Lecture 4

Capital

The Accumulation of Money & Trouble
Keys

- Capital: principal driver of growth
  - Pushing markets, competition & technology

- Capitalism rests on exploitation
  - Of labor & nature – & everyone

- Capitalist growth comes in waves/cycles
  - & recessions are the downside

- Last 40 years have been very rocky
  - Ending with the Great Recession
Lecture 4: Capital
The Accumulation of Money & Trouble

I. Capital & Growth
II. The Sources of Profit
III. Boom & Bust
IV. Into The Great Recession
I. Capital & Growth

A. What Causes Growth?
B. Markets & Competition
C. Technology & Scale
D. Profit & Accumulation
What Drives Growth?

- A key question for classical political economy
  - Markets, but also society & state creating conditions
  - Living the revolution (& worried it might fail)

- Largely forgotten by neoclassical theory
  - Optimization & equilibrium in self-regulating markets
  - Living the triumph

- Kept alive in Marxist & Schumpeterian theory
  - Capitalism as driver
  - And also subject to crisis
    - Cf. Keynes & Great Depression
The Ghost in the Economy

# 3 theories of growth
  # Markets & competition
  # Technology & scale
  # Profit & accumulation

# Also theories of industrial revolution
  # Discussed in lectures 1, 2 & 3
I. Capital & Growth

A. What Causes Growth?
B. Markets & Competition
C. Technology & Scale
D. Profit & Accumulation
Markets & Growth

- Division of labor (Adam Smith)
  - Internal specialization

- International trade (David Ricardo)
  - External specialization
  - “comparative advantage”

- Efficiency (Neoclassicals)
  - Cost minimization
# Markets & competition
- Among buyers & sellers
- Race to keep up (weak competition)
- Neoclassical version

# Strong competition
- Race to get ahead (extra profits)
- Schumpeter & Marx
- “Competitive advantage” not comparative advantage
Who Competes?

- Firms (companies)
  - Intra-firm (profit centers)

- Industries (products, sectors)
  - Compete for investment capital

- Places (at all scales)
  - Countries, cities, continents (see Part II)

*Only firms compete in neoclassical economics.*  *Cf. Michael Porter*
I. Capital & Growth

A. What Causes Growth?
B. Markets & Competition
C. Technology & Scale
D. Profit & Accumulation
Technology & Growth

# Technical change explains rising productivity
  # Robert Solow, 1950s (big discovery!?)

# But what explains technical change?
  # Exogenous theory: Deus ex machina
  # Endogenous theory: Economic drivers of tech (lec. 3)

# ‘New growth theory’
  # “Not more cooking but better recipes” - Paul Romer
  # Back to Schumpeter – and Marx – again

NB: not all technical change explained by economics
Increasing Returns

# vs. neoclassical constant returns

# Economies of market size (more specialization)
# Economies of scale (shared overhead)
# Economies of mass (flow efficiencies)
# Economies of interaction (external economies)
# See also lec. 5

*Also important in New Growth Theories*
I. Capital & Growth

A. What Causes Growth?
B. Markets & Competition
C. Technology & Scale
D. Profit & Accumulation
Capital Accumulation

# Profit-seeking – the name of the game
- Desire to get rich, build a company
- Remain in the game (avoid bankruptcy)

# Profit drives investment
- Investment creates industry
- Industry produces more profits

# Spiral of accumulation
- Investment » profit » more investment,
- No limit to riches in money form
Capital Creates...

- **Industrial capacity**
  - factories, machinery, etc.

- **Technology**
  - R&D, new machinery, new products, etc.

- **Markets**
  - demand for capital goods + wages for consumer goods

- **Competition**
  - more capacity, more price pressure, more firms seeking to get ahead, etc.

*Capital is the key creative force pushing the market frontier (lec. 1), the industrial frontier (lec. 2) and the technical frontier (lec. 3).*
Key Driver

# Capital accumulation is, therefore, the principal driver of growth

# And if it slows down...
  # Firms seen as failing
    # E.g., Yahoo
  # Economies seen as failing
    # E.g., U.S. today
Lecture 4: Capital
The Accumulation of Money & Trouble

I. Capital & Growth
II. The Sources of Profit
III. Boom & Bust
IV. Into The Great Recession
II. The Sources of Profit

A. What is Capital?

B. Labor & Profit

C. Nature & Rent

D. Money & Interest

"We're frequent rowers. Any chance of an upgrade?"
Three Faces of Capital

- Property
  - Land, business, assets
  - “Means of production”

- Wealth (& Money)
  - Stock of property
  - Income flows from property

- Class
  - Power over economy & society
Three Functions of Capital

# Invest
  # For renewal & expansion

# Manage
  # Organization & leadership

# Supervise
  # Bossing workers

# But surplus > investment
# & reward > skill value
Capital Profits

- Capitalists seek profits
  - If not, they’re history…

- Where does profit come from?
  - Value added = revenue – costs
  - Workers produce more than they cost

- Vs. Neoclassical economics
  - Zero surplus at equilibrium
  - Capitalists paid for their ‘contributions’
Capital Lives!

# Capitalism is a social system
  # Classical political economy & Marx

# Vs. cold, dead logic of markets
  # Neoclassicals

# Capitalism has an economic logic (accumulation)
  # Also a social logic: class conflict
Mythology of Capital

# Karl Marx’s key ideas
- Capital is not a god of immaculate birth
- Wealth of Nations is not money or things, but human labor & creativity
- (Plus wealth of nature)

# Three forms of surplus
- Profits (from labor)  *Part IV*
- Rent (from land/nature)  *Part V*
- Interest (from money)  *Part VI*
II. The Sources of Profit

A. What is capital?

B. Labor & Profit

C. Nature & Rent

D. Money & Interest

"We're frequent rowers. Any chance of an upgrade?"
The Fruits of Labor

- The creative force of industry
  - Workers, managers, technicians, etc.
  - Both manual labor & mental labor

- What else do capitalists do?
  - Buy labor in the market (lec. 1)
  - Put it to work in industry (lec. 2)
  - Collect products of labor & sell them
  - Keep the profits (revenues – costs)

Yes, they invest – but not everything!
Labor as a Class

# Labor is exploited
  # It gives more than it receives

# Labor has little control
  # Does not make big decisions

# Working class majority
  # 60-80% of people

More on work & labor in Part IV
II. The Sources of Profit

A. What is capital?
B. Labor & Profit
C. Nature & Rent
D. Money & Interest
Exploiting Nature

- Nature provides resources
  - Materials, fuel, soil, air, etc.

- Nature yields a ‘natural surplus’
  - Photosynthesis, animal power, fossil fuels, etc.

*More on resources in Part VI*
Who Gets the Surplus?

- Capitalists get fruits of natural processes
  - Keep the surplus over cost, again

- Landowners get rent
  - Just for owning pieces of nature

- Are landowners a class?
  - Often targeted by economic critics
    - E.g., Ricardo, Henry George, critics of OPEC
  - Another branch of capital today
    - But that doesn’t make landowning ‘productive’
II. The Sources of Profit

A. What is capital?

B. Labor & Profit

C. Nature & Rent

D. Money & Interest

"We're frequent rowers. Any chance of an upgrade?"
The Monied Interest

- Financiers are the owners of money
  - Make money by lending money
    - Get interest – their cut of the surplus
  - & investing in paper assets, like stocks
    - Dividends also paid out of social product

- BUT isn’t money useful/productive?
  - For investment, it expands production
  - But still subject to same analysis of profit

More on money & finance in Part V
Conclusion

- Myths of modern economics
  - There is no profit/surplus
  - Labor is just a cost (nature, too)
  - Capital is the creative force

- Exploitation creates antagonisms
  - Hence social struggles
  - Around work, environment & money
  - Hence political economy
Lecture 4: Capital
The Accumulation of Money & Trouble

I. Capital & Growth
II. The Sources of Profit
III. • Boom & Bust
IV. Into The Great Recession
III. Boom & Bust

A. Waves/Cycles
B. Upswings
C. Downturns
D. Geography
The Business Cycle

- **Upswing**
- **Peak**
- **Downturn**
- **Trough**
- **Recovery**

- **Peak-to-peak**
- **Trough-to-trough**

A common, repetitive pattern
Trends & Cycles

Actual growth

Trend line

GDP 1920–1940

Billions of constant $1990

US GDP Growth

www.kshitij.com

# Deviations from trend

# Smoothing
Monitoring Cycles

- **Indicators**
  - GDP, jobs, orders, sales
- Leads & lags
  - Hard to predict
- Poor indicators
  - Stocks, ‘consumer confidence’
- Imperfect data
  - NBER six month revisions

US GDP growth revised down to 1.6 percent as economy cools

US GDP grew at a 1.6 percent pace in the second quarter, less than the original 2.4 percent estimate. Surging imports and the end of homebuyer tax credits contributed to the change.
Business Blarney

# Everything’s always coming up roses
# Glass more than half full...always

How to lie with statistics
# Mixing leading & lagging indicators
  # Esp. unemployment & stocks
# Minimizing recessions
  # Definition: 2 quarters below zero
III. Boom & Bust

A. Waves/Cycles
B. • Upswings
C. Downturns
D. Geography
Business Rising

- Rising sales
  - Falling inventories
  - Rising orders (K goods)
  - Rising capacity use

- Key signal
  - Rising profit rate
  - Triggers investment
Virtuous Circle

- Technology
  - Add new factories & equipment
  - Keep improving

- Labor
  - Add new workers, rising wages
  - Learning & lower turnover

- Multiplier (Keynes)
  - Spending generates more business
Bottlenecks

# Supply lags demand growth
# Labor, resources, machinery

# » Input prices (costs) rise

# » Profit squeeze
Overshoot

- As the cycle peaks...
- Things move too fast
- Calculations go wrong

- Overaccumulation
- Too much capacity
- Too many firms
- Too much output

- Generally felt as “too much competition”
III. Boom & Bust

A. Waves/Cycles
B. Upswings
C. Downturns
D. Geography
Glut

# Excess output
  # Unsold goods » rising inventories
  # » falling prices

# Excess capacity
  # Idle machines & factories

# Excess labor
  # Layoffs & rising unemployment

# » Profit decline: \( \pi = \frac{(R-C)}{K} \)
  # R down (falling prices)
  # C up (bottlenecks)
  # K too large (excess capacity)
Spiraling Down

# Vicious cycle
# Falling profits
# Less investment
# Plant closures & layoffs
# Smaller multiplier
# Pessimism
Cleaning House

# Reduced K
  # Plant closures
  # Bankruptcies
  # Fire sales

# Reduced C
  # Layoffs
  # Wage cuts
  # Falling input prices

# » Improved \( \pi \)
  # \( \pi = (R-C)/K \)

(AP).....Stricken Bear Stearns is being bought by rival JP Morgan Chase for just $2 a share — versus Friday’s closing price above $30 —
Creative Destruction

# Sweeping away the old to allow the new to flourish
# J. Schumpeter
# “All that’s solid melts into air” – K. Marx
III. Boom & Bust

A. Waves/Cycles
B. Upswings
C. Downturns
D. • Geography
Geography of Booms

# Outward

- New industrial spaces
  - Guangdong in 1980s
- New industrial countries
  - China in 1990s
- New urban rings
  - Beijing in 2000s

# Upward

- Cities rising, greater density
  - L.A. in 1980s
  - Shanghai in 2000s
Geography of Busts

- Local crises
  - L.A. in 1990, SF in 2000
  - Inland California today

- Country crises
  - Japan 1990
  - Thailand 1996
  - USA 2008

- Decline of old industrial places
  - Rolling up the rug of progress...
  - Deindustrialization of Northeast
  - Hollowing out of whole cities
CODA: Capital Cycles

1. If capital drives growth, then it creates cycles
2. NOT just techno genie, globalization, Presidents, etc.

3. Capital also undermines growth » downturns
4. NOT just external shocks from OPEC, politics, natural disasters, etc.

Note: We’ll add finance & financial bubbles to this model in Part V
Lecture 4: Capital
The Accumulation of Money & Trouble

I. Capital & Growth

II. The Sources of Profit

III. Boom & Bust

IV. Into The Great Recession
IV. Into the Great Recession

A. Violent Swings

B. Great Regression

C. Return of the Long Wave?
5 Cycles Since 1970

1. Up 1960-72    Down 1973-74
4. Up 1993-00    Down 2001-03
5. Up 2003-06    Down 2007-10

But not in unison around the world
And For the World Economy?
Waves of Expansion & Crisis

# 1950s-70s: Japan & Germany
  # Recession of early 1970s

# 1960s-80s: Taiwan & Southern Europe
  # Recession of early 1980s

# 1980s-90s: Korean, SE Asia [South China]
  # Recession of early 1990s (Japan, EU, US)

# 2000s: China, India, Eastern Europe
  # Recession of 2007-10
1970s

- Crisis of 1970-73 (double dipper)
  - Hits US, Japan & Europe

- US devalues dollar
  - Nixon 1971

- US staggers
  - Stagflation decade

- Japan & Germany revive smartly
1980s

- Deep recession, 1979-82
  - > 10% unemployment

- Deindustrialization
  - Midwest leveled
  - Capital cleans house

- Attack on the unions
  - Reduce wages & unions

Corporate “restructuring” the hot idea in business
US Revival in 1980s

- Productivity and profits up
- Long stock run-up begins
- Reagan’s military buildup
- “military Keynesianism”
- Plaza Accord, 1986
- Dollar falls, Yen rises
- But down it goes, 1989–92
US Boom of 1990s

- Rapid growth, 1994-99
- Investment boom, 1993-96
- High productivity growth
- ‘Great American Jobs Machine’

- New Economy
  - High tech & internet
  - Stock boom & Greenspan
California moved up a notch among the world's biggest economies, ranking 5th in the world, according to estimates provided by economic research. The California Finance Department and the University of California, Los Angeles, have found that the state's gross domestic product exceeded that of Italy. The state's gross domestic product was estimated at $1.34 trillion in 2020, making it the largest in the United States. The state's economy is driven by a mix of technology, education, and healthcare sectors. The state is home to many of the world's top technology companies, including Apple, Google, and Facebook, which are headquartered in the Silicon Valley region. The state's education sector is also a major driver of economic growth, with several top-ranked universities in the state, including the University of California system. The state's healthcare sector is also a major contributor to the economy, with a strong presence of biotechnology companies and medical research institutions. Overall, California's economy is diverse and dynamic, with a strong focus on innovation and technology.
The New Economy Hits the Wall

- Overexpansion of tech sectors
  - Telecoms & Silicon Valley
  - Collapse of the dot-coms

![Cartoon of two men at a bar with a newspaper article titled Qwest to write down $34.8 billion in assets.]

WELL YOU KNOW WHAT THEY SAY "HERE TODAY GONE TOMORROW" OR IN THE CASE OF DOTCOMS "HERE TODAY GONE SHORTLY AFTER LUNCH"
IV. Into the Great Recession

A. Violent Swings

B. •Great Regression

C. Return of the Long Wave?
Worker Wastage

- Higher unemployment
- Stagnant wages
- Greater insecurity
- Longer hours
The Great Prosperity: 1947–79

Pay Rose With Productivity ...
Wages and overall compensation, for production and non-supervisory workers (now about 82 percent of the private sector work force), tracked steadily upward alongside gains in productivity.

The rising value of goods and services per worker meant rising pay. But that relationship ended in the 1970s.

Income Gains for All, Then ...
From 1947 to 1979, all lower classes did better than the top fifth of earners on a percentage basis.

<table>
<thead>
<tr>
<th>FIFTH</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom Fifth</td>
<td>+122%</td>
</tr>
<tr>
<td>Second Fifth</td>
<td>+101%</td>
</tr>
<tr>
<td>Third Fifth</td>
<td>+113%</td>
</tr>
<tr>
<td>Fourth Fifth</td>
<td>+115%</td>
</tr>
<tr>
<td>Top Fifth</td>
<td>+96%</td>
</tr>
</tbody>
</table>

The Great Regression: 1980–Now

... And Then it Didn’t

Productivity

Change, 1947-79
+119%

Change, 1979-2009
+80%

Avg. Hourly Compensation

Change, 1947-79
+100%

Change, 1979-2009
+48%

Avg. Hourly Wage

Change, 1947-79
+72%

Change, 1979-2009
+7%

... Lopsided Gains at the Top

From 1980 to 2009, no one did better than the top fifth. The poorest lost ground.

<table>
<thead>
<tr>
<th>INCOME RANGE FOR EACH FIFTH:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOTTOM FIFTH</td>
</tr>
<tr>
<td>SECOND FIFTH</td>
</tr>
<tr>
<td>THIRD FIFTH</td>
</tr>
<tr>
<td>FOURTH FIFTH</td>
</tr>
<tr>
<td>TOP FIFTH</td>
</tr>
<tr>
<td>$26,934 OR LESS</td>
</tr>
<tr>
<td>$26,935-$47,914</td>
</tr>
<tr>
<td>$47,915-$73,338</td>
</tr>
<tr>
<td>$73,339-$112,540</td>
</tr>
<tr>
<td>$112,541 OR MORE</td>
</tr>
</tbody>
</table>
Sunset on Japan

- Moment in the (rising) sun
  - Global exports & investments

- Pain of rising Yen
  - Plus Plaza Accord

- Banking & property bubbles

- Bubble bursts
  - Bad loans, falling land values

- Economy stagnates in 1990s
East Asian Crisis

- Starts in Thailand, 1996
  - Debt, fast-finance, dollar peg
  - Hits South Korea & Indonesia hardest
  - Regional average real GDP/capita falls 11%
  - Average growth falls from 7.5% to 5%

- Almost triggers global meltdown
  - Collapse of Long-Run Capital Management
  - Russian crisis 1998
  - Even China has a downturn
Europe in the Slow Lane

# Lagging the U.S., let alone China
IV. Into the Great Recession

A. Violent Swings

B. Great Regression

C. Return of the Long Wave?
Long Waves?

- Old puzzle of economic history
  - Kondratieff waves

- Possible periods
  - 1775-1845
  - 1845-1895
  - 1895-1940
  - 1940-1990?

- Great depressions
  - 1810s
  - 1870s
  - 1930s
  - 1970s?
  - 2010s?
Wither the U.S.?

- Again, we must ask...
- Still #1 economy, but:
  - Less manufacturing
  - Massive trade deficit
  - Huge external debt
- Is this the end of an era?
End of lecture
1. Industrial Revolution era

# 1775-1820
- Industrial revolution in UK
- Peak in Napoleonic Wars
- US boom of 1820s

# 1830s-40s
- UK squeeze, depression of early 1840s
- Chartists, Free Trade, Factory Acts
- US depression of 1839-44
- European Revolts of 1830, 1848
2. Victorian Era

# 1845-1870
  # Victorian boom in UK
  # Northern boom in US
  # Second Empire France
  # Bismarck’s Germany

# 1870-95
  # Britain’s “Great Depression”
  # Paris Commune, 1871
  # US crises of 1873-77 and 1893-95
  # long price & profit decline
3. Fordist Era

- Huge boom of 1900-1914
  - High profits, high investment
  - Ford assembly line, electric motors, lighting, etc

- The Great Depression
  - Weakness of 1920s (depression in UK & Europe)
  - Total meltdown of 1929-33
  - National trauma of the Depression
4. Postwar Era

- Postwar Golden Age
  - US profits high
  - US investment boom
  - Productivity gains

- Europe & Japan recover
  - Rapid growth (‘miracles’)
  - High profits & productivity

- Minor downturns
  - Late 1940s, late 1950s
1990s Revival

- **Shift to exports**
- **Mexican model**
  - Maquiladoras
- **Chilean model**
  - High-end primary exports
  - Fruit, fish, metals
Latin America’s Lost Decade

- Global debt crisis, 1982
- Mexico & Brazil default
- Long recession
  - Income & wages fall