Abstract

Motivation (introduction)

Rise of the welfare state in the middle of the twentieth century ..: Even since, the share of social spending as risen. Will this continue and which factor sets the limits to social spending?

1. Competing theories

What forces will set the ultimate limits to social spending?

* 1. Burden of taxation: there ain’t no such thing a free lunch.

A theory of the limits to social spending predicts that **rising marginal deadweight costs** of the redistributive welfare state will choke of either the ability or the willingness to raise taxes and transfers. Since the days of Adam Smith, warnings have been made, that costs rise on two fronts and create discouraging effort both for the taxes and the subsidized.

* 1. Effect of informality

Taxes affects labour-leisure choices, but it also stimulates labour supply in the informal economy, here defined as the untaxed part of the economy. Some has argued that the increase of the informal economy is due to the rise of taxation and social security (Schneider et al, 2000). The argument is straight forward: as taxes are distortionary, the higher the tax rates, the more distortion and shadow economy.

Others have argued that firms are willing to be taxed at reasonable rates, but unwilling to put up with over-regulation and corruption, and thus explaining the rise of the informal economy and decline of government revenue by poorly managed tax systems (E. Friedman et al, 2000, La Porta et al, 1999).

No matter the reason, a rise in the share of the informal economy will decrease government revenue. This might result in a vicious circle where tax rates on the formal economy are increased to keep funding the public provision of goods – often combined with a decline in quality goods provided by the public sector and the administration – with the consequence of additional growth in the informal economy (Schneider et al, 2000).

**Informality** might affect social expenditures in two opposite directions. A high degree of informality might make it difficult to obtain a high level of social spending, as the share of people paying taxes and thus funding the welfare state is low.

(Working in the opposite direction, a high degree of informality in the economy might require the state the expand redistributive program to support persons who does not participate on the labour market.)

* 1. Demography: the young man’s burden

An important factor for society’s priorities and government expenditure are the age distribution of the population. An older population might prefer government contribution to health, pensions and welfare programs. The older the population, the more the concern of the elderly will mobilize the old and middling age. However, as elderly people become too numerous, the generosity of the programs will start to decrease.

* 1. Control variables

Literature have argued that the average income, income distribution and a number of political factors also affects social spending.

It has been argued, that an increase in **average income** raises not only the level of government spending, but even the share of GDP. There is not consensus on why, some argues that raise the GDP provides the social insurance we need, while other argues that development causes problems that make insurance needed. Both sides predict that government transfer and total spending should rise with the advance of average income. (Lindert. p.6). **Income distribution,** especially the significance of the median-voter, have gotten more attention role in the recent year. The central question here is which group the median voter sympathizes with: the poor or the rich? The closer to the poor, the median voter feel, the more the median voter will favour redistribution and egalitarian spending. On other hand, if the median voter feels closer to the rich they will vote against taxation. (Meltzer and Richard). Higher inequality, measured by the median/mean income ratio, gives the median voter a taste for taxing the rich, which might discourage growth. (Equality is good for growth.)

Turning to political factors, the only relevant **electoral variables** for the period 1980-2012 are voter turnout and executive turnover as democracy and adult suffragette are present. Both these variable might have a positive effect on redistribution and social spending. As voter turnout generally are more elastic among lower income voters, a high turnout tends to favour redistribution. Executive turnover is thought to be a measure of political stability, and fast turnover may raise spending.

Controlling for the effect of these factors, competing theories can now be tested against each other to find the limit of social spending.

1. Empirical work

2.1. Data selection

The data set includes 34 OECD member states from the period from 1980 to 2012. This also includes 5 countries that used to be under Soviet control (Poland, Estonia, Slovak Republic, Slovenia and the Czech Republic). Data from these countries are unavailable for many variables before the beginning of the 90’s. This implies an unbalanced data set.

Most of the data is extracted from OECD.Stat. This includes data on government expenditures, GDP, demography, income inequality, voter turnout, unemployment and labour force participation.

Social expenditures are divided into the sub-categories health, welfare, unemployment and pensions. All categories include both benefits in cash and benefits in kind. Social expenditures are the sum of these expenditures, thus excluding spending on housing. Non-social expenditures are defined as the residual of total government spending. The variables used throughout the analysis are the respective shares of GDP.

Labour force participation for males are here used to measure the degree of informality in the economy. Earlier studies have used the difference between the official and actual labour force (cited in Schneider et al, 2000). The weakness of this method is that the difference in labour may have other causes, norms for whether or not women are participating on the labour market. Moreover, people can work both the formal and the informal economy. Only using male labour force participation might be a better indicator for the size of the informal economy.

As a measure for inequality the P90/P50 ratio is used. This is the ratio of the upper bound value of the ninth decile to the median income. An increase in the ratio will imply more distance between the median voter and the rich. (P50/P10 also possible, measuring the distance between the median voter and the upper bound of the first decile – the poor)

The variables for the development in demographics are: young (0-19), school\_age (5-19), workage (20-64), young\_adult (20-39) and old (65 +). The variables entering the analysis are the ratio of the group with respect to people in the working age. The variables school\_age2, young2, old2 and young\_adult2 are the squared ratio.

Data on expenditures on education and number of student enrolled are extracted from the World Bank. Data on import, export and capital formation are extracted from Pen World Tables. The variable open is defined as sum of export and import as a share of GDP. Corporatism is a crude index developed by Bruno and Sachs [1985] and Schmitter [1989] of national institutions negotiating pay, employment and fiscal policies among organized representatives of labour, business and government. Executive turnover is measured as the number of changes in president/premiere minister over the last decade and The Archigos data set “A Data Base on Leaders” is used. The variables linc is the natural logarithm to GDP pr. capita. The dummy-variable eastern takes the value 1 for countries that used to be under Soviet control.

2.2 Model selection

In any data set containing countries and time, “the error terms are likely to contain both international heteroscedasticity (a different error term for each country) and serial correlation (dependence of each year’s error on that of the preceding year” (Lindert, p. 9). Moreover, the errors from each social-spending equation, are likely to be interdependent. National propensity toward one program are omitted and can cause errors in the estimation of the propensity toward another program.

A big informal economy might damper growth as there is negative correlation between informality and investment in public infrastructure (Loayza, 1996). However, widely discussed as it builds on the assumption that public investment in infrastructure is necessary to develop production technology (Schneider et al p. 13, 2000). (criticism, Asea 1996, Loayza only uses Latin American countries with poor institutions)

2.3 Hypothesis testing

A comparison of single-equation OLS and equation system OLS is carried out:

2.3.1. OLS

2.3.2. SEM

There are good reasons to explore simultaneous relations between income level, informality and social spending. These relations might as well be nonlinear.

1. Presentation of results
   1. Which theory fit the data?
   2. Prediction
2. Discussion, comparing to other literature
3. Conclusion

References