The size of government

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Introduction

- We have previously discussed voting and voting mechanisms
- The origin of the state
- History tells us that the size of states (government expenditure) has risen over time
- What can explain the increase in the size of government?
The facts

- Government has grown and grown dramatically

<table>
<thead>
<tr>
<th>Year</th>
<th>US spending % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>10</td>
</tr>
<tr>
<td>1939</td>
<td>19.4</td>
</tr>
<tr>
<td>1949</td>
<td>23</td>
</tr>
<tr>
<td>1959</td>
<td>26.8</td>
</tr>
<tr>
<td>1969</td>
<td>30.4</td>
</tr>
<tr>
<td>1979</td>
<td>31.1</td>
</tr>
</tbody>
</table>

- Biggest growth of public sector around 1960
- 22% increase in over 20 years (1937-1960)
- As expected, increase in wartime: but does not decrease after
- underestimation: tax deductions
Spending on?

- Defense
- Education
- Transfer payments
- Health
- Other public goods
The facts: Growth of general government expenditure

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>24.1</td>
<td>17.2</td>
<td>32.8</td>
<td>33.5</td>
<td>39.4</td>
</tr>
<tr>
<td>UK</td>
<td>30</td>
<td>32.2</td>
<td>43</td>
<td>39.9</td>
<td>43.3</td>
</tr>
<tr>
<td>US</td>
<td>19.7</td>
<td>27</td>
<td>31.4</td>
<td>32.8</td>
<td>32.4</td>
</tr>
<tr>
<td>Average (14)</td>
<td>22.8</td>
<td>27.9</td>
<td>43.1</td>
<td>44.8</td>
<td>45.6</td>
</tr>
</tbody>
</table>

- Belgium, Japan, Sweden and Switzerland doubled spending from 1960 to 1980
- 1980s it the growth stopped
- Full scale of government?: expenditures and transfers that governments make
<table>
<thead>
<tr>
<th></th>
<th>Maximum $T^0$</th>
<th>$T^0$ in 1992 (%)</th>
<th>Maximum $S^0$</th>
<th>$S^0$ in 1992 (%)</th>
<th>Maximum $R^0$</th>
<th>$R^0$ in 1992 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>30% (1976)</td>
<td>24</td>
<td>38% (1976)</td>
<td>36</td>
<td>32% (1990)</td>
<td>30</td>
</tr>
<tr>
<td>Austria</td>
<td>41% (1981)</td>
<td>41</td>
<td>52% (1986)</td>
<td>50</td>
<td>44% (1992)</td>
<td>44</td>
</tr>
<tr>
<td>Finland</td>
<td>60% (1992)</td>
<td>60</td>
<td>66% (1992)</td>
<td>66</td>
<td>49% (1992)</td>
<td>49</td>
</tr>
<tr>
<td>Germany</td>
<td>40% (1992)</td>
<td>40</td>
<td>48% (1992)</td>
<td>48</td>
<td>43% (1992)</td>
<td>43</td>
</tr>
<tr>
<td>Italy</td>
<td>37% (1987)</td>
<td>36</td>
<td>55% (1992)</td>
<td>55</td>
<td>43% (1992)</td>
<td>43</td>
</tr>
<tr>
<td>Japan</td>
<td>29% (1989)</td>
<td>26</td>
<td>34% (1983)</td>
<td>31</td>
<td>32% (1990)</td>
<td>29</td>
</tr>
<tr>
<td>Norway</td>
<td>49% (1978)</td>
<td>43</td>
<td>58% (1978)</td>
<td>48</td>
<td>51% (1986)</td>
<td>48</td>
</tr>
<tr>
<td>Portugal</td>
<td>33% (1985)</td>
<td>27</td>
<td>50% (1985)</td>
<td>41</td>
<td>38% (1992)</td>
<td>38</td>
</tr>
<tr>
<td>Spain</td>
<td>33% (1991)</td>
<td>32</td>
<td>42% (1991)</td>
<td>42</td>
<td>36% (1992)</td>
<td>36</td>
</tr>
<tr>
<td>Sweden</td>
<td>55% (1985)</td>
<td>42</td>
<td>66% (1985)</td>
<td>56</td>
<td>57% (1990)</td>
<td>52</td>
</tr>
<tr>
<td>Switzerland</td>
<td>28% (1992)</td>
<td>28</td>
<td>32% (1976)</td>
<td>32</td>
<td>31% (1986)</td>
<td>31</td>
</tr>
<tr>
<td>Turkey</td>
<td>24% (1979)</td>
<td>23</td>
<td>31% (1979)</td>
<td>30</td>
<td>23% (1981)</td>
<td>23</td>
</tr>
<tr>
<td>UK</td>
<td>35% (1975)</td>
<td>28</td>
<td>47% (1975)</td>
<td>40</td>
<td>39% (1982)</td>
<td>35</td>
</tr>
</tbody>
</table>

On-budget transfers equal on-budget spending minus spending on public goods and interest on debt (see text above for details on how spending on public goods and interest was calculated).
Questions:

- What caused the increase in the relative size of government over the past two centuries?
- What caused the growth of government after WWII?
- What has caused the size of government to stop growing and in a few cases decline?
- What explains the large disparities in the sizes of the government sectors across developing countries?
The government as a provider of public goods and eliminantor of externalities

- Each citizen has demand for public good as a function of income, relative price of public to private good, and other taste variables
- If a majority voting rule exists: citizens can vote for level of government expenditure
- can apply median voter theorem: $X$ composite private goods; $G$ composite public good, with respective prices $P_x$ and $P_g$
- $Y_m$ income of median voter and $Z$ is vector of taste parameters
- Government expenditure equation for median voter (in logs)

$$\ln G = a + \alpha \ln P_g + \beta \ln Y_m + \gamma \ln Z + \mu$$ (1)
Growth in government expenditure explained by

- Demand for public goods is inelastic \((-1 < \alpha < 0)\) and \(P_g\) has risen relative to \(P_x\)
- The demand for public goods is elastic \((-1 > \alpha)\) and \(P_g\) has fallen relative to \(P_x\)
- Because \(Y_m\) has been increasing over time, if changes in \(Y_m\) are to explain growing \(G\) relative to \(X\), \(\beta\) must be greater than unity
- Taste variables could change
- Tastes: to ensure against risk: unemployment/ poverty. Population density higher greater need for public goods.
- Income: $\beta > 1$ mixed support
- Baumol effect: price elasticity of demand ($\alpha$): most suggest greater than -1: relative growth in government if there has been a relative increase in its price
The government as a redistributor of income and wealth

- Government exists to eliminate externalities and increase public goods: normative?
- Positive theory of government must analyze what the redistributive nature of activity; everything has redistributive conflict.
- Meltzer and Richard model: $r$ lump sum grants; tax $t$ levied on mean per capita income $\bar{y}$. Balanced budget:

$$ r = t\bar{y} \quad (2) $$

- Individual

$$ l = 1 - n \quad (3) $$

$$ c = (1 - t)y + r \quad (4) $$
Income depends on random variable $x$, so that $y = nx$.

Individual’s choice of $n$ satisfies:

$$\frac{U_l}{U_c} = (1 - t)x$$  \hspace{1cm} (5)$$

Marginal rate of substitution between leisure and consumption is equated to the net-of-tax marginal product of an individual’s time.

For utility function $U = \ln(c + \gamma) + a\ln(l + \lambda)$:

$$n = \frac{(1 - t)(1 + \lambda)x - a(r + \gamma)}{(1 - t)(1 + a)x}$$  \hspace{1cm} (6)$$

critical amount of $x_0$ is:

$$x_o = \frac{a(r + \gamma)}{(1 - t)(1 + \lambda)}$$  \hspace{1cm} (7)$$

Substituting $n$ into utility functions gives shows utility depends on $r$ and $t$.

A tax and grant ratio can be established similar to the median voter theorem.
alternative redistribution models

- Cusack: left of center governments may prefer more redistribution and larger budgets (cannot explain growth)
- Kristove et al (1992): redistribution as social affinity between different groups: gaps between upper and middle class determines level of government
- Peltzman (1980): depends on shape of distribution of income
- problem with model: government too large for simply a redistributive tool.
Representative democracy and growth of government

- Increased franchise of voters? more demand for government: UK franchise increased until median voter’s income was below mean and government redistribution went from regressive to progressive.
- Poorer now franchised: increased demand for government.
- Why did was this allowed: ruling elite were worried of revolutions.
- Pommerehne and Schneider (1982) show that demand for government under Swiss municipalities with direct democracy is always lower compared to if it was representative democracy–28% more
- Rep. democracy changes the nature of political outcomes making government considerably larger than if it was directly controlled by citizens. It effectively constrains government.
- Representative democracy facilitates interest groups
- Also depends on structure of institutions within representative democracy. Are citizens rationally ignorant?
- Tends to support state over citizen view
Interest groups and the growth of government

- Tullock (1959): majority rule results in ‘over investment’ in public goods
- if we focus purely on government expenditure: contradictory results: some interest groups prefer more while others less
- Mueller and Murrell: parties supply interest groups with favous in exchange for support. With spillovers form other groups, government becomes larger. Positive relationship between interest groups and government sector
- Must argue that interest groups have grown in strength the last decades.
Bureaucracy and the growth of government

- Expenditure demanded by government bureaucracy (e.g. ‘lobbying from inside’)
- Growth in government: larger salaries/travel expenses etc UK perks!
- Government employees maximize their size of budget: size of government: asymmetric information.
- Linkage between budget and benefits: time delay?
- Voting power of government employees: tend to vote more
Fiscal illusion

- Fiscal illusion hypothesis presumes that the legislature can deceive the citizens about the true size of government.
- Citizens measure size of government by size of tax bill.
- Must increase tax burden without citizens being aware.
- A flat renter: paying property tax.
- Voters are ‘rationally ignorant’.
- Types:
  1. Tax burden is more difficult to judge the more complex the tax structure.
  2. Renters are less able to judge their share of property taxes than homeowners.
  3. Built-in tax increases because of progressivity of tax structure are less clear than legislative changes.
  4. Implicit future tax burdens inherent in the issuance of debt! less clear than equivalent tax raises.
  5. Lump sum cash subsidies to their government as being as much theirs as they would a cash subsidy to themselves.
- Not much compelling evidence or vague way it is interpreted.
Tax elasticity

- Supply of government services is provided by those who seek to maximize the budget size
- Ease of taxing: rural to urban / women into work/ technology
- Kau and Rubin (1999) find 2/3 of government changes can be explained by these methods
- What about a smaller growth in government? Overestimated the elasticity of tax revenue and raised tax beyond the level at which it could be sustained indefinitely.
Conclusions

- Two general methods to explain the size of government:
  1. Classical theory of democracy where authority lies with citizens: state exists to carry out the will of the people (provider of public goods; redistributor of income; interest groups)
  2. State above the citizen (Bureaucracy; fiscal illusion; tax elasticity)

- Latter emphasizes the preference of the state (or workers within the government)

- Likely that all reasoning has some justification.