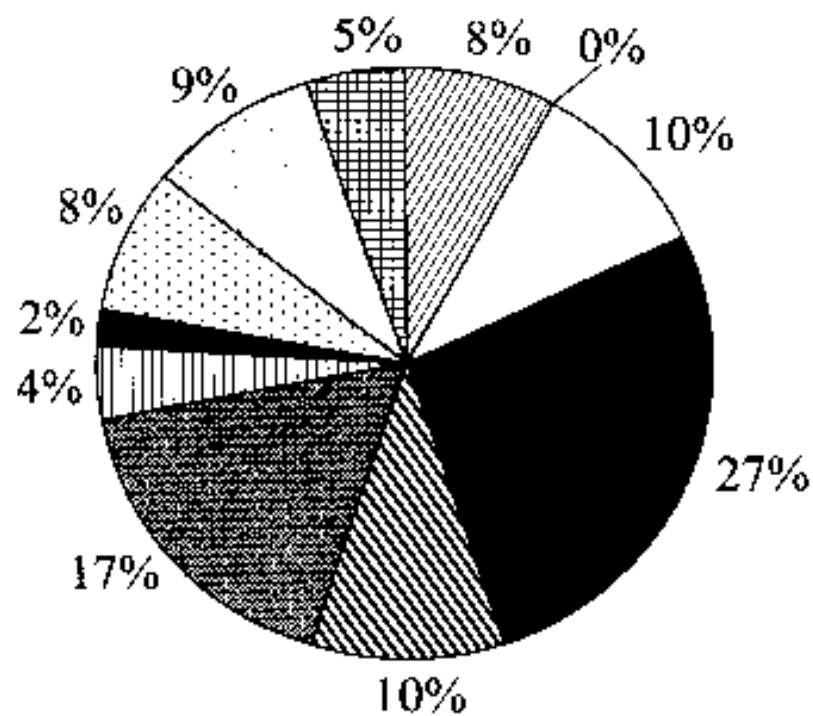


c. United Kingdom 1998

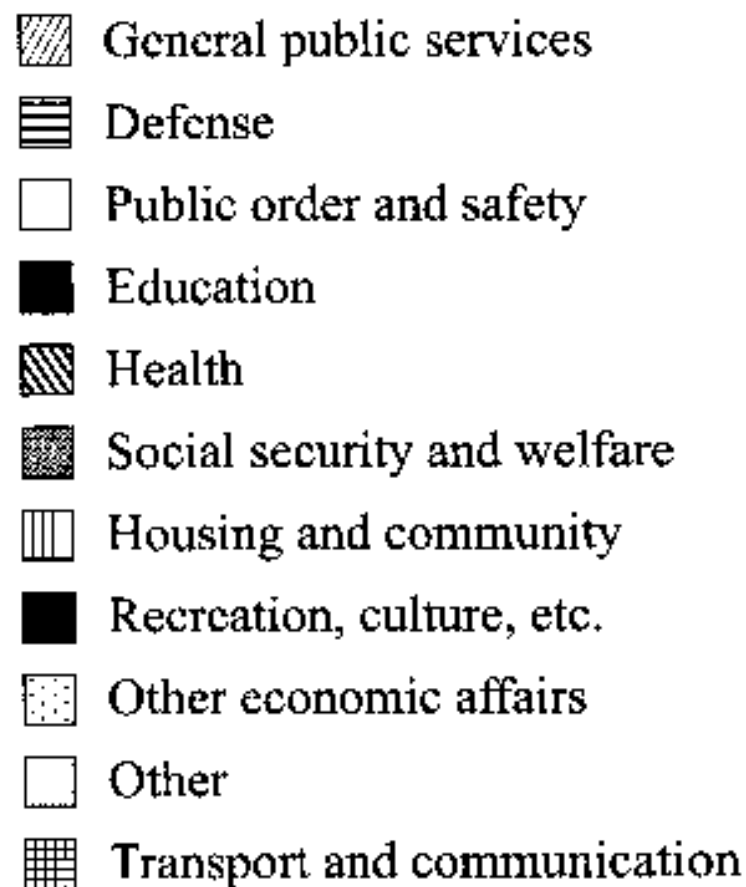
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-  Other
-  Transport and communication



a. United States 1996

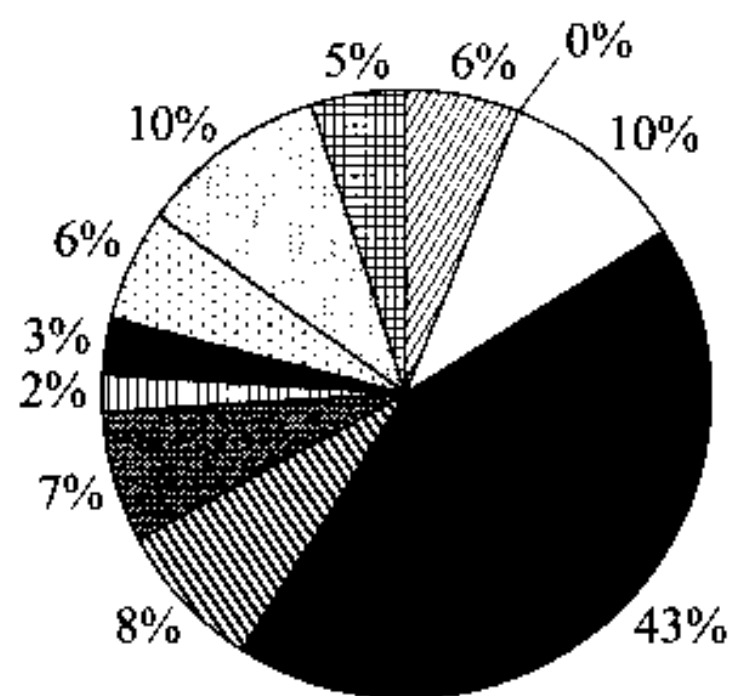


b. Germany 1996

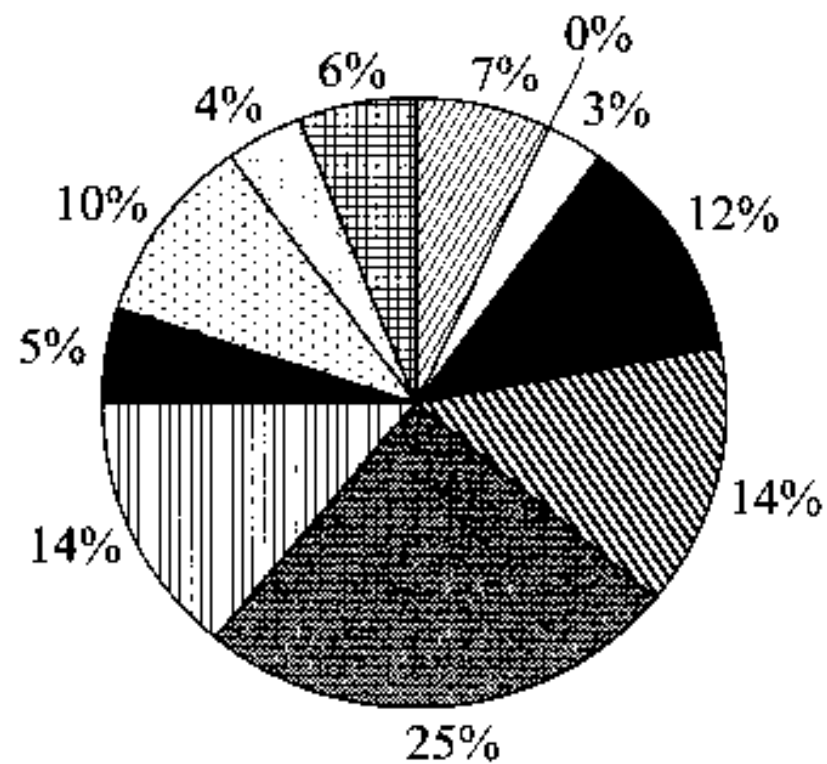


**Figure 3.8**  
Composition of state spending



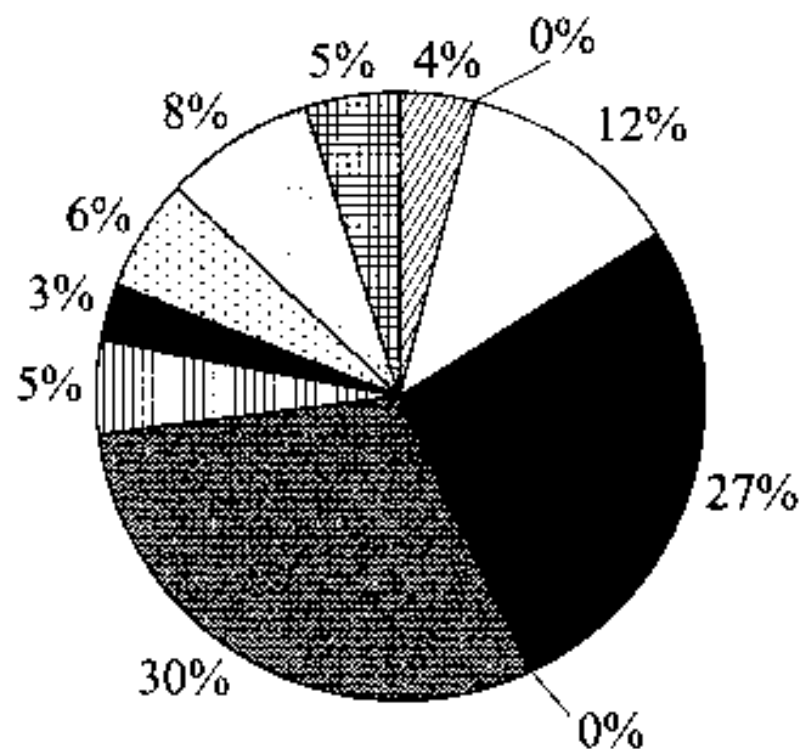


a. United States 1996














b. Germany 1996





c. United Kingdom 1998

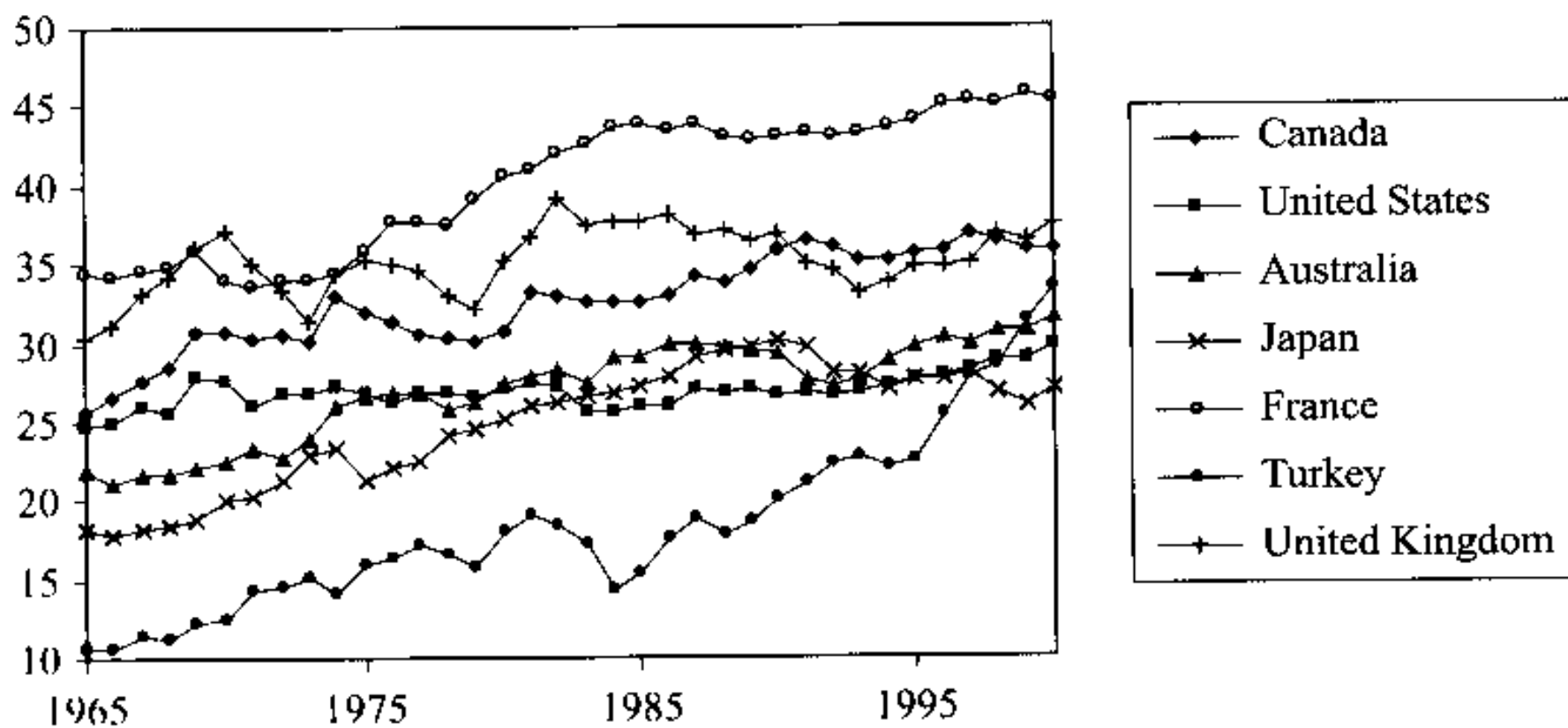
-  General public services
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**Figure 3.9**  
Composition of local spending

## 3.4 Revenue

### ■ Figure 3.10

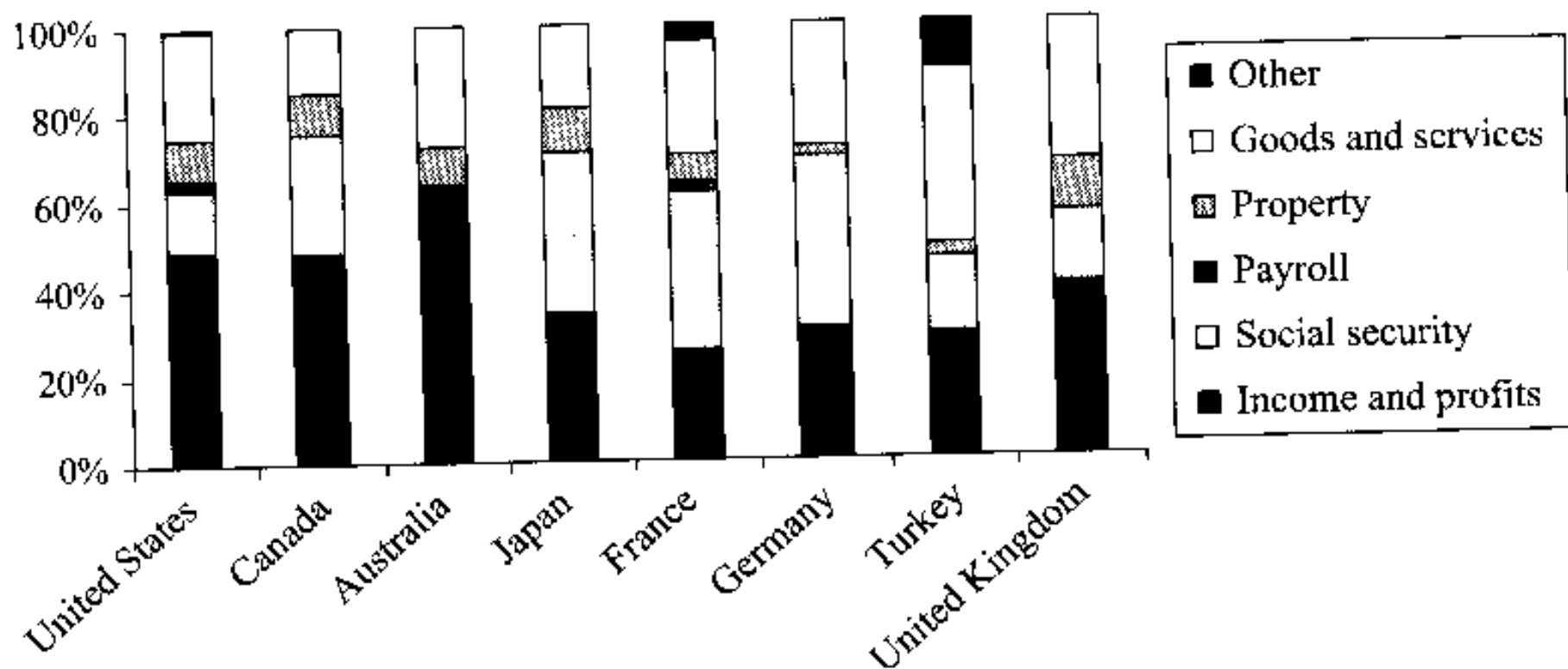
- total tax revenue for 7 countries (% of GDP)
- growth in tax revenue
- degree of convergence (27%~45%)
- France (45%), UK (37%), Canada (36%),  
Turkey (33%), US (30%), Japan (27%)
- the most growth: Turkey  
11%(1965) --->33%(2000)
- similar outcome (surprising uniformity)



**Figure 3.10**  
Tax revenues, 1965 to 2000 (% GDP)

## ■ Figure 3.11

- ❑ proportion of tax revenue raised by six categories of tax instrument in 2000
- ❑ largest proportion of revenue
  - income and profit taxes: Australia(57%), US(51%)  
Canada(49%), UK(39%)
  - social security tax: Germany(39%), Japan(36%)  
France(36%)
  - goods and services: Turkey(41%)
- ❑ in European countries taxes on goods and services are high, but in US not <--- value-added taxation (VAT)
- ❑ property taxes are significant in the majority of countries



**Figure 3.11**

Tax revenue for category of taxation, 2000

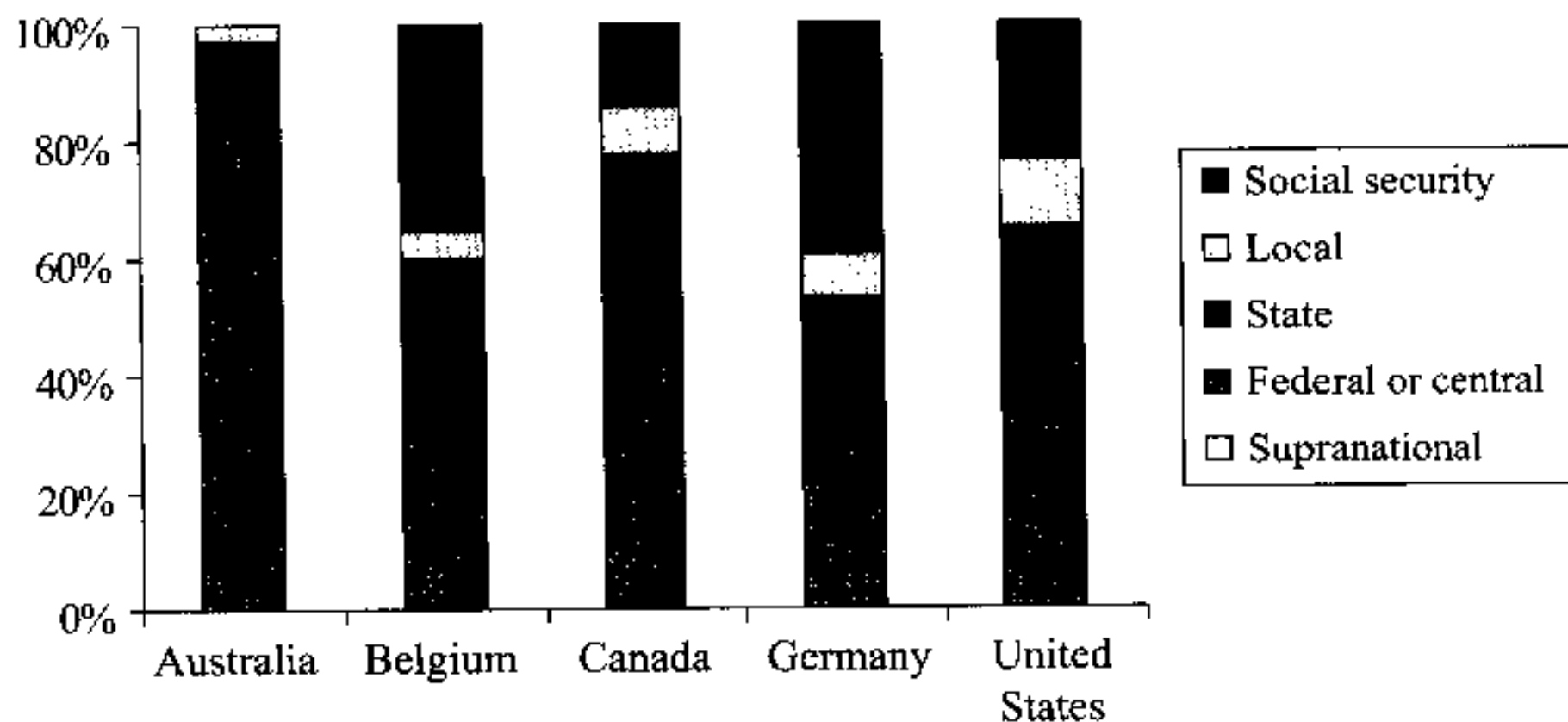
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- Figure 3.12, 3.13

- proportion of tax revenue raised by each level of government

- Figure 3.12

- proportions in five federal countries
    - central gvn raises more revenue than state gvn
      - Canada (42% vs 36%), Germany (31% vs 23%)
      - US (46% vs 20%), Australia (83% vs 14%)
    - local gvn raises the smallest proportion of revenue
      - Australia (3%)
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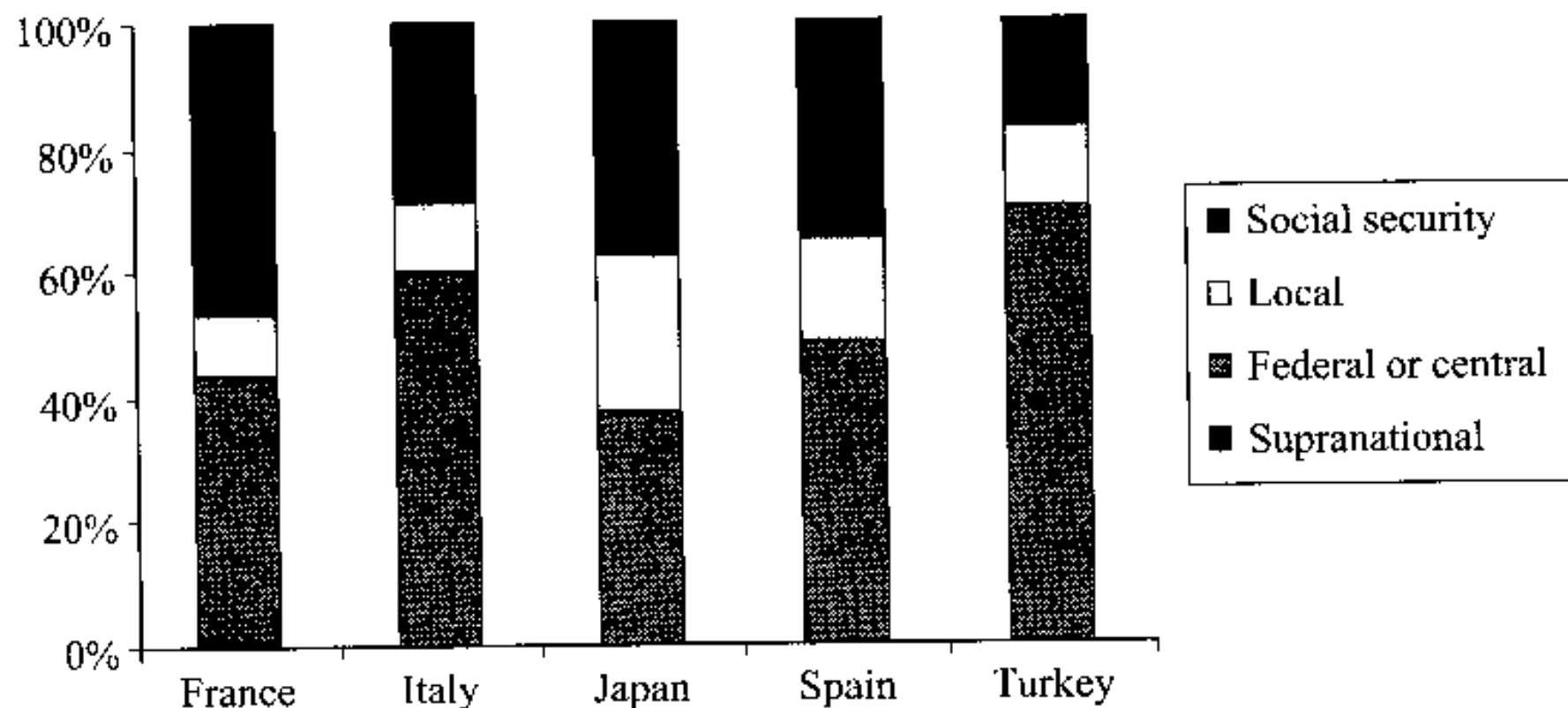
**Figure 3.12**

Tax revenue by level of government, federal countries, 2000

## ■ Figure 3.13

- proportions in five unitary countries
- central gvn raises more revenue than local gvn
  - largest: Turkey (70%)
  - smallest: Japan (37%)
- local gvn is most significant in Japan (25%)
- comparison: federal and central countries
  - local gvn raises more revenue on average in the unitary countries than the federal countries
  - revenue by central gvn is almost the same
  - difference comes from absence of state gvn
  - role of state gvn is absorbed within central gvn





**Figure 3.13**

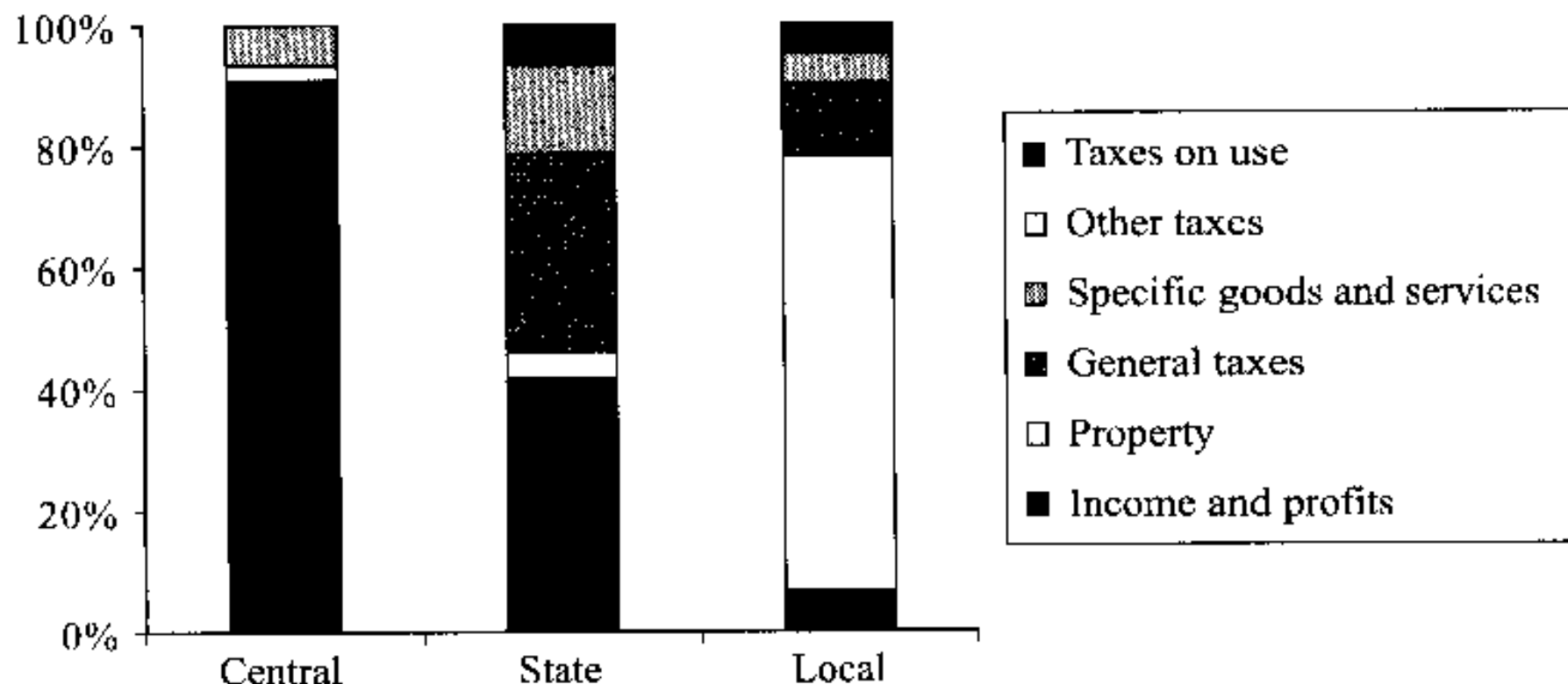
Tax revenue by level of government, unitary countries, 2000

## ■ Figures 3.14~3.17

- ❑ share of revenue raised by each category of tax instrument at each level of gov
- ❑ two federal countries: US, Germany
- ❑ two unitary countries: UK, Japan

## ■ Figure 3.14 (US)

- ❑ importance of income and profits taxes falls from central to local (91% for central, 7% for local)
- ❑ their reduction is matched by increase in property taxes (2% for central, 72% for local)



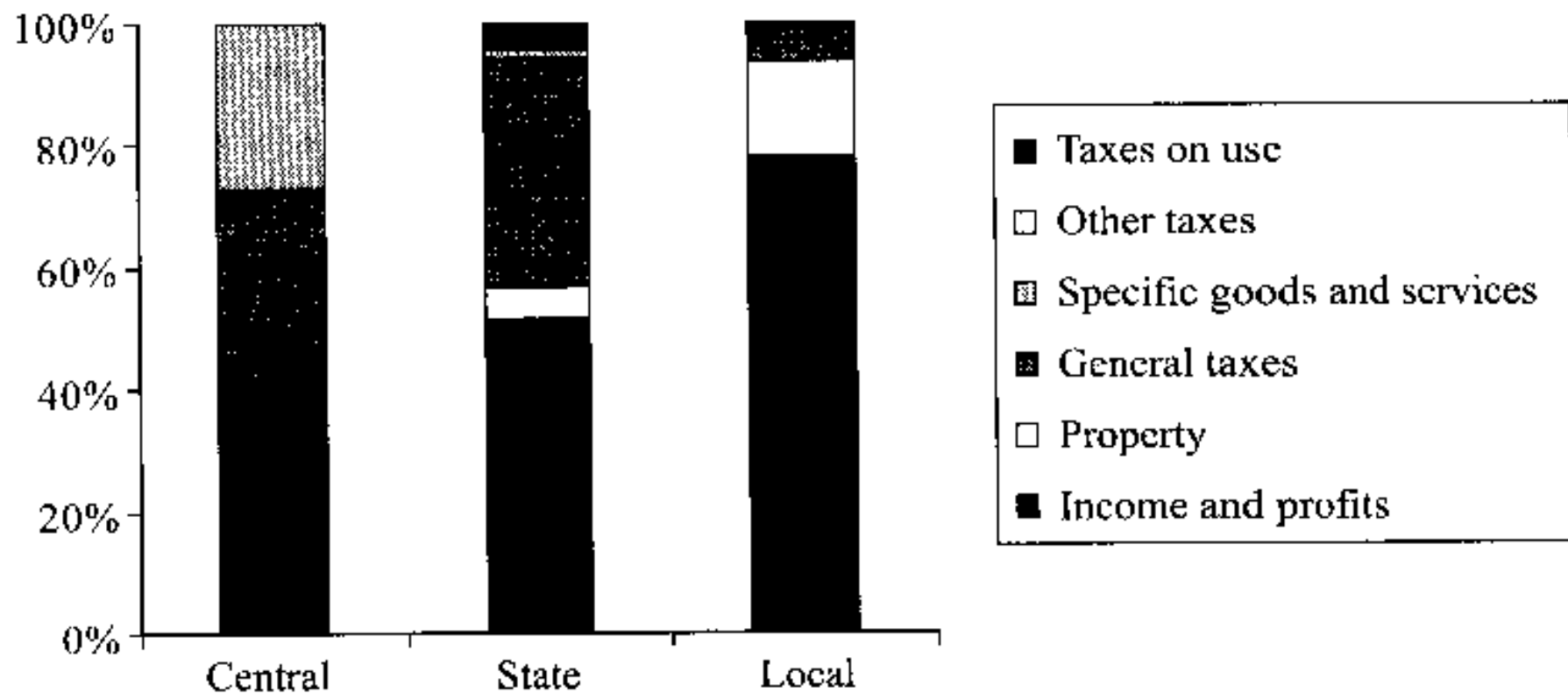
**Figure 3.14**

Tax shares at each level of government, United States, 2000

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## ■ Figure 3.15 (Germany)

- opposite pattern
  - income and profits taxes become more important for local gvn (78%) than central gvn (42%)
  - same pattern
  - property taxes are more important for local gvn than for central gvn
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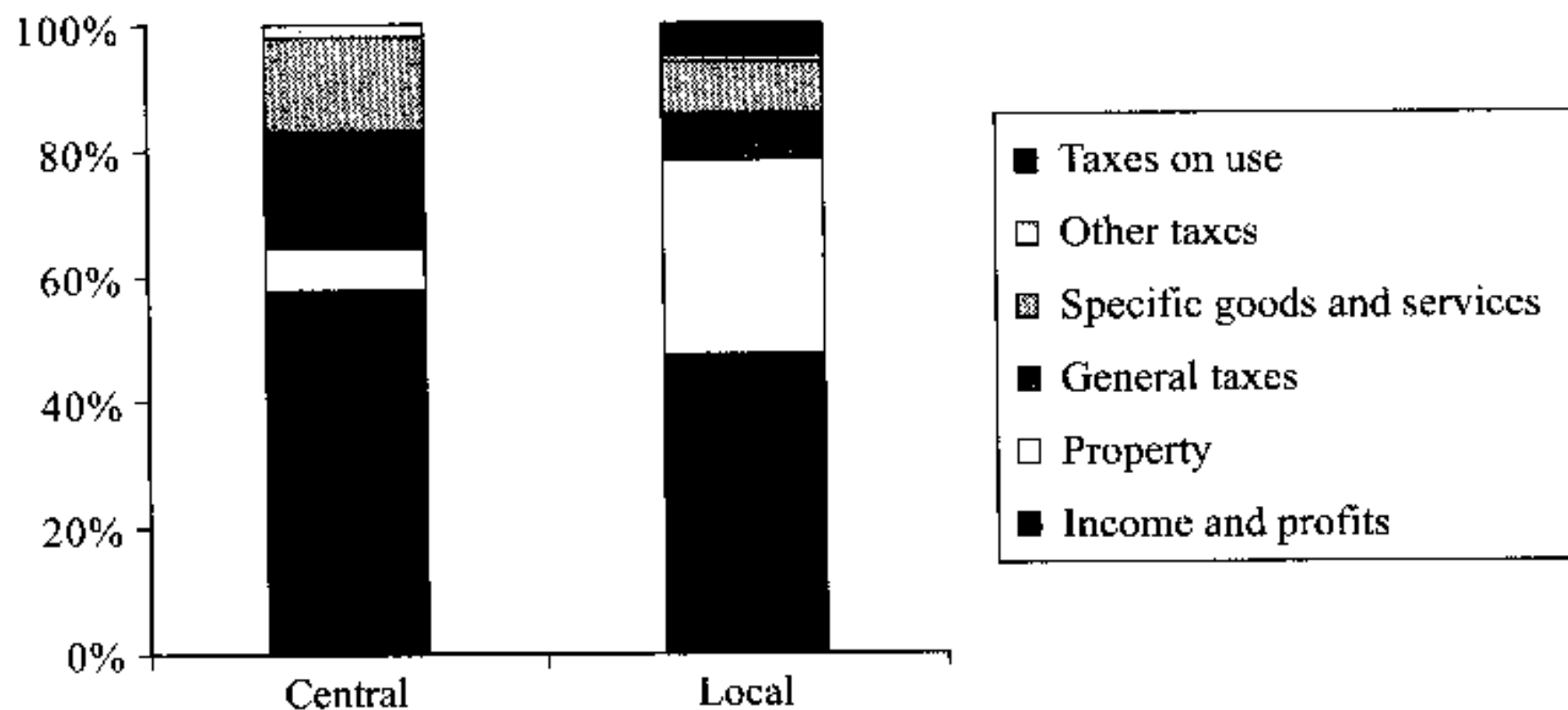


**Figure 3.15**

Tax shares at each level of government, Germany, 2000

## ■ Figure 3.16 (Japan)

- income and profits taxes are equally important for both central gvn (58%) and local gvn (47%)
- they are also more important for both level of gvn than any other category of tax instrument
- property taxation is much more significant for local gvn than central gvn
- for central gvn, general taxes (19%) make up the difference



**Figure 3.16**

Tax shares at each level of government, Japan, 2000

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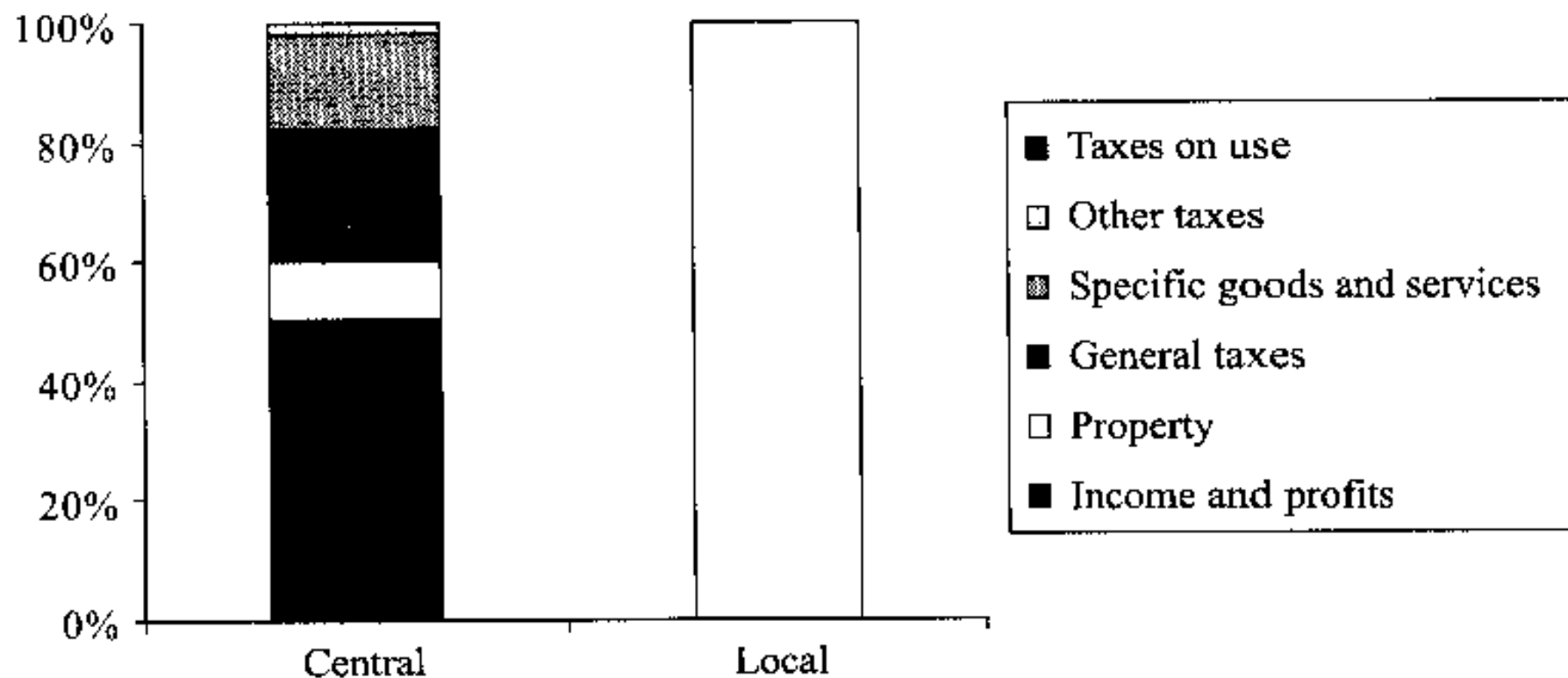
## ■ Figure 3.17 (UK)

- extreme version of the importance of property taxation for local gvn (over 99%)
- no revenue is raised by local gvn from income and profits taxes

## ■ comparison between unitary and federal

- no standard pattern of revenue within each group
  - the differences are as marked within the categories as they are across the categories
  - for all four countries property taxes raise a larger proportion for local gvn than central gvn
-





**Figure 3.17**

Tax shares at each level of government, United Kingdom, 2000

## 3.5 Measuring the Government

- two important questions on meaning of data
  - relative size of the public sector ---> interpretation
    - nominal or real (gross or net)
    - valued at market price?
    - apparent size of public sector can be increased
  - what should be included within the def of gvn?
    - state-run industries: profit max and gvn is a shareholder  
---> not included within gvn
    - policy of investment in impoverished area + cross-subsidization ---> included within gvn
  - gvn influence is broader than its expenditure