Short Run Fluctuations

Fluctuations in Aggregate Spending main source of recessionary and expansionary gaps.

Investment Spending = IP

Planned vs Actual Spending

C, G, NX: actual = planned

Inventory investment
Business Fixed investment

Consumption

\[ C = \bar{C} + c(Y - T) \]

- not function of income
- wealth
- real interest rate (more in lec 11)
- consumer confidence

Economic Naturalist

26.2

What effect did 2000 to 2002 decline in stock market have on consumption spending?

13.3 T to 6.5 T

$1 fall mean fall in C 3 to 7 cents

Other factors counteract stock market wealth effect
Spending depends on Income

\[ \text{PAE} = C + Ip + G + NX \]

\[ C = 620 + 0.8(Y - T) \]
\[ G = 300 \]
\[ NX = 20 \]
\[ T = 250 \]
\[ Ip = 220 \]
\[ \text{PAE} = 960 + 0.8Y = \text{autonomous} + \text{induced} \]

Output depends on Spending

Meeting demand at set prices

\[ \text{Production} = \text{PAE (demand)} \]
\[ Y = \text{PAE} \]

Output depends on Spending

\[ Y = \text{PAE} \]

Short-Run Equilibrium Output

<table>
<thead>
<tr>
<th>Output Y</th>
<th>Planned aggregate expenditure PAE = 960 + 0.8Y</th>
<th>Y - PAE</th>
<th>Y = PAE?</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,000</td>
<td>4,160</td>
<td>-160</td>
<td>No</td>
</tr>
<tr>
<td>4,200</td>
<td>4,320</td>
<td>-120</td>
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<tr>
<td>4,400</td>
<td>4,480</td>
<td>-80</td>
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<tr>
<td>4,600</td>
<td>4,640</td>
<td>-40</td>
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<td>4,800</td>
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<td>0</td>
<td>Yes</td>
</tr>
<tr>
<td>5,000</td>
<td>4,960</td>
<td>40</td>
<td>No</td>
</tr>
<tr>
<td>5,200</td>
<td>5,120</td>
<td>80</td>
<td>No</td>
</tr>
</tbody>
</table>

Determination of Short-Run Equilibrium Output (Keynesian Cross)

A Decline In Planned Spending Leads To A Recession

Inventory drawn down

more sales than planned

firms expand production to meet demand

A decline in autonomous aggregate expenditure (C)

shifts the expenditure line down

Recessionary gap

Equilibrium Y = 4,800

\[ Y < 4,800, \text{PAE} > Y \text{ actual} < \text{planned} \]
\[ Y > 4,800, \text{PAE} < Y \text{ actual} > \text{planned} \]
Increase in Planned Spending

Shifts in PAE

\[ C \] shifts
Ip shifts
G
NX

Naturalist 26.3

Cause of 90-91 recession?
Decline in consumer confidence
Credit crunch from 80s bank crises

Naturalist 26.5

Cause of 2001 Recession (Mar 01)?
C high
Ip low

Multiplier

10 unit drop in aut expd
50 unit fall SR output

Multiplier = \( \frac{1}{1-0.8} = \frac{1}{0.2} = 5 \)

Large means spending changes due to income change large.
Likewise for small multiplier

C(bar) falls 10

PAE falls 10
Producer’s income (worker, firm owner) falls 10, spending falls 0.8x10
Other producers’ income falls .8(0.8x10)

\[ 10[1+0.8+0.8^2+0.8^3+...] = 10[1/1-0.8] = \]
Closing Output Gaps

Stabilization Policy
Fiscal: G, T
Monetary: (next time)

Expansionary
Contractionary

Close Gap due to fall in Ip

Ip falls 10
PAE shifts down 10
Stabilize: Inc Aut exp by 10,
Fiscal Policy = Inc G by 10

Naturalist 26.7

Does military spending stimulate economy?

Change in T to close gap

Change Y-T
means change C
Dec tax or Inc transfer

Recessionary Gap=50

Shift up PAE by 10 (since 10xmult=50)
Inc C by 10
10 = 0.8(change in T)
change in T = 12.5
Dec in tax
Inc in transfer

Naturalist 26.8

Why did govt send out rebates $300-$600 in 2001?
Total $38B
dec tax
U Michigan survey: actually little effect
Fiscal Policy

1) Affects spending & potential output
   Potential Output (if work & saving incentive)
2) Large deficit means low public saving
3) Legislative process: inflexible tool
4) Automatic Stabilizer: fall in GDP, get inc G,
   inc transfer, dec T