

FISCAL POLICY AND NATIONAL INCOME
 By Jorgen Gelting, University of Copenhagen

A simple model is used to carry out a static short run analysis of the effects of fiscal policy on national income. Symbols used:

Value-flow per time unit	Marginal rate	
E	.	Total public income creating expenditure
R	.	Total public income destroying revenue
B	.	$E - R$
D	d	Direct tax on income
T	t	Indirect tax on consumption
W	.	Public expenditure for wages
V	.	Public expenditure for buying goods
Y	.	Gross national product
Z	.	$Y - W$
S	s	Private saving (+ depreciation)
F	.	$Y - D - S$
C	.	$F - T$
G	g	Private gross investment
U	.	Exports
A	a	Imports
K	.	Capital exports = $U - A$

Basic equations:

1. $U + G + W + V = A + S + D + T$

2. $Y = Z + W$

3. $A = (U + G + C + V)a$

4. $Z = (U + G + C + V)(1 - a)$

- 5. $G = gZ$
- 6. $D = dY$
- 7. $S = (1 - d)sY$
- 8. $T = t(1 - d)(1 - c)Y$
- 9. $C = (1 - d)(1 - c)(1 - t)Y$

Hence

10.
$$Y = \frac{(U+V)(1-a) + N(1-(1-a)g)}{1 - (1-a)g - (1-d)(1-s)(1-t)(1-c)}$$

Using these equations the effects of several forms of fiscal policy may be ascertained.

In the case of Denmark in the inter-war period the following values of the marginal rates have been found:

	<u>1922-31</u>	<u>1932-39</u>
g	0.12 (?)	0.12
a	0.5	0.2
s	0.2 (?)	0.2
d	?	0.2
t	?	0.1

The above analysis assumes the rate of interest to be constant. In Denmark in the 1930's the elasticity of private investment with respect to the rate of interest seemed to be approximately 2. The dependency of the interest rate upon the policy of the central bank has been sought determined through correlation analysis.

The interrelationships between fiscal, interest and foreign exchange policy and national income is illustrated through a chart.