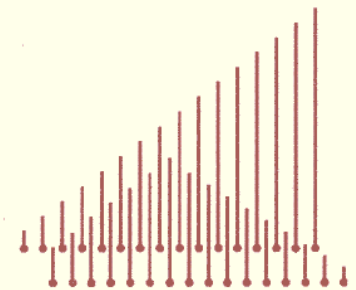


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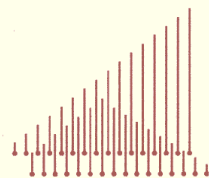
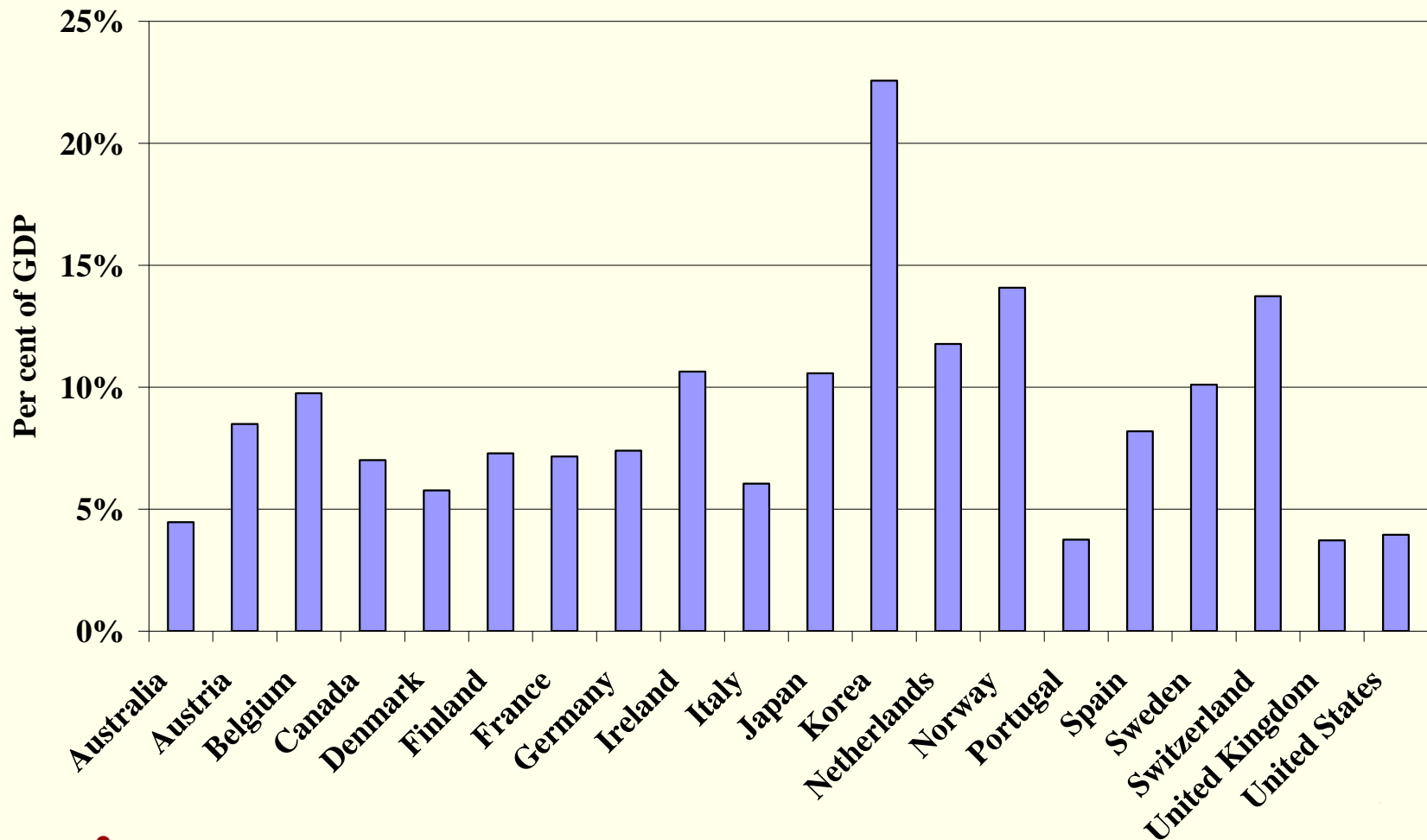
## Fiscal Policy, Fairness between Generations and National Saving

Ray Barrell and Martin Weale

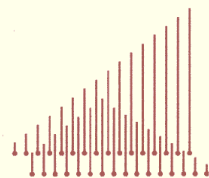
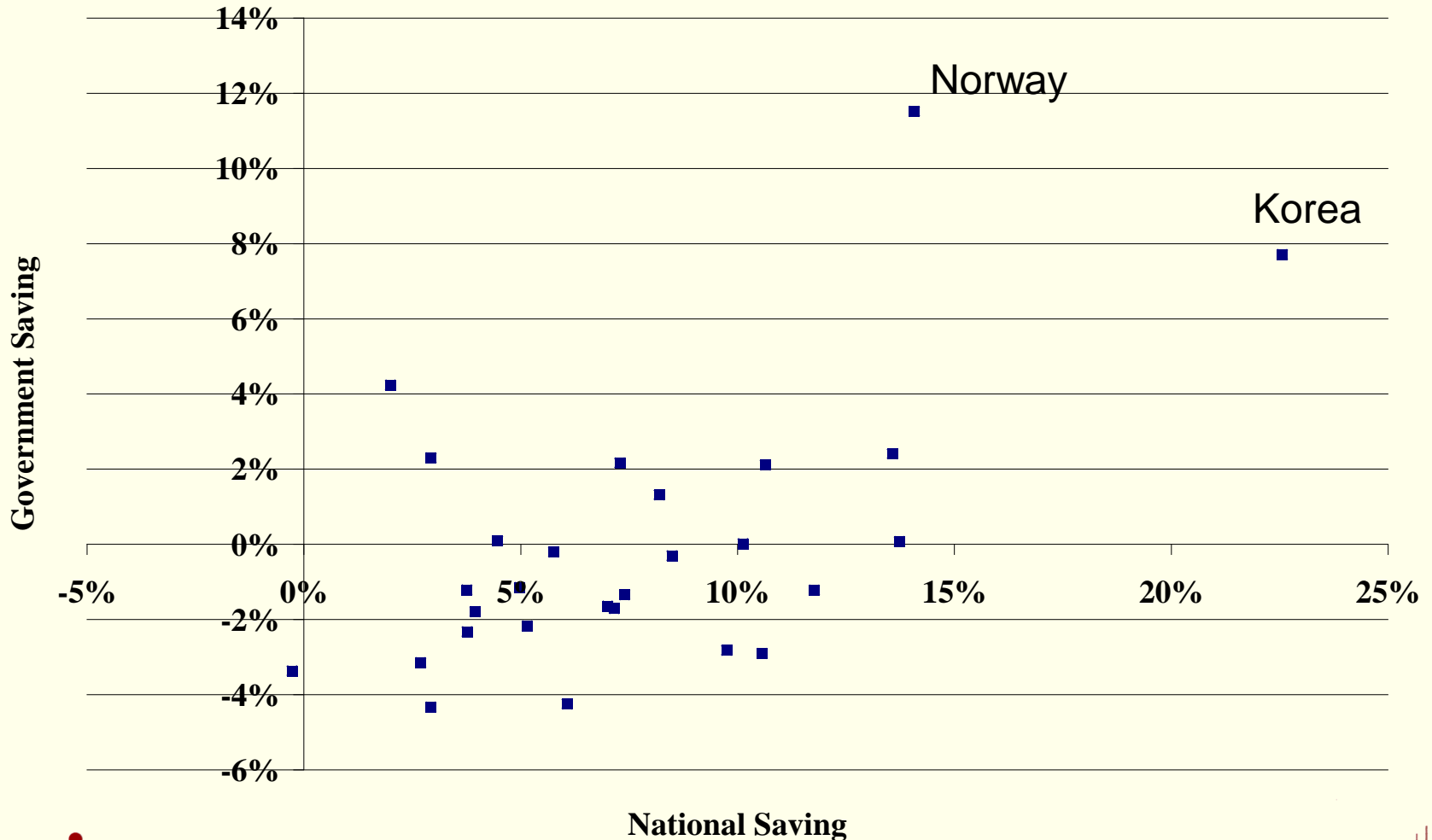


National Institute  
of Economic and  
Social Research

# International Comparisons of Saving: Average 1987-2007



# The Fiscal Balance and National Saving



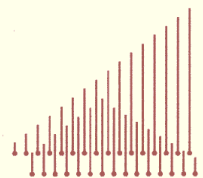
# Short-term Relationships

- Annual data with country fixed effects removed and Norway and Korea omitted

$$NSG_{it} = 0.50SG_{it} \quad R^2 = 0.26$$

(14.0)

- Similar offset to results obtained from consumption functions



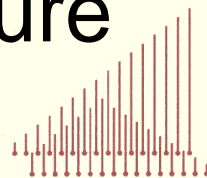
# Influences on Distribution of Resources between Generations

1. Pay as you go transfers
2. Debt-financed Expenditures
3. Movement in Land Prices

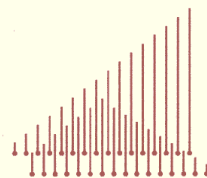
Explore using standard two-period overlapping generations model (Allais, 1947)

Initially consumption choice with fixed endowment

Then introduce i) housing/land and ii) leisure

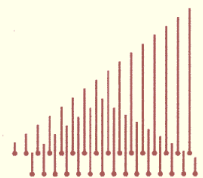


- $c_{1t} = \phi(r) w_t$
- $c_{2t} = (1 - \phi(r)) w_t / (1 + r)$
- $k_t = (1 - \phi(r)) w_t$
  
- $g$  is growth rate  $R = 1 + r$
- $r$  is interest rate  $G = 1 + g$



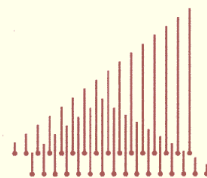
# Pay as You Go Transfer

- $c_{1t} + c_{2t}/R = w_t + t_t(1/R - 1/G)$
- $k_t = G^{t-1} \{ (1 - \phi)(w_1 - t_1/G) - \phi(1/R)t_1 \}$
- The present discounted value of the reduction in consumption of future generations matches that of the increase in the consumption of the first generation.



# Debt-Financed Spending

- $d_t + k_t = G^{t-1} (1 - \phi) (w_1 - d_1 (R/G - 1))$
- The discounted value of the service payments matches the initial value of the debt.
- With  $t_t = R d_t$  the effects of debt financed expenditure and transfer payments are equivalent.
- Possibly easier to reduce transfer payments than to default on debt.



# Housing and Land

$\rho_t$  is rental on housing

$h_{it}$  is amount of housing consumed

Cobb-Douglas consumption structure

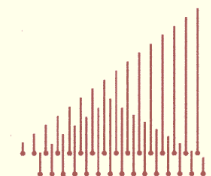
$$\rho_t h_{it} = (1-\gamma)(c_{it} + \rho_t h_{it})$$

A fixed supply of housing  $h$  so the rental clears the market

$$\rho_t = (1-\gamma)\{(1-\phi)w_t + R\phi w_{t-1}\}/h$$

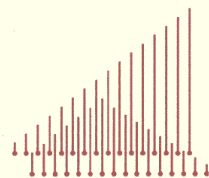
Land price

$$\pi_t = \rho_t / (r-g)$$

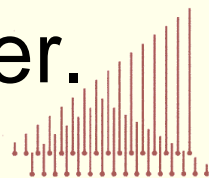


□  $\pi_t h + k_t = G^{t-1} (1 - \phi) w_t$

- Land crowds out productive capital in much the same way as PAYG transfers or national debt.
- Suppose  $\gamma$  falls to  $\gamma'$
- Each generation spends less of its fixed labour income on produced goods and the price rather than the amount of housing consumed rises.

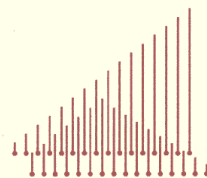


- All subsequent generations become worse off.
- We show that the present discounted value of the loss of consumption of produced goods matches the increase in consumption of produced goods of the generation owning the land at the time preferences change.
- An increased price of land is like an increased national debt or PAYG transfer.

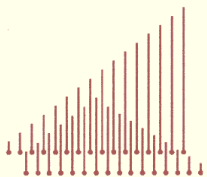


# Normative Analysis

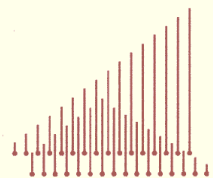
- Should governments be concerned about fairness between generations.
- Three notions of fairness
  1. Each generation should pay its own way
  2. Fairness as seen by a social planner
  3. Altruism: equalisation of consumption of young people and old people alive at the same time.



- (3) can be achieved either by compulsory saving or by PAYG transfers. Thus (3) offers an incomplete specification for fiscal policy.
- (1) can be seen as a special case of (2) with infinitely inelastic substitution of welfare of different generations.
- But all of these have implications for required national savings.



- The fiscal balance needs to take account of i) historic PAYG arrangements and ii) movements in land prices.



# Conclusions

- A focus on fiscal policy as defined with reference to the budget balance runs the risk that large burdens may be imposed on future generations.
- Fiscal policy should be assessed with reference to i) the overall savings needs of the economy and ii) the extent of private sector savings.

