Innovation and Competition in the Global Economy

William Lazonick
The Academic-Industry Research Network
(william.lazonick@gmail.com)

Rethinking Development in a World in Transition
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The development objective: sustainable prosperity

Stable and equitable economic growth = “sustainable prosperity”

- **Growth:** sustained real per capita productivity gains that can raise standards of living

- **that is stable:** employment and income not subject to boom and bust, sustained over a working life of some four decades, with retirement income for two decades

- **that is equitable:** gains from growth shared fairly among those who contribute to it—including equitable and sustainable use of the planet’s resources across nations and over generations
The investment triad

Investment in productive capabilities
A necessary condition for economic development

Who invests in productive capabilities?

THE INVESTMENT TRIAD

❖ HOUSEHOLDS invest in the labor force
❖ GOVERNMENTS invest in infrastructure and knowledge
❖ BUSINESSES invest in processes and products

Development strategy needs a theoretical framework on how these three types of organizations work together to develop and utilize productive capabilities.
Organizations, not markets, invest in productive capabilities

- Households invest in developing the labor force: the *supportive family* based on employment income
- Governments invest in physical infrastructure and the knowledge base (education, S & T): the *developmental state* based on taxation
- Businesses invest in productive capabilities that can generate higher quality, lower cost products: the *innovative enterprise* based on equity capital for new ventures; retained earnings for going concerns
But aren’t the most successful economies “market economies”?

Well-developed markets are OUTCOMES, NOT CAUSES, of economic development

- Well-developed **product markets** depend on business enterprises that generate high-quality, low-cost products
- Well-developed **labor markets** depend on business enterprises that develop and utilize productive capabilities to employ people productively
- Well-developed **financial markets** depend on business enterprises that use equity and debt to invest in productive capabilities to generate high-quality, low-cost goods and services
A modern economy is not just “states and markets”

- An economy needs business enterprises to transform investments in productive capabilities into innovative (higher-quality, lower-cost) goods and services, which in turn form the foundation for sustained productivity growth.

- A THEORY OF ECONOMIC DEVELOPMENT NEEDS A THEORY OF INNOVATIVE ENTERPRISE:
  How and under what conditions do investments in productive capabilities result in higher-quality products at lower unit costs than had previously been available?
The fundamental neoclassical absurdity

- Neoclassical economists teach that the unproductive firm is the foundation of the most efficient economy—an absurdity that we all know as “perfect competition”.
- Neoclassical economists have, as a result, a trained incapacity to analyze how firms operate—and hence an inability to understand economic development.
- The theory of perfect competition makes the firm impotent and the market omnipotent in the allocation of the economy’s resources.
- This absurd view of the economic world underpins agency theory and its highly destructive shareholder-value ideology of corporate governance.
Neoclassical economists posit “perfect” competition as the best of all possible worlds.

The firm is very small relative to the size of the market. Free entry competes away profits.

Textbook theory of the firm in “perfect” competition assumes that workers can’t or won’t work. Increasing costs set in at a very low level of output.

\[ \text{Price (P), cost} \]

\[ \text{The firm is very small relative to the size of the market.} \]

\[ \text{Free entry competes away profits.} \]

\[ \text{Output (Q)} \]

\[ \text{MC} \]

\[ \text{AR} = \text{MR} \]

\[ \text{Q}_{\text{be}} \]

\[ \text{AC}^* \]

\[ \text{AC}^* = \text{average total cost} = \text{average fixed cost} + \text{average variable cost} \]
Foundations of “perfect” competition, and hence neoclassical economics = Low or no productivity workers
The absurdity of “perfect competition”

The firm in “perfect competition” is the sweatshop!

To create the theory of “perfect" competition, post-Marshallians assumed that increasing costs set in at a very low level of output because the “entrepreneur”
1) invests in a factory that is too small so that workers crowd one another (no risk-taking)
2) loses control of labor productivity as he hires more workers (poor management)
“What we have got to accept is that [the large-scale enterprise] has come to be the most powerful engine of [economic] progress and in particular of the long-run expansion of total output not only in spite of, but to a considerable extent through, the strategy that looks so restrictive when viewed in the individual case and from the individual point in time. In this respect, perfect competition is not only impossible but inferior, and has no title to being set up as a model of ideal efficiency.”


What was the neoclassical response to the Schumpeterian critique? Paul Samuelson’s 1948 textbook

- p. 24 “THE FAMOUS LAW OF DIMINISHING RETURNS”
- p. 25: “Diminishing returns is a fundamental law of economics and technology” (table heading)

- p. 26: “ECONOMIES OF SCALE AND MASS PRODUCTION: A DIGRESSION”
- p. 27: “Economies of scale are very important in explaining why so many of the goods we buy are produced by large companies...They raise questions to which we shall return again and again in later chapters.”

“After the overhead has been spread thin over many units, it can no longer have much influence on Average Cost. Variable items become important, and as Average Variable Cost begins to rise because of limitations of plant space and management difficulties, Average Cost finally begins to turn up. Thus, the average curve is U-shaped: falling at first because of spreading the overhead and economies of mass production, but ultimately rising because of some kind of diminishing returns.”

On page 525, there is a graph of AFC, AVC, and a U-shaped AC, with the caption “The Average Cost curve is generally U-shaped”

And note that Prof. Samuelson gives away his bias in favor of the unproductive firm when he writes “Average Cost finally begins to turn up.”
You won’t find this “sweatshop” explanation for the U-shaped cost curve in the current textbooks

Two textbooks that publishers sent to me recently:

N. Gregory Mankiw, *Principles of Microeconomics* (Cengage Learning 8th ed., n.d.), simply states that the cost curve is U-shaped (“cost curves for a typical firm”, p. 259) using a made-up coffee shop (coffee cups per hour): AVC rises from $0.30 for one cup to $12.00 for 10 cups, with rising AVC surpassing declining AFC after 6 cups (p. 254).

Paul Krugman and Robin Wells, *Essentials of Economics* (Worth Publishers, 4th ed., 2017) argue that a “realistic marginal cost curve has a ’swoosh’ shape” (p. 189) and give the example of a salsa maker whose AVC rises from $12.00 for one case of salsa to $120.00 for 10 cases, with rising AVC surpassing declining AFC after 3 cases (p. 185).

In both cases, the “explanation” for the U-shaped cost curve is simply the made-up numerical example!
So what happened to Samuelson’s “sweatshop” explanation of the firm in “perfect” competition?

- Samuelson **excised** the explanation from the 6th (1964) edition of Economics! He now had no explanation for the U-shaped cost curve.

- Maybe he recognized the absurdity of his theory of the firm in perfect competition, articulated in the first five editions.

- He did not “return again and again” to “economies of scale and mass production”. The large firm became a **market imperfection**.

- **BUT WHAT ABOUT THE PROOF OF THE SUPERIORITY OF PERFECT COMPETITION?**
Proof that “perfect competition” is superior?

The theory of monopoly supposedly proves the superiority of “perfect competition” by showing that monopoly results in higher prices and lower output than perfect competition.

But how did the monopolist gain a dominant market position? It is ILLOGICAL to assume that the cost structure of firms in “perfect competition” are the same as that of a firm that dominates the industry.
The innovating firm transforms technological and market conditions that the optimizing firm accepts as “given” technological and market constraints.

Monopoly and competition: ILLOGICAL COMPARISON

Innovating and optimizing firms LOGICAL COMPARISON

\[ \begin{align*}
   p_m &= \text{monopoly price; } q_m = \text{monopoly output} \\
   p_c &= \text{competitive price; } q_c = \text{competitive output} \\
   p_{\text{min}} &= \text{lowest breakeven price, optimizing firm} \\
   q_{\text{min}} &= \text{lowest breakeven output, optimizing firm}
\end{align*} \]
Reject the neoclassical obsession with free entry and market equilibrium

Price, Cost

movements toward equilibrium

Why is the industry supply curve upward sloping?

A productive economy needs a downward sloping supply curve*

* So what if there is no equilibrium output or price.
Basic principles of the theory of innovative enterprise:

- High fixed costs of the firm’s investments in productive capabilities, including organizational learning, place the firm at a competitive disadvantage at low levels of output.

- But if, through organizational learning sustained by committed finance, the firm can generate a higher quality product, it can gain a large extent of the market, transforming high fixed costs into low unit costs, and hence competitive advantage.

Economics needs a theory of innovative enterprise.
What is an *innovating* firm?

Definition of “the innovating firm”: given prevailing factor prices, the innovating firm transforms the productive resources under its control into *higher-quality, lower-cost* goods and services than previously available.

Innovation is a process that is

- *uncertain*: it cannot be done “optimally”
- *collective*: it cannot be done all alone
- *cumulative*: it cannot be done all at once
Innovative enterprise:
Transforming high fixed costs into low unit costs

Replacing the theory of the “optimizing” (unproductive) firm with the theory of the innovating firm...

❖ **Strategy:** confronting *uncertainty*, the innovating firm incurs *high-fixed costs* to develop a *higher-quality product* that, by gaining market share, is produced at low unit cost

❖ **Organization:** developing a higher-quality product and accessing a large market share require *collective* (i.e., organizational) *learning*

❖ **Finance:** the innovating firm *needs committed funding* to sustain *cumulative learning* until, by generating innovative products, it can reap returns
Comparing the optimizing and innovating firm

How does the innovating firm transform high fixed costs into low unit costs?

Technological and market conditions are given by cost and revenue functions.
The “good manager” optimizes subject to technological and market constraints.

Through strategy, organization, & finance, innovating firm transforms technologies and markets to generate higher quality, lower cost products. There is no “optimal” output or “optimal” price.
By internalizing variable factor creating increasing costs, IE incurs even higher fixed costs but the investment enables it to “unbend” the U-shaped cost curve.

Through innovative strategy, IE expects to outcompete OF. But, in period one, IE’s strategy only results in high unit costs, and IE remains at a competitive disadvantage.
Innovating firm, t1: high fixed costs + increasing variable costs = competitive disadvantage

Innovating firm, t2: even higher fixed costs become lower unit costs = competitive advantage

How, over time, can innovation outcompete optimization?
Strategy: *innovation is uncertain* - the abilities and incentives of the strategic decision-makers are of critical importance to the types of investments made.

Organization: *innovation is collective* – development & utilization of productive resources requires integration of a hierarchical and functional division of labor.

Finance: *innovation is cumulative* – committed finance (“patient capital”) is needed to sustain the innovation process until it generates financial returns.

Innovative strategy only results in low units costs if products can be sold: need to bring product market demand into the analysis.
What is the source of high income demand?
For example: integrated circuits - military; jet engines - military; calculators - engineers; orphan drugs – national healthcare system
Key to the **indigenous innovation** strategies of developing countries: e.g., Japan from 1950s, Korea from 1980s, China from 1990s
Like the theory of innovative enterprise, the infant industry argument depends on the transformation of competitive disadvantage into competitive advantage.

Technological and market conditions given by cost and revenue functions. Theory says that the poor nation should compete in industries in which it has *comparative* advantage.

Innovative enterprise can transform technologies and markets to generate higher quality, lower cost products. Protection that supports innovation can enable a poor nation to gain competitive advantage.
Innovative enterprise: foundation of sustainable prosperity

By creating new sources of value embodied in higher-quality, lower-cost products, the innovative enterprise makes it possible (but by no means inevitable) for all participants in the economy to gain:

❖ **Employees:** Higher pay/benefits, better work conditions
❖ **Creditors:** More secure paper
❖ **Shareholders:** Higher dividends or share prices
❖ **Government:** Higher taxes
❖ **The Firm:** Stronger balance sheet

AND

❖ **Consumers:** Higher-quality, lower-priced products
Social conditions of innovative enterprise: An analytical framework that connects institutions, firms, and industries

- Economic Institutions
- Industrial Sectors
- Business Enterprises
- Markets
- Technologies
- Competition
- Governance
- Employment
- Investment
- Strategy
- Organization
- Finance

- Governance reform
- Employment enable and proscribe
- Investment
- Strategic Control embed
- Organizational Integration shape
- Financial Commitment
- Social Conditions of Innovative Enterprise

An analytical framework that connects institutions, firms, and industries.
Innovative enterprise requires three social conditions related to strategy, organization, and finance

- **Strategic control**: a set of relations that gives decision-makers the power to allocate the firm’s resources to confront **uncertainty** by transforming technologies and markets to generate higher quality, lower cost products.

- **Organizational integration**: a set of relations that create incentives for people to apply their skills and efforts to engage in **collective** learning.

- **Financial commitment**: a set of relations that secure the allocation of money to sustain the **cumulative** innovation process until it generates financial returns.
<table>
<thead>
<tr>
<th>KEY QUESTIONS:</th>
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<tbody>
<tr>
<td><strong>Strategic control and asset ownership:</strong> How does strategic control change with the growth of the firm? Why might asset ownership be separated from managerial control? Who is included in the structure of strategic control?</td>
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<td><strong>Strategic control, abilities:</strong> Who is able to allocate resources to innovative investment strategies? What role does experience in the firm and industry play?</td>
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<tr>
<td><strong>Strategic control, incentives:</strong> Do executives want to allocate resources to innovation? Why not just reap the returns of past investments? How do their individual incentives affect organizational goals?</td>
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Organizational integration

KEY QUESTIONS:

- **Innovative skill bases, abilities:** How do education, training, and experience make employees productive? What are the hierarchical responsibilities and functional specialties integrated into organizational learning?

- **Innovative skill bases, incentives:** How does the firm attract, recruit, retain and motivate employees? How does the structure of incentives reconcile individual behavior with organizational goals?

- **Innovative skill bases, change:** What happens when competitive challenges render innovative skill bases obsolete? How are collective and cumulative learning trajectories transformed?
Financial commitment

KEY QUESTIONS:

• **Internal funds**: Are internal sources of funds important for financing innovation? How does the firm ensure that it can retain control over its revenues?

• **Debt and the finance of innovation**: Do bank loans provide a source of financial commitment? In what relation to internal funds? Do bond issues provide financial commitment? Why loans or bonds?

• **Equity and the finance of innovation**: Does private equity provide financial commitment, and to what types of companies? What is the role of the stock market in the finance of innovation?
How can a national development strategy contribute to sustainable prosperity?

Build national institutions that support strategic control, organizational integration, and financial commitment

Using the “social conditions of innovative enterprise” framework, we focus on how:

❖ Governance institutions
  influence strategic control

❖ Employment institutions
  influence organizational learning

❖ Investment institutions
  influence financial commitment

When these institutions support innovative enterprise, they constitute the developmental state
National institutions and business organizations in the innovation process

**Governance institutions and strategic control:**
What are the rights and responsibilities that govern the allocation of productive resources (labor and capital) in the economy? Where in the economy is control over allocation decisions located? What are the social processes that monitor, sanction, and reform such control?

**Employment institutions and organizational integration:**
To whom does society provide education, training, and experience? Through what organizations? For what purposes? Who pays? How do people get jobs? With what expectations of rewards over what time frame? Are careers within or across organizations?

**Investment institutions and financial commitment:**
How are financial resources mobilized in the economy for investments in productive capabilities? From what sources? On what terms? With what expected returns? And returns for whom?
National institutions and innovative enterprise

- Do governance, employment, and investment institutions enable or proscribe innovative enterprise?
- Do institutions that support innovative enterprise in one era constrain it in another?
- How do institutions influence the relation between those who invest in value-creation processes and those who extract the value that has been created?

A research agenda:
Comparative-historical study of national economic development with a view toward constructing a theory of innovative enterprise that explores (rather than ignores) historical experience
Economic development in comparative-historical perspective

Some nation-focused research in which I have engaged:

Marshallian industrial districts: craft foundations made Britain “workshop of the world” in late 19th century

US managerial corporation: integrated management structures made US dominant in first half of 20th century

European alternatives in second half of 20th century

France: functional integration for complex systems

Germany: hierarchical integration for high-quality goods

Italy: emergence of “neo-Marshallian” industrial districts

UK: organizational segmentation, not a viable alternative

Japanese challenge: power of broad and deep skill bases

US New Economy: power of highly educated skill bases

The rise of China and India: globalization of the labor force
The US Old Economy business model

Strategic control:

• separation of ownership and control secured by the rise of liquid stock markets and widespread distribution of shareholding; precondition for managerial control

Organizational integration:

• career rewards: distinction between salaried managers and “hourly” workers; hierarchical specialization and hierarchical segmentation; higher education system important for members of “management”

Financial commitment:

• retentions (after stable dividends), bonded debt, stock issues relatively unimportant
US managerial control confronts UK craft control

United States

Executives

Specialists

“Semi-skilled” workers

Britain

Executives

Specialists

Craft Workers and Assistants

=Hierarchical Integration

=Functional Segmentation

=Hierarchical Segmentation
The Japanese challenge

Strategic control:
• secured by stable shareholding; career managers exercise control; post-war rise of a young cohort of top executives

Organizational integration:
• permanent employment: career rewards for all salaried personnel, blue collar and white collar; hierarchical and functional integration, with educational qualifications tracking white-collar and blue-collar workers; high level of general education with in-house training

Financial commitment:
• main-bank lending: retentions (with low dividends) highly leveraged by state-supported bank finance
Organizational integration and international competition
United States and Japan, circa 1980

United States

Executives
Specialists

“Hourly” Operatives

Japan

Executives
Specialists
Regular Male Operatives

Females/Temporary Employees

= Hierarchical Integration
= Hierarchical Interaction
= Functional Segmentation
XXX = Hierarchical Segregation

Organizational integration and international competition
United States and Japan, circa 1980
German and Japanese business models compared

Germany

Executives

Specialists

Craft Workers

Japan

Executives

Specialists

Regular Male Operatives

Most females and temporary employees
The French business model

France

PDG

Ouvriers

XXX = Hierarchical Segmentation

Cadres

Techniciens

Ouvriers

XXX = Hierarchical Segmentation

Lazonick: UMass Lowell
### National institutions and international competition: 1980s

<table>
<thead>
<tr>
<th>Product quality</th>
<th>Low cost</th>
<th>High cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality</td>
<td>Japan</td>
<td>Germany</td>
</tr>
<tr>
<td>Low quality</td>
<td>United States (OE)</td>
<td>Britain</td>
</tr>
</tbody>
</table>

**Adaptation and globalization since the 1990s**
The rise of the New Economy business model

Strategic control:
• control by managers secured by liquid capital markets; may be owners but all strategic managers highly specialized & experienced in particular industrial sector

Organizational integration:
• salaried (not hourly), career rewards for motivation plus stock-based compensation as recruitment/retention tool; tap into global labor forces as labor flows across borders to capital and capital flows across borders to labor

Financial commitment:
• venture capital reallocates money and people, funds raised in IPO, retentions, little if any dividends and debt
The US New Economy business model

US-Based Operations

Executives

sales

OEM

design

Specialists

Global Operations

Global markets

Global labor

Vertical Organization

Contract manufacturers

Component producers

Machinery makers

Venture capital
The shift from the Old Economy business model (OEBM) to the New Economy business model (NEBM) has resulted in the stock market becoming much more central to the operation of the firm than previously.

Upjohn Institute for Employment Research
2009

1. What is New, and Permanent, about the “New Economy”?  
2. The Rise of the New Economy Business Model  
3. The Demise of the Old Economy Business Model  
4. Pensions and Unions in the New Economy  
5. Globalization of the High-Tech Labor Force  
6. The Quest for Shareholder Value  
7. Prospects for Sustainable Prosperity
A greatly increased role of the stock market in allocating capital and labor in NEBM compared with OEBM

<table>
<thead>
<tr>
<th>Strategy, product</th>
<th>OEBM</th>
<th>NEBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth by building on internal capabilities; business expansion into new product markets based on related technologies; geographic expansion to access national product markets.</td>
<td>Firm entry into specialized markets; sale of branded components to system integrators; accumulation of new capabilities by acquiring young technology firms.</td>
<td></td>
</tr>
<tr>
<td>Strategy, process</td>
<td>Corporate R&amp;D labs; development and patenting of proprietary technologies; vertical integration of the value chain, at home and abroad.</td>
<td>Cross-licensing of technology based on open systems; vertical specialization of the value chain; outsourcing and off-shoring.</td>
</tr>
<tr>
<td>Finance</td>
<td>Venture capital; NYSE listing; payment of steady dividends; growth finance from retentions leveraged with bond issues.</td>
<td>Venture finance from personal savings, family, and business associates; NASDAQ listing; low or no dividends; growth finance from retentions plus stock as acquisition currency; stock buybacks to support stock price.</td>
</tr>
<tr>
<td>Organizational</td>
<td>Secure employment: career with one company; salaried/hourly employees; unions; defined-benefit pensions; employer-funded medical insurance in employment and retirement.</td>
<td>Insecure employment: interfirm mobility of labor; broad-based stock options; non-union; defined-contribution pensions; employee bears greater burden of medical insurance.</td>
</tr>
</tbody>
</table>
Neoclassical “agency theory”: a theory of the firm and its role in resource allocation that provides academic legitimacy to MSV ideology

- **MSV**: rooted in neoclassical theory, with business enterprise as a massive market imperfection, reflecting “inefficient” capital markets

- Critical assumption of agency theory: all economic participants receive guaranteed market returns except for *shareholders who bear risk by making investments without guaranteed returns*

- It is then assumed that this risk-bearing function results in a more efficient economy

- It follows that those who bear risk should control the allocation of the economy’s resources
Jensen: “Disgorge” the “free” cash flow

Solution to the agency problem:
To make markets efficient, “disgorge free cash flow”:

“Free cash flow is cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital. Conflicts of interest between shareholders and managers over payout policies are especially severe when the organization generates substantial free cash flow. The problem is how to motivate managers to disgorge the cash rather than investing it at below cost or wasting it on organization inefficiencies.”

What it means to “disgorgel” the “free” cash flow

**DISGORGE:** Implication that the cash that is under corporate control is ill-gotten—but agency theory lacks a theory of the productive (i.e., innovative) enterprise

Who created that value? Whose cash is being “disgorged”?

**FREE CASH FLOW:** Lay off, say, 5,000 employees who generated the firm’s revenue-generating products—and increase the cash flow that is “free”

Or avoid corporate taxes to make more cash flow “free”

Or price-gouge customers to create more “free cash flow”

Integral to disgorging corporate cash is the alignment of the interests of managers as agents with shareholders as principals by giving managers stock-based pay.
“Shareholder value” hits in Wall Street Journal

Harvard Business School hires Michael C. Jensen, 1985

SEC Rule 10b-18. Nov. 1982, legalizing large-scale buybacks

Battle for control of RJR Nabisco, 1988

Fundamental problem with MSV: erroneous assumption that shareholders are the only actors who invest without a guaranteed return.

NOT SO: Taxpayers through government agencies and workers through business enterprises regularly make risky investments in productive capabilities. From this perspective, both the state and labor have economic claims on profits if and when they occur.

Irony of MSV: public shareholders typically never invest in the company’s value-creating capabilities. They invest in outstanding shares, hoping for a rise in price. Following MSV, executives fuel this hope by “disgorging” cash as dividends and buybacks.
The looting of the US industrial corporation


Net equity issues, U.S. nonfinancial corporations, 1946-2017

SEC Rule 10b-18 November 1982
The era of downsize-and-distribute:
The U.S. corporate economy is a “buyback economy”

<table>
<thead>
<tr>
<th>Period</th>
<th>Net equity issues, U.S. non-financial corporations 2015$ billions</th>
<th>Net equity issues as % of GDP</th>
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<tbody>
<tr>
<td>1946-1955</td>
<td>143.2</td>
<td>0.56</td>
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<tr>
<td>1956-1965</td>
<td>110.9</td>
<td>0.30</td>
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<tr>
<td>1966-1975</td>
<td>316.0</td>
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<td>1976-1985</td>
<td>-290.9</td>
<td>-0.40</td>
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<td>1986-1995</td>
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<td>1996-2005</td>
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<td>-1.09</td>
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<tr>
<td>2006-2015</td>
<td>-4,466.6</td>
<td>-2.65</td>
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In the name of “maximizing shareholder value”

Middle class disappears

Buybacks and dividends for 232 companies in the S&P 500 index in January 2017 publicly listed 1981-2016:
Buybacks, 4% of profits, 1981-83; 59% of profits, 2014-16

SEC Rule 10b-18
November 1982
<table>
<thead>
<tr>
<th>RANK</th>
<th>Company Name</th>
<th>Ticker Symbol</th>
<th>NI, $b</th>
<th>BB, $b</th>
<th>DV, $b</th>
<th>BB/NI</th>
<th>DV/NI</th>
<th>(BB+DV)/NI</th>
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<td>1</td>
<td>EXXON MOBIL</td>
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<td>GENERAL ELECTRIC</td>
<td>GE</td>
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<td>PROCTER &amp; GAMBLE</td>
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<td>75</td>
<td>163</td>
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<tr>
<td>6</td>
<td>CHEVRON</td>
<td>CVX</td>
<td>173</td>
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<td>65</td>
<td>20</td>
<td>38</td>
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Value-extracting insiders, enablers, and outsiders

➢ **Value-extracting insiders:** senior corporate executives incentivized by stock-based pay to engage in downsize-and-distribute rather than retain-and-reinvest

➢ **Value-extracting enablers:** institutional investors, mainly pension and mutual fund managers, holding over 60% of market cap of outstanding shares in the United States, incentivized to secure high yields on stock portfolios and required to exercise proxy votes

➢ **Value-extracting outsiders:** hedge-fund activists, holding small fractions of shares of companies, lobby proxy-voting services (ISS and Glass Lewis) to back board of director candidates who will pursue the activists’ agenda to “maximize shareholder value” (MSV)
“Salaried” incomes of the top 0.1%, 1916-2011

http://topincomes.parisschoolofeconomics.eu/#Database: United States, Top 0.1% income composition.

“Salaried” include gains from stock-based pay
Value-extracting insiders: Stock-based pay incentivizes senior executives to do buybacks to boost stock prices

Average total pay and % shares of pay components, 500 highest paid executives in each year, 2007-2016

Source: S&P ExecuComp database; calculations by Matt Hopkins, theAIRnet
Since the 1990s, the proxy voting system requires fund managers to vote portfolio shares, and they rely on proxy advisers (mainly ISS and Glass Lewis) to recommend how to vote.
## Value-extracting outsiders: Take-home pay of hedge-fund managers, 2016; shareholder activists underlined

<table>
<thead>
<tr>
<th>Name</th>
<th>Hedge Fund</th>
<th>Take-Home Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Simons</td>
<td>Renaissance Technologies</td>
<td>$1.5 billion</td>
</tr>
<tr>
<td>Michael Platt</td>
<td>BlueCrest Capital Management</td>
<td></td>
</tr>
<tr>
<td>Raymond Dalio</td>
<td>Bridgewater Associates</td>
<td></td>
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<tr>
<td>David Tepper</td>
<td>Appaloosa Management</td>
<td>$1 billion</td>
</tr>
<tr>
<td>Kenneth Griffin</td>
<td>Citadel LLC</td>
<td>$500 million</td>
</tr>
<tr>
<td>Daniel Loeb</td>
<td>Third Point Capital Management</td>
<td>$400 million</td>
</tr>
<tr>
<td>Paul Singer</td>
<td>Icahn Capital Management</td>
<td></td>
</tr>
<tr>
<td>David Shaw</td>
<td>D. E. Shaw &amp; Co.</td>
<td></td>
</tr>
<tr>
<td>John Overdeck</td>
<td>Two Sigma Investments</td>
<td></td>
</tr>
<tr>
<td>David Siegel</td>
<td>Two Sigma Investments</td>
<td>$375 million</td>
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<tr>
<td>Michael Hintze</td>
<td>CQS LLP</td>
<td>$325 million</td>
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<tr>
<td>Jeffrey Talpins</td>
<td>Element Capital Management</td>
<td>$300 million</td>
</tr>
<tr>
<td>Stanley Druckenmiller</td>
<td>Duquesne Family Office</td>
<td>$300 million</td>
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<td>Brett Icahn</td>
<td>Icahn Capital Management</td>
<td>$280 million</td>
</tr>
<tr>
<td>David Schechter</td>
<td>Icahn Capital Management</td>
<td>$280 million</td>
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**Take-home pay of the top 15 hedge-fund managers, USA, 2016 (top15 average=$606 million)**

**Top15 corporate executives in 2016

- Average total pay=$120 million (93% stock-based)
- Range: $83 million to $220 million**

“In a free-enterprise, private-property system, a corporate executive is an employee of the owners of the business. He has direct responsibility to his employers. That responsibility is to conduct the business in accordance with their desires, which generally will be to make as much money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom.”

Friedman concludes the article by quoting himself from his 1962 book *Capitalism and Freedom*: “There is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.”
A Friedman doctrine—
The Social Responsibility
Of Business Is to
Increase Its Profits

By MILTON FRIEDMAN

TAMING G.M.—Chairman James Roche of General Motors (right) replies to members of Campaign G.M. (below, wearing “Tame G.M.” buttons) at the corporation’s stockholders’ meeting in May. Representatives of the campaign demanded that G.M. name three new directors to represent “the public interest” and set up a committee to study the company’s performance in such areas of public concern as safety and pollution. The stockholders defeated the proposals overwhelmingly, but management, apparently in response to the second demand, recently named five directors to a “public-policy committee.” The author calls such drives for social responsibility in business “pure and unadulterated socialism,” adding: “Businessmen who talk this way are unwitting puppets of the intellectual forces that have been undermining the basis of a free society.”
“Campaign GM” demands that GM address car safety and environmental pollution

In the photo from GM’s shareholder meeting in May 1970, Roche was replying to members of Campaign G.M., an organization that

“demanded that G.M. name three new directors to represent ‘the public interest’ and set up a committee to study the company’s performance in such areas of public concern as safety and pollution. The stockholders defeated the proposals overwhelmingly, but management, apparently in response to the second demand, recently named five directors to a “public-policy committee.” The author [Milton Friedman] calls such drives for social responsibility in business “pure and unadulterated socialism,” adding: “Businessmen who talk this way are unwitting puppets of the intellectual forces that have been undermining the basis of free society.”
The photo of Roche and the editorializing on it, points out that, in historical retrospect, the demands of Campaign G.M. for safer and less polluting cars were in effect demands for GM to engage in automobile innovation. In the 1970s and beyond, the world leaders in producing these “socially responsible” cars would be Japanese and European companies, leaving the “profit-maximizing” General Motors lagging further and further behind.

What Friedman (and, quoting him, the New York Times editor) called “pure and unadulterated socialism” proved to be the future of the innovative automobile industry!
How MSV undermines innovation

Maximizing Shareholder Value (MSV) is an ideology that is destructive of innovative enterprise

- **Strategic control:** MSV permits separation of interests of top executives from interests of the corporation’s other stakeholders; executives use MSV to justify resource allocation (e.g., buybacks) for their personal gain

- **Organizational integration:** MSV undermines workers’ incentives and abilities to engage in collective and cumulative learning (the essence of the innovation process)
  - MSV favors “downsize” (layoffs, wage cuts, offshoring)

- **Financial commitment:** MSV drains the company of financial resources needed to sustain innovation—in the name of MSV, top executives and activist shareholders make tens or hundreds of millions of dollars as *predatory value extractors*
  - MSV favors “distribute” (buybacks & dividends)
How did agency theorists get it so wrong?

- They are “well-trained” neoclassical economists: they posit that *the most unproductive business firm is the foundation for the most efficient economy*.

- They view the large-scale business enterprise as a massive “market imperfection”; *not* as a value-creating, i.e., innovative, social organization that must distribute gains to value creators and defend itself from value extractors.

- With their training in “the myth of the market economy”, even progressive economists have been blind to the looting of the US industrial corporation.
The increasing divergence of productivity from pay
Wage increases track productivity increases to late 1970s
And then wage increases lag with a growing gap

Cumulative annual percent changes in productivity per hour and real wages per hour, 1948-2015

Source: Bureau of Labor Statistics
Career employment: Key driver of the productivity-pay relation

Old Economy Business Model

Career-with-one-company norm: employees share in profits through job security, pay raises, defined-benefit pensions, and health coverage

New Economy Business Model

Insecure jobs, globalized labor, defined-contribution pensions

Massive stock buybacks and exploding top executive pay

Erosion of middle-class employment opportunities as careers in companies disappear

Source: Bureau of Labor Statistics
Stock buybacks are an important explanation for both the concentration of income among the richest households and the disappearance of middle-class employment opportunities in the United States over the past three decades. Over this period, corporate resource-allocation at many, if not most, major U.S. business corporations has transitioned from “retain-and-reinvest” to “downsize-and-distribute,” says William Lazonick in a new paper.
Transformation of the social conditions of innovative enterprise: From “retain-and-reinvest” to “downsize-and-distribute”

WHEN PRODUCTIVITY AND WAGES PARTED WAYS
From 1948 to the mid-1970s, increases in productivity and wages went hand in hand. Then a gap opened between the two.

Make use of unused resources = “retain-and-reinvest”

Disgorge the free cash flow = “downsize-and-distribute”

SOURCE: ECOnETAUS.COM/WAGEGAP12.HTML
2002-2017 Cisco expended $103b, or 91% of net income, on buybacks, on top of $24b on dividends (21% of net income). In the process Cisco eschewed investment in sophisticated communication technologies, despite being well positioned to do so at the beginning of the 2000s. Huawei, a 100% employee-owned Chinese company, not listed on a stock market, has become what Cisco could have been: the world’s leading communication technology company.

Developmental State: US National Institutes of Health (NIH) funding, 1938-2017

NIH funding 1938-2017: just over $1 trillion in 2017 dollars
2017 budget: $33.1b.
Does all that NIH funding result in high levels of innovation?

**NO!**

- **NEBM in biopharma** results in too much labor mobility of key employees in search of stock-based returns plus employee churn of the rest.

- **Doubling of NIH funding** has probably been detrimental to productivity in the biopharma industry because the executives of US pharma companies are obsessed with MSV.
Pharma profits are used to manipulate stock prices

Stock buybacks (BB) and cash dividends (DV), billions of dollars, 2007-2016, 19 pharmaceutical companies in the S&P 500 Index January 2017 with BB and DV as % of net income (NI) and R&D as % of revenues (REV)

<table>
<thead>
<tr>
<th>Company</th>
<th>REV $b</th>
<th>NI $b</th>
<th>BB $b</th>
<th>DV $b</th>
<th>R&amp;D $b</th>
<th>BB/NI %</th>
<th>DV/NI %</th>
<th>(BB+DV)/NI %</th>
<th>R&amp;D/REV %</th>
<th>Employees, FY16 end</th>
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<td>JOHNSON &amp; JOHNSON</td>
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<td>131</td>
<td>45</td>
<td>65</td>
<td>82</td>
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<td>49.8</td>
<td>83.8</td>
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<td>126,400</td>
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<td>PFIZER</td>
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<td>86</td>
<td>61</td>
<td>68</td>
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<td>21</td>
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<td>51.5</td>
<td>83.7</td>
<td>9.1</td>
<td>75,000</td>
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<td>7</td>
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<td>-20.5</td>
<td>-60.6</td>
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<td>0.0</td>
<td>93.4</td>
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<td><strong>Totals, 19 pharma companies, 2007-16</strong></td>
<td><strong>3,095</strong></td>
<td><strong>566</strong></td>
<td><strong>297</strong></td>
<td><strong>267</strong></td>
<td><strong>488</strong></td>
<td><strong>52.4</strong></td>
<td><strong>47.2</strong></td>
<td><strong>99.6</strong></td>
<td><strong>15.8</strong></td>
<td><strong>611,037</strong></td>
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<td><strong>Total, 461 S&amp;P 500 companies, 2007-16</strong></td>
<td><strong>91,484</strong></td>
<td><strong>7,338</strong></td>
<td><strong>3,995</strong></td>
<td><strong>2,881</strong></td>
<td><strong>1,904</strong></td>
<td><strong>54.5</strong></td>
<td><strong>39.3</strong></td>
<td><strong>93.7</strong></td>
<td><strong>2.1</strong></td>
<td><strong>24,920,918</strong></td>
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<tr>
<td>19 Pharma as % of 461 S&amp;P 500 = 4.1%</td>
<td>3.4%</td>
<td>7.7%</td>
<td>7.4%</td>
<td>9.3%</td>
<td>25.6%</td>
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BB=$297b DV=$267b (BB+DV)/NI%=99.6%; R&D=$488b
## Stock buybacks and big pharma: End of the (pipe)line

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<th></th>
<th>BB $b</th>
<th>DV $b</th>
<th>BB/NI%</th>
<th>DV/NI%</th>
<th>(BB+DV)/NI%</th>
<th>R&amp;D/Sales%</th>
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<td>0.4</td>
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<td>44.8</td>
<td>54.5</td>
<td>9.4</td>
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<td>46.1</td>
<td>76.5</td>
<td>10.8</td>
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<td>1995-2004</td>
<td>26.4</td>
<td>25.8</td>
<td>46.4</td>
<td>45.5</td>
<td>91.8</td>
<td>7.9</td>
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<td>2005-2014</td>
<td>26.5</td>
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<td>51.6</td>
<td>82.2</td>
<td>133.8</td>
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<td>94.2</td>
<td>115.2</td>
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<td>130.7</td>
<td>218.3</td>
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<td>167.7</td>
<td>215.8</td>
<td>383.5</td>
<td>25.4</td>
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<td>43.1</td>
<td>43.1</td>
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<td>1985-1994</td>
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<td>51.4</td>
<td>93.1</td>
<td>10.5</td>
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<td>1995-2004</td>
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<td>52.3</td>
<td>57.3</td>
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<td>2015</td>
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<td>99.7</td>
<td>188.2</td>
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<td>69.3</td>
<td>101.4</td>
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<td>40.6</td>
<td>62.2</td>
<td>102.9</td>
<td>14.4</td>
</tr>
</tbody>
</table>
Price gouging: drug prices and stock prices

- Unregulated US pharma companies engage in price gouging
- Claim that high prices fund augmented R&D and innovation
- But in the name of MSV, these companies use the profits from high drug prices to make massive distributions to shareholders
- The purpose of buybacks is to manipulate the company’s stock price
- Prime beneficiaries of buybacks are pharma executives, hedge-fund managers, and Wall Street bankers
Innovation and competition: pharmaceuticals


- US national innovation system offers high unregulated prices, massive NIH funding, and various subsidies to pharmaceutical innovation

- Financialized US pharma companies are abusing the system: use profits to prop up stock prices

- Less financialized European companies are using the US system to engage in innovation: prime example is Roche, which has become the world leader in pharmaceutical innovation
The case of the United States: Unstable employment, inequitable income, and sagging productivity growth

The economic performance of the United States is the antithesis of sustainable prosperity

- **Unstable employment:** since the 1980s “middle class” employment opportunities with US business corporations have eroded

- **Inequitable income:** U.S. productivity gains have gone mainly to the richest households, with stagnating real incomes for most Americans

- **Slow productivity growth:** innovative enterprise having less impact on the whole economy, even as the world faces major health and environmental challenges
Implications for development strategy

- **Reject** the absurd body of “knowless” called neoclassical economics; it perpetuates the myth of the market economy, and undermines sustainable prosperity
- **Build** a rigorous and relevant economic perspective based on the theory of innovative enterprise, supported by the developmental state
- **Train** development professionals to integrate theory and history (i.e., use logic to explore rather than ignore facts, and use facts to build logic)
- **Attack** the fundamentally flawed ideology, built on the neoclassical theory, that companies should be run to “maximize shareholder value”