AMERICAN INVESTMENT IN THE 21ST CENTURY

PROJECT FOR STRONG LABOR MARKETS AND NATIONAL DEVELOPMENT

SENATOR MARCO RUBIO

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INTRODUCTION

SENATOR RUBIO: THE AMERICAN THEORY OF VALUE

When my parents came as immigrants to the United States, they found a nation of opportunity and possibility where hard work could secure a stable and prosperous family life. Today, however, the American Dream of earned happiness is increasingly out of reach. Settled paths to skills and employment for millions of regular Americans have disappeared, and with them the prospects for starting a family and contributing to community life. Even those who make it into the upper ends of the job market often discover their position to be more insecure than they imagined it would be, or find their work a far cry from the confident projects of their predecessors.

We often grapple with this anxiety through how we view the economy, which provides a picture of how resources are distributed, but also a story about how value is created and who creates it. If the only way to understand what's going on in the economy is how the stock market or GDP growth is doing, then this decline will not be evident. But behind recent positive numbers, there is plenty that isn't working the way it should. We don't have to look far for a troubling example: business investment, one of the most basic economic activities of the free enterprise system, is declining. As this report demonstrates, in the 21st century the American corporate business sector no longer plays the role of long-term investor that they carried out effectively for most of our history.

American capitalism has produced more prosperity for more people than any economic system in the history of the world. That record of achievement is dependent upon capital investment. Less investment in our own future productivity represents a lack of will to build an economy and country that can sustain and renew itself for generations to come.

Our adversaries are wasting no time in securing their own economic futures. Fifty years after the United States put a man on the moon through the audacity of our ambition and belief our in innovative potential, China landed a probe on the dark side of the moon for the first time in history. China has a whole-of-nation effort underway to dominate innovation and high-value manufacturing in this century.[1] Our economic competitors understand the critical importance of investment in themselves, and we must as well.

We need to build an economy that can see past the pressure to understand value-creation in narrow and short-run financial terms, and instead envision a future worth investing in for the long-term. Our future strength, security, and prosperity depend on it.

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[1] Project for Strong Labor Markets and National Development, "Made in China 2025 and the Future of American Industry," February 2019. https://www.rubio.senate.gov/public/_cache/files/d1c6db46-1a68-481a-b96e-356c8100f1b7/3EDECA923DB439A8E884C6229A4C6003.02.12.19-final-sbc-project-mic2025-report.pdf.

The decline of business investment and its relation to broader economic decline can be summarized through the key findings in this report.

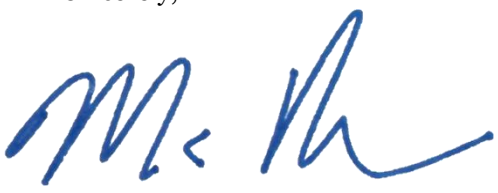
1. The decline in business investment represents a shift away from the traditional understanding of the role of capitalist businesses. In American capitalism, private business enterprise is the fundamental unit of economic production. Private business has historically provided the dominant source of investment spending in the American economy, and economic productivity has been the outcome of a high-investment private business sector. However corporate business enterprise increasingly does not fulfill this role. For the first time, the nonfinancial corporate business sector now consistently spends more on acquiring financial assets than on capital development.

2. Shareholder primacy theory is a driving cause behind this shift of American business away from the traditional role expected of it in our economy. Rising out of the economic stagnation of the 1970s, shareholder primacy theory refocused corporate management's understanding of economic value as financial return to shareholders. This theory tilts business decision-making towards returning money quickly and predictably to investors rather than building long-term corporate capabilities, reduces investment in research and innovation, and undervalues American workers' contribution to production.

3. An economy more oriented toward capital development by the private sector would be truer to the system of American capitalism that created great prosperity in prior generations. There is a public interest in the nonfinancial business sector, instead of the financial sector or the government, being the primary investor in our future productivity. Economic productivity orients public life towards dignified work and determines American living standards. Creating value it is at the heart of what it means to work and provide for families and communities. Ensuring that all American workers have the chance at a productive livelihood is among the most basic responsibilities of the American social contract. Changes to public policy should reflect this.

I want my children and yours to find our nation the same place of possibility and promise that my parents did when they arrived here. We need an economy that rewards long-term investment and productivity. I hope this report will offer a contribution to this essential conversation.

Sincerely,



Marco Rubio
U.S. Senator

The Wall Street Journal CEO Council, November 14, 2017.[2]

> *GERARD BAKER, THE WALL STREET JOURNAL: Companies are making profits, and investment is down, it's true they're giving a lot of those profits back to shareholders. Why, how is it again, I'm not sure what it is that business needs right now that is actually answered for by a big tax cut that's going to somehow make them invest more.*
>
> *GARY COHN, DIRECTOR OF THE WHITE HOUSE NATIONAL ECONOMIC COUNCIL: Look, again, we want companies to invest back in the economy, not give money back, or sit on money because they don't think there's anything to do with it. We think there should be an enormous amount of opportunity in the economy right now to invest capital into our economy. And that's what we want companies to do, and the reason they're not doing it is because it's really hard…*
>
> *…*
>
> *JOHN BUSSEY, THE WALL STREET JOURNAL: Can I ask you all a quick question? If the tax reform bill goes through, do you plan to increase investment, your companies' investment, capital investment? Just a show of hands, if tax reform goes through, okay?*
>
> *COHN: Why aren't the other hands up?*
>
> *BUSSEY: Why aren't the other hands up?*

[2] "Wall Street Journal CEO Council," CSPAN November 14, 2017. https://www.c-span.org/video/?437316-2/wall-street-journal-ceo-council-gary-cohn-democratic-senators&start=1499.

INVESTMENT AND ECONOMIC ORDER

Business investment in the United States is decreasing. The trend is most clearly revealed in comparison to what was typical of the U.S. economy for much of the 20th century. Net private domestic investment, or the total amount of private investment in fixed assets like equipment, machinery, or property after accounting for depreciation, fell from nearly a tenth of U.S. Gross Domestic Product (GDP) as late as the mid-1980s, to less than half of that amount by the end of 2018. As a percent of corporate profits, it declined from nearly 100 percent in the early 1980s to less than 40 percent today. Net private domestic investment was once equal to over half of the private sector's net financial asset acquisition, but for most of the 21st century it has been at levels nearly five times less.

Investment is not only declining as a share of these measures of income and wealth, but also slowing on its own terms. According to data from the U.S. Bureau of Economic Analysis, from 1947 to 2000 annual investment growth in private nonresidential fixed assets by nonfinancial corporations averaged over 5 percent. From 2001 to 2017, however, the average growth rate of private investment in these fixed assets was half this historical average, at just over 2.5 percent.[3]

Recent economic data do not provide evidence that this long-term decline is likely to reverse anytime soon. Though the new law enacted by the *Tax Cuts and Jobs Act* is likely to produce increases in business investment relative to what would have otherwise been expected, it is less likely to reverse these historical trends in the allocation of capital.[4] Adjustments to recent investment data to control for changes in oil prices[5] or capital-light investment[6] further reveal the significant changes in trajectory required to attain prior levels, and should raise the burden of proof for what counts for real increases in investment.

These shifts in the allocation of financial resources away from investment have yielded an economy with a reduced stock of physical capital than in prior compositions of the American economy.

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[3] U.S. Bureau of Economic Analysis, National Income and Product Accounts, Table 4.8.
[4] The White House Council of Economic Advisers argues in their 2019 Economic Report of the President that changes to real private nonresidential fixed investment should be compared to levels projected by the Congressional Budget Office (CBO), which in June 2017 forecasted a growth rate of 3.0 percent for this measure. By comparison, it was 6.9 percent for the whole of 2018. Whether this is indicative of a meaningful increase depends on the standard. The average annual rate for this measure from 1950 through 2000 was 5.4 percent. Prior business cycles reached 8 percent in 2006, 10.9 percent in 1998, 16.7 percent in 1984, and even higher in years before then. By the end of the first quarter of 2019, the measure had fallen back below even the CBO's forecast for the prior year, to 2.7 percent. This report is concerned with understanding the downward slope of the overall trend instead of comparing current points to recent projection, in the hope of explaining why it is that the projected values like that of the CBO are below what has been the norm for most of American history.
[5] Alexander Arnon, "The Price of Oil is Now a Key Driver of Business Investment," *University of Pennsylvania Wharton Budget Model*, January 17, 2019. http://budgetmodel.wharton.upenn.edu/issues/2018/12/14/the-price-of-oil-is-now-a-key-driver-of-business-investment.
[6] Lewis Alexander and Janice Eberly, "Investment Hollowing Out," IMF Economic Review, Palgrave Macmillan; International Monetary Fund, 2018 vol. 66(1), pages 5-30, March.

Figure 1. U.S. Net Private Domestic Investment as a percent of GDP, 1947-2019Q1.[7]

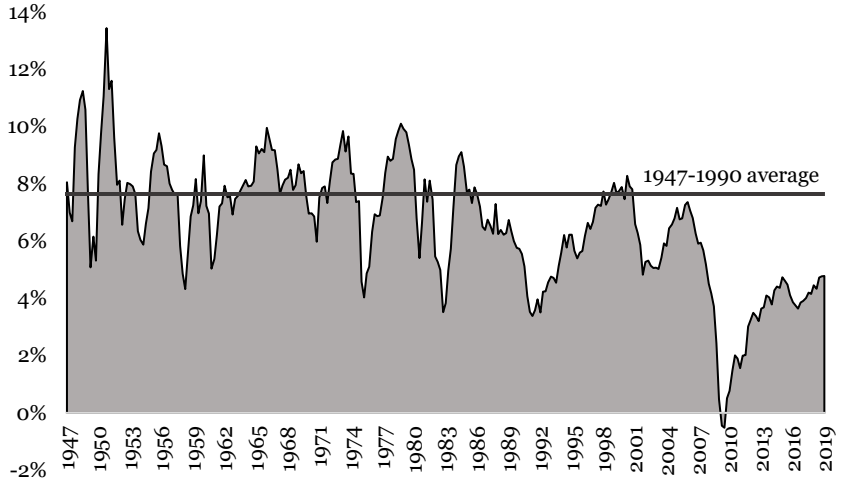
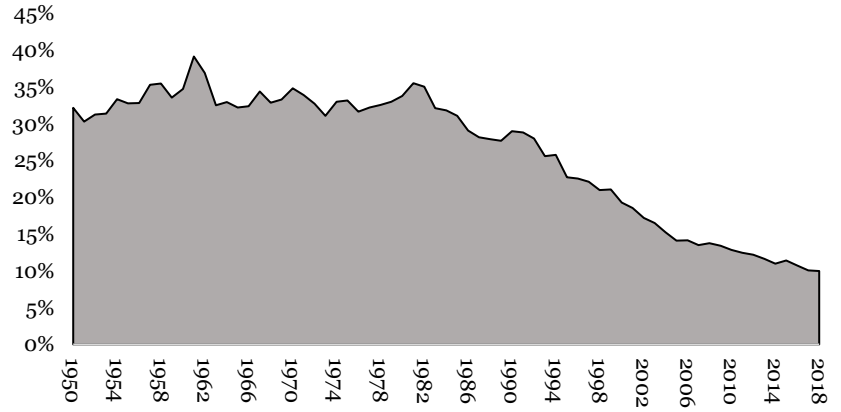
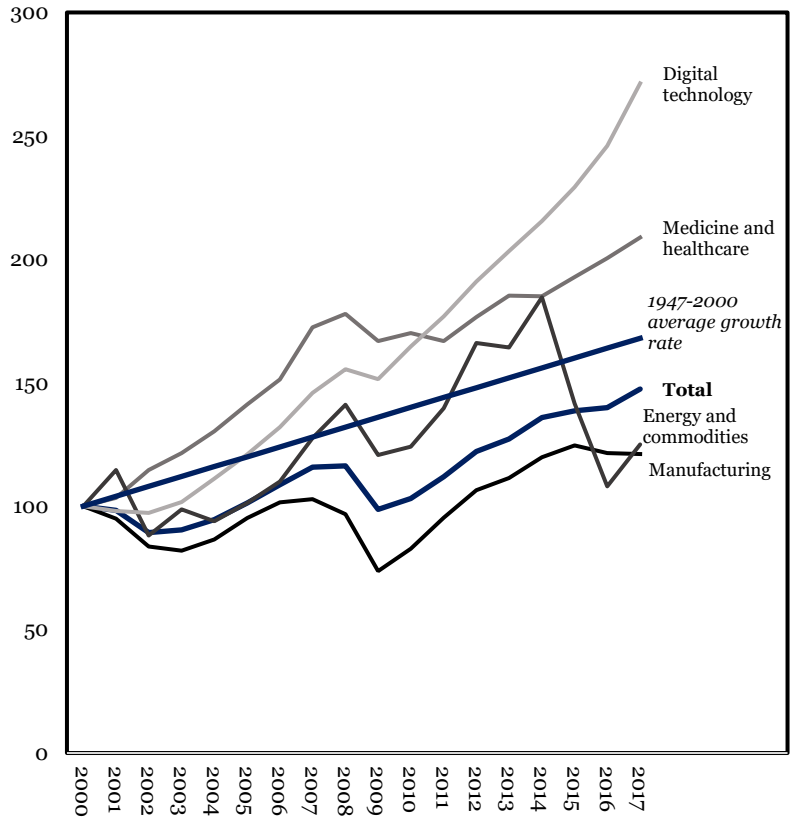


Figure 2. S&P 500 median Property, Plants, and Equipment value as a percent of Total Assets, 1950-2018.[8]



[7] U.S Bureau of Economic Analysis, National Income and Product Accounts. Table 5.1.
[8] Data compiled from S&P Compustat. Unlike in the National Income and Product Accounts, Compustat measures assets at historical cost.

Figure 3. Change in U.S. Fixed-Cost Investment in Private Nonresidential Fixed Assets by Type, 2000-2017 (index, base year = 2000).[9]



[9] U.S. Bureau of Economic Analysis, "Detailed Data for Fixed Assets and Consumer Durable Goods," Net stocks, fixed cost. https://apps.bea.gov/national/FA2004/Details/Index.htm. **"Manufacturing base"** includes other fabricated metals, steam engines, internal combustion engines, metalworking machinery, special industrial machinery, general industrial equipment, electric transmission and distribution, light trucks (including utility vehicles), other trucks buses, and truck trailers, autos, aircraft, ships and boats, railroad equipment, other agricultural machinery, farm tractors, other construction machinery, construction tractors, warehouses, manufacturing, chemical manufacturing, semiconductor and other component manufacturing, computers and peripheral equipment manufacturing, communications equipment manufacturing, navigational and other instruments manufacturing, other computer and electronic manufacturing, motor vehicles and parts manufacturing, aerospace products and parts manufacturing and other manufacturing. **"Medicine and healthcare"** includes nonelectro medical instruments, electro medical instruments, hospitals, special care, medical buildings and pharmaceutical and medicine manufacturing. **"Energy and commodities"** includes mining and oilfield machinery, electric, wind and solar, gas, petroleum pipelines, communication and petroleum and natural gas. **"Digital technology"** includes mainframes, PCs, DASDs, Printers, terminals, tape drives, storage devices, system integrators, communications, nonmedical instruments, photocopy and related equipment, office and accounting equipment, communication, prepackaged software, custom software, own account software, software publishers, financial and real estate services, computer systems design and related services.

Figure 4. U.S. Real Private Fixed investment Growth by Type, Chained Dollars, 2013-2019Q1.[10]

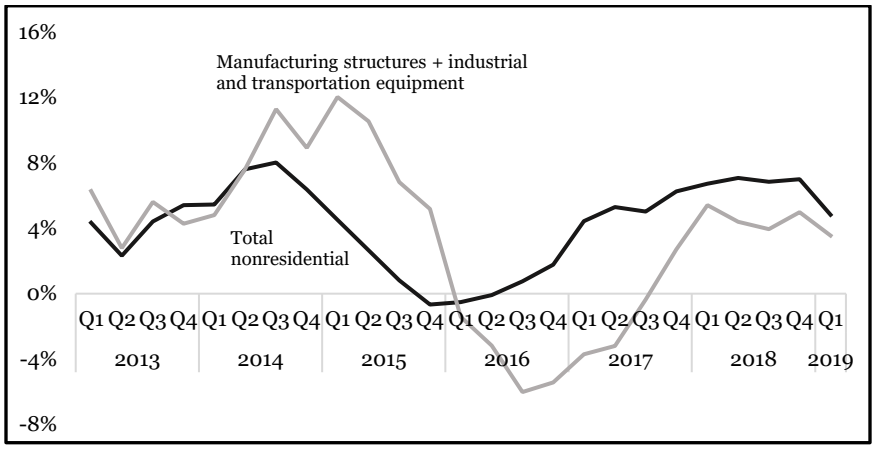
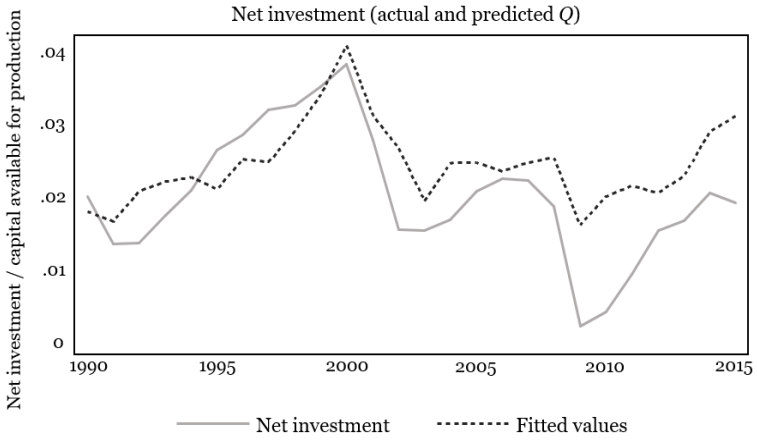


Figure 5. Gutierrez and Philippon: "Investment-less Growth."[11]



[10] BEA NIPA, Table 5.3.6.

[11] From Germán Gutiérrez & Thomas Philippon, 2017. "Investment-less Growth: An Empirical Investigation," Brookings Papers on Economic Activity, Economic Studies Program, The Brookings Institution, vol. 48(2 (Fall)), pages 89-190. "Capital available for production" is in their paper titled "K," for explanation's sake it has been altered in this format, as has the coloring and font of the chart. Their data is available here: https://www.brookings.edu/bpea-articles/investment-less-growth-an-empirical-investigation/. *Q* is "Tobin's Q," defined as market value as a percent of asset value. The "q-theory of investment" states generally that investment opportunities are worth undertaking if market value exceeds capital replacement costs.

These findings replicate a consensus position in the academic literature. Robert E. Hall of the Hoover Institution at Stanford University has found, for example, that U.S. capital stock growth was 13 percent below trend in years after the financial crisis.[12] Germán Gutiérrez and Thomas Philippon of New York University likewise find that corporate investment is weak relative to predictive measures like valuation and profitability, under-shooting expected investment by 10 percent.[13] Calling these effects the "hollowing out" of business investment, Lewis Alexander and Janice Eberly find in research published by the International Monetary Fund that "investment fell relative to fundamentals at the turn of the millennium – well before the Great Recession," and investment growth has since "[shifted] away from production sectors, like manufacturing… toward intangible, rather than physical, capital."[14] Moreover, the White House Council of Economic Advisers (CEA) in both the current and prior presidential administrations have documented the trend. President Trump's CEA has blamed a "disappointing state of capital accumulation" for "the recent disconnect between America's real wages and America's corporate profits,"[15] while President Obama's CEA ascribed "broad-based investment slowdown" in recent years to "secular shifts in the U.S. economy."[16]

The wide notice of falling business investment is even more strongly replicated by political consensus. Many economic policies are publicly justified by their advocates on the grounds that they increase investment, even when it is at least equally as plausible that other policy goals are intended. The common defense that new government expenditure for various priorities, like vocational education or renewable energy, will "pay for itself" is an implicit argument that the private business sector will increase its output (and so also investment) in response to the policy. President Obama, for instance, argued for green energy incentives in the 2009 *American Recovery and Reinvestment Act* not primarily as a way to reduce carbon emissions, but to grow a "new, clean energy economy that can create countless well-paying jobs" in the context of recovery from the recent economic downturn.[17] Likewise, corporate income tax rate cuts enacted by the *Tax Cuts and Jobs Act* were often expressly advocated for as a means of on-shoring corporate residence and increasing capital investment, not as increasing the efficiency of corporate resources neutral across end use.

Increasing business investment is widely considered a priority in its own right. President Trump's White House, together with Congressional Republicans, declared in 2017 that one of the four key principles for tax reform should be to "bring back trillions of dollars that are currently kept

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[12] Robert E. Hall "Quantifying the Lasting Harm to the U.S. Economy from the Financial Crisis," National Bureau of Economic Research, May 2014. https://www.nber.org/papers/w20183.
[13] Germán Gutiérrez & Thomas Philippon, 2017. "Investment-less Growth: An Empirical Investigation," Brookings Papers on Economic Activity, Economic Studies Program, The Brookings Institution, vol. 48(2 (Fall)), pages 89-190.
[14] Alexander and Eberly, 2018. "Investment Hollowing Out."
[15] "The Growth Effects of Corporate Tax Reform and Implications for Wages," White House Council of Economic Advisers. https://www.whitehouse.gov/sites/whitehouse.gov/files/images/Corporate%20Tax%20Reform%20and%20Growth%20Final.pdf.
[16] "2017 Economic Report of the President," White House Council of Economic Advisers. https://www.govinfo.gov/content/pkg/ERP-2017/pdf/ERP-2017-chapter2.pdf.
[17] Federal News Service, "Obama's Remarks at Stimulus Signing," *The New York Times,* February 17, 2009. https://www.nytimes.com/2009/02/17/us/politics/17text-obama.html.

offshore to reinvest in the American economy," and argued that proposed business tax cuts would promote "greater investment in American manufacturing."[18] President Barack Obama's 2016 "President's Framework for Business Tax Reform" noted the need to "fundamentally reform the business tax base" in order to "encourage greater investment in America."[19] As with political leaders, so too with advocacy groups and the public. Business groups such as the U.S. Chamber of Commerce[20] and labor organizations such as the AFL-CIO[21] alike name increasing capital investment in the U.S. as a priority to promote the general welfare of businesses and workers. A 2017 Gallup poll found "keeping manufacturing jobs from going overseas" was the top recommendation Americans gave for how to create more jobs in the U.S.,[22] and a survey conducted in 2017 by Deloitte found 76 percent of Americans agreed upon the need to "further invest in the manufacturing industry."[23]

Recognizing the existence of a long-run decline in business investment therefore provides an important backdrop to current debates. The gap between the widely-shared goal of increasing business investment and its actual state is significant. This report is concerned with understanding why this is the case and offering a framework for setting policy based on an explanation.

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[18] "Unified Framework For Fixing Our Broken Tax Code," U.S. Department of Treasury, 2017. https://www.treasury.gov/press-center/press-releases/documents/tax-framework.pdf

[19] "The President's Framework for Business Tax Reform: An Update," The White House and U.S. Department of Treasury, April 2016. https://www.treasury.gov/resource-center/tax-policy/documents/the-presidents-framework-for-business-tax-reform-an-update-04-04-2016.pdf.

[20] "Principles for Tax Reform," U.S. Chamber of Commerce, March 3, 2017. https://www.uschamber.com/issue-brief/principles-tax-reform.

[21] AFL-CIO Staff, "We Need Tax Reform That Works for Working People," American Federation of Labor and Congress of Industrial Organizations, April 17, 2017. https://aflcio.org/2017/4/17/we-need-tax-reform-works-working-people.

[22] Frank Newport and Andrew Dugan, "Americans Still See manufacturing as Key to Job Creation," *Gallup*, May 24, 2017. https://news.gallup.com/poll/211010/americans-manufacturing-key-job-creation.aspx.

[23] "A look ahead: How modern manufacturers can create positive perceptions with the US public," Deloitte Industry Insights, 2017.

DIS-ORDERED ECONOMICS

Reduced business investment provides an intuitive explanation for other common concerns. Poor macroeconomic outcomes attributed to declining investment include slower economic growth, stagnant productivity growth, and less pay for workers. While worthwhile, attempts to establish a correlation between these changes are not sufficient for understanding their whole effect. The macroeconomic statistics which characterize this discussion are largely self-defining, the most obvious examples being how the unemployment rate automatically adjusts itself to the amount of the population seeking employment, or how Gross Domestic Product counts certain inputs like financial intermediation as output. Like observing a game of musical chairs by only counting what percent of the chairs are taken at the end of each round, such a method can miss out on important structural changes. Moreover, many of these measures are value-neutral, describing how efficient the economy is operating on its own terms, but not evaluating its overall direction. It is in this light that business investment should be evaluated, as an indicator of how much, and to what end, the economy is investing in its future capacity. More than merely providing a tool for macroeconomic prediction, such an evaluation can help us understand the ends to which our work and economic institutions are ordered today.

Reduced business investment in recent years should not be understood as merely a shift toward a "new normal" or as the "natural" outcome of inevitable technological progress and globalization. A full accounting of the situation will demonstrate that reduced investment is part of a fundamental change in the understanding of what the proper goal of the business enterprise should be in our economic system. Inverting the flow of funds expected by a more traditional understanding of capitalism, this new framework diminishes the responsibility of the private business sector to produce and maintain the nation's physical capital stock. With the removal of this institutional constraint on business enterprise, businesses can, and increasingly do, meet their liabilities through acquiring financial assets and other forms of returns without investment instead of developing nonfinancial, or real assets. We might think of this pattern of "lending for profit" as more typical of banks than production businesses, but in the 21st century the distinction is less true than nearly ever before.

The essential distinction between business models based on the acquisition of financial and nonfinancial assets can be seen in relation to the rest of the economy. Financial assets derive their value from obligations to future payment; the net financial assets businesses acquire as a sector are financial liabilities for the rest of the economy. Nonfinancial assets, often called "real" or "tangible" capital, are valuable in their own right. There is no corresponding liability to a nonfinancial asset.[24] If financial assets represent today's consumption financed by

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[24] In this regard we follow the methodology of Wynne Godley and Marc Lavoie, who wrote "A tangible asset – a real asset – only appears in a single entry of the sectoral balance sheet, that of its owner. This is in contrast to financial assets and all liabilities, which are a claim of someone against someone else." *Monetary Economics: An Integrated Approach to Money, Income, Production, and Wealth* (2007), Pallgrave Macmillan. http://dl4a.org/uploads/pdf/Monetary+Economics+-+Lavoie+Godley.pdf.

tomorrow's production, nonfinancial assets represents the opposite, which is today's production for tomorrow's consumption. The U.S. Bureau of Economic Analysis begins its methodology for fixed assets with this definition:

> *"Wealth, in the broadest sense, consists of assets that provide the capacity to produce output and income. The components of the Nation's wealth that are measured in this publication are fixed assets (equipment, software, and structures, including owner-occupied housing) owned by private business and nonprofit institutions or by governments, and durable goods owned by consumers."*[25]

This section explores how businesses have typically been understood in the American economy as the production units of these "real" assets, how this differs from their current performance, and the implications of this change.

Our first objective is a description of the assumed institutional arrangement of the U.S. economy. This is most clearly described as an intuitive understanding of the flow of money, a kind of "economic order" that the economy follows, which often operates in the background of public discussion of economic matters. It proceeds like this: financial institutions, such as banks or credit unions, lend money to businesses, who use the money to invest in projects and activities in the course of competition with other businesses. Workers receive wages from their employers, which they use to provide for their households, buying consumer products from other businesses and saving for their families' future in banks and retirement accounts. Financial institutions then lend their savings back out into the cycle, which starts all over again with greater productive resources than it had to begin with.

This is the flow of capital of the typical private enterprise economy that many Americans likely assume describes the U.S. economy today. Examples of its application to current political debate are abundant. As Dr. Alan Viard of the American Enterprise Institute describes clearly, "savings finance the business investment that in turn drives future growth of the economy and living standards of workers."[26] All sorts of modifications could be made to update this intuitive cycle to particular situations – attaining business financing through equity instead of debt liabilities, for instance, or workers receiving wages from themselves in the case of many small businesses. The essential idea remains. No matter the arrangement or method of savings, private business enterprise is the driver of investment and ultimate creator of value for the economy. Businesses borrow from the rest of the economy in order to finance their investment and continue operations based on their ability to grow. The outcome of the business sector's economic growth is value for investors in the form of return on investment, and workers in the form of wages.

If the structure is intuitive, it is because this is a fundamental characteristic of free market capitalism. An opening premise of Adam

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[25] U.S. Department of Commerce. Bureau of Economic Analysis. Fixed Assets and Consumer Durable Goods in the United States, 1925–99. Washington, DC: U.S. Government Printing Office, September, 2003. https://apps.bea.gov/national/pdf/Fixed_Assets_1925_97.pdf.

[26] Alan Viard, "A deeper look at new wealth tax proposal from Elizabeth Warren," The Hill, January 28, 2019. https://thehill.com/opinion/finance/427218-a-deeper-look-at-new-wealth-tax-proposal-from-elizabeth-warren.

Smith's theory of the invisible hand in his classic book, *The Wealth of Nations*, is that "every individual endeavours…to employ his capital in the support of domestic industry."[27] As the economists Heiner Flassbeck and Paul Steinhardt summarize simply, "The whole idea of a market economy—across all schools of thought—is based on the principle that the corporate sector should be largely responsible for the profitable use of savings."[28] To discern how the American economy is performing, we should therefore look primarily to the performance of the private business sector in carrying out its role as the investor of the country's resources.

Our next objective is to display how the U.S. economy has adhered to this institutional arrangement over time. What we call in this report the "traditional view" of the economy, with business debtors and bank and household creditors, was true for most of modern American economic history. From the years 1960 until 2000, what the U.S. Integrated Macroeconomic Accounts characterize as "nonfinancial corporate business" were "net borrowers" from the rest of the economy. This means they incurred greater liabilities to banks and shareholders as they raised capital for investment than the amount of financial assets they acquired, like cash deposits or other securities. "Nonfinancial *non*-corporate business," which includes what is most often thought of as small businesses, were likewise net borrowers. The rest of the domestic private sector, including households and financial institutions like banks, were "net lenders," that is, they acquired greater financial assets like cash deposits, retirement savings, or shares in companies than they incurred in liabilities like mortgages or consumer debt. Once more, in the traditional view's conception of the economy, households' lending and business' borrowing are mirror images: households' net financial assets are backed by business' liabilities. Something changed in recent years, however, that makes the traditional view less descriptive of the U.S. economy than it used to be. Around the turn of the 21st century, nonfinancial corporate business joined the rest of the private sector in the position of net lending. At nearly the same time, in the run-up to the mortgage debt-driven global financial crisis of 2008, the household sector became a net borrower for the first time on record. The flow of funds between households and businesses temporarily reversed, while the net lending position of financial institutions increased.[29] [30]

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[27] Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*. Public Domain. https://www.econlib.org/library/Smith/smWN.html.

[28] Heiner Flassbeck and Paul Steinhardt, "Corporate Power and the Self-Destruction of Neoliberalism," *American Affairs*, Winter 2018. https://americanaffairsjournal.org/2018/11/corporate-power-and-the-self-destruction-of-neoliberalism/.

[29] In the years following the financial crisis, nonfinancial businesses have remained in net lending position by various measures. Net lending may be calculated both as a measure of stock, or the total position of assets and liabilities, and flow, or changes in assets or liabilities. It may also be identified as a measure in the capital account, which is the IMA accounting for income and expenditures, or in the financial account, which measures the values of assets and liabilities. These measures should all be equivalent in theory, though due to statistical discrepancy there may be some difference. Following from the diversity of literature, multiple methods are used in this report throughout, and are identified in the footnote of each chart. The general formula is displayed below:

Net lending (+) or borrowing (-) = *Financial assets – Financial Liabilities*
= *Gross Saving – Investment*

[30] For other decompositions of net lending positions, see also "The Macroeconomics of Firms' Savings," by Roc Armenter of the Federal Reserve Bank of Philadelphia and Viktoria

Figure 6. Net lending (+) or borrowing (-) as a percent of national fixed assets and consumer durable goods, 1960-2017.[31]

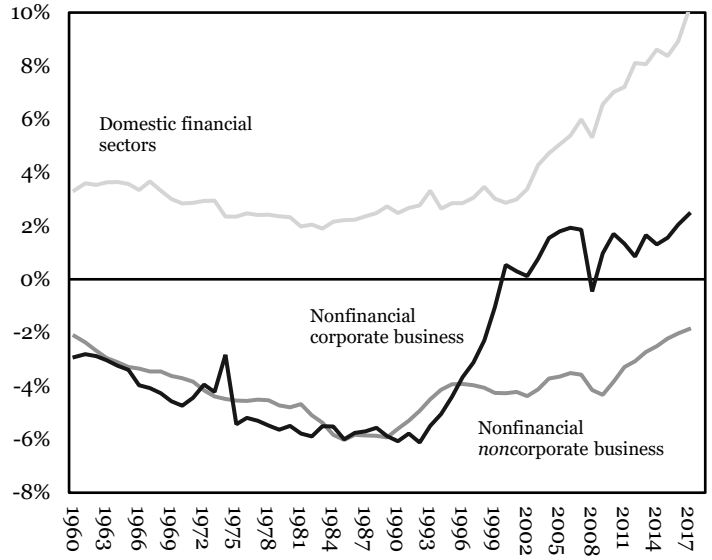
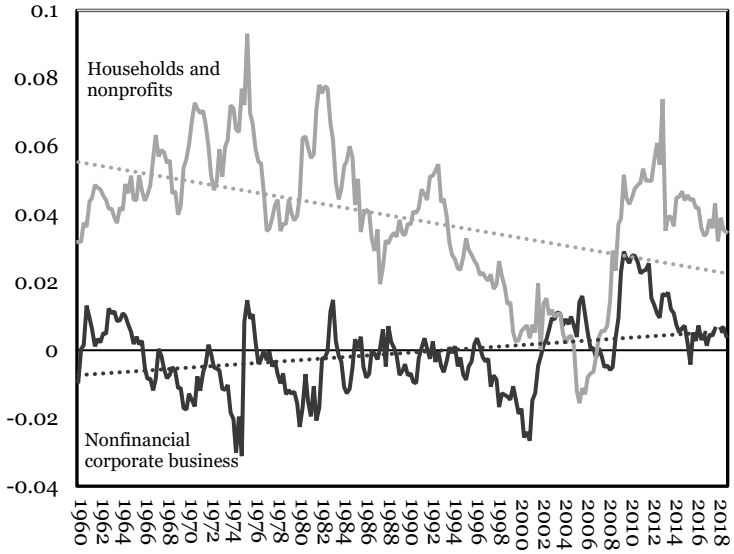


Figure 7. Net lending (+) or borrowing (-) (financial account transactions) as a percent of Gross Value Added, 1960-2018Q3.[32]



Hnatkovska of the the University of British Columbia, December 2013. http://www.roc-armenter.net/research/files/AH_2013.pdf, and "The corporate saving glut," by Giacomo Saibene, *Journal of Macroeconomics*, 2018. https://www.sciencedirect.com/science/article/pii/S0164070417304950?via%3Dihub.

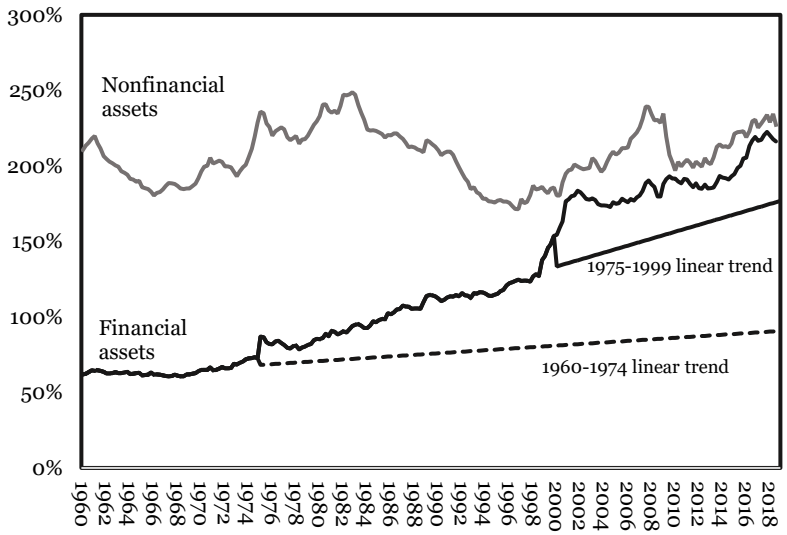
[31] Federal Reserve Financial Accounts and U.S. Bureau of Economic Analysis. Net lending is defined as financial assets less liabilities. "Financial sector" is "Domestic financial sectors"

[32] Federal Reserve Financial Accounts. 2017Q4 has been removed due to the accounting of abnormal repatriation tax revenues.

The net lending position (identified in the figures above as a data point listed above zero) means that a sector acquires more financial assets than it incurs in liabilities. The transition of corporate businesses from net borrowers to net lenders could be described as follows. Businesses traditionally raise capital to use for investment. They raise capital by incurring liabilities, that is, they receive capital today from "lenders" or "creditors" like banks or shareholders in exchange for the promise of future payment. In the case of a loan, this future payment takes the form interest and the eventual return of principal. In the case of an equity investment, the future payment is dividends, and increasingly share buybacks.[33] In either case, the business raises funds for its operations by increasing the liabilities it owes to the rest of the economy, which as a whole is a creditor to the business. Businesses then use these funds to spend on investment, like buying property, developing new equipment, or training workers.

The net financial position of the business, so defined, is typically negative, because the liabilities the business took on with the funds they raised are greater than the financial assets they acquired, as they spent the money on property, plants, and equipment or other nonfinancial assets instead. For the net financial position of a business to be positive, then, one of two changes from the traditional view is required. Either the business has reduced its outstanding liabilities, or it has spent the funds it raised on financial assets instead of capital investment. Corporate liabilities increased over nearly 100 percent of gross value added between 2010 and 2017, demonstrating no net reduction in liability issuance.[34] As demonstrated in Figure 8, nonfinancial corporate business has increasingly accumulated financial assets relative to nonfinancial assets.

Figure 8. Total value of financial vs. nonfinancial assets owned by nonfinancial corporate business as a percent of gross value added, 1960-2018Q3.[35]



[33] Godley and Lavoie, *Monetary Economics*, similarly count equities as liabilities in a stock-flow consistent framework, as do the U.S. Integrated Macroeconomic Accounts.
[34] U.S. Bureau of Economic Analysis, Integrated Macroeconomic Accounts. Table S.5.q.
[35] Ibid. Note also how the two levels begin to move in tandem starting in the late 1990s. The r-squared figure prior to 2000 is 0.02, but after it is 0.42.

The marked increase in corporate savings over investment has become increasingly documented by economic literature. Joseph Gruber and Steven Kamin of the Federal Reserve find, for instance, that "For most of the period before 2000, non-financial corporations borrowed on net from the rest of the economy to finance their investments," but "during the years 2002-2005, these corporations experienced small positive net lending positions" that "ballooned after the global financial crisis."[36] Labeled the "corporate savings glut" by numerous scholars, the "pervasive shift in the composition of saving away from the household sector and toward the corporate sector"[37] is "quite at odds with traditional models of corporate finance," according to Roc Armenter in research conducted at the Philadelphia Federal Reserve.[38] The *Financial Times* columnist Martin Wolf noted that while "In a dynamic economy, one would expect corporations in aggregate to use the excess savings of other sectors, notably those of households… If investment is weak and profits strong, however, the corporate sector will, weirdly, become a net financer of the economy."[39]

While this trend is true of the nonfinancial corporate business sector as a whole, it may also be useful to view the shift through a look at individual companies that comprise it. Analysis of firm-level net lending can be found by identifying assets and liabilities on a company's balance sheet. Following the above definitions by the U.S. Integrated Macroeconomic Accounts and the Federal Reserve's Financial Accounts, net lending can be found by subtracting out financial liabilities from financial assets. In the firm samples used below, this has been done by defining financial asset as total assets less property, plant, and equipment, and total inventories, and defining financial liabilities as total liabilities and stockholder equity less retained earnings.

Individual companies further display the shift. Figure 9 displays the upward movement of selected blue-chip companies in to the net lending position. Companies identified with the navy blue line are recorded in 2018 as being net lenders, while companies identified with the gray line are recorded in 2018 as being net borrowers. The sample is not representative, but following changes in companies over time can reveal important trends, combined with relevant outside information. It should be notable in any case that large companies in the U.S. have generally reduced their borrowing over time, and that younger firms in digital technology do not make up for this shift because they largely occupy net lending positions as well.[40]

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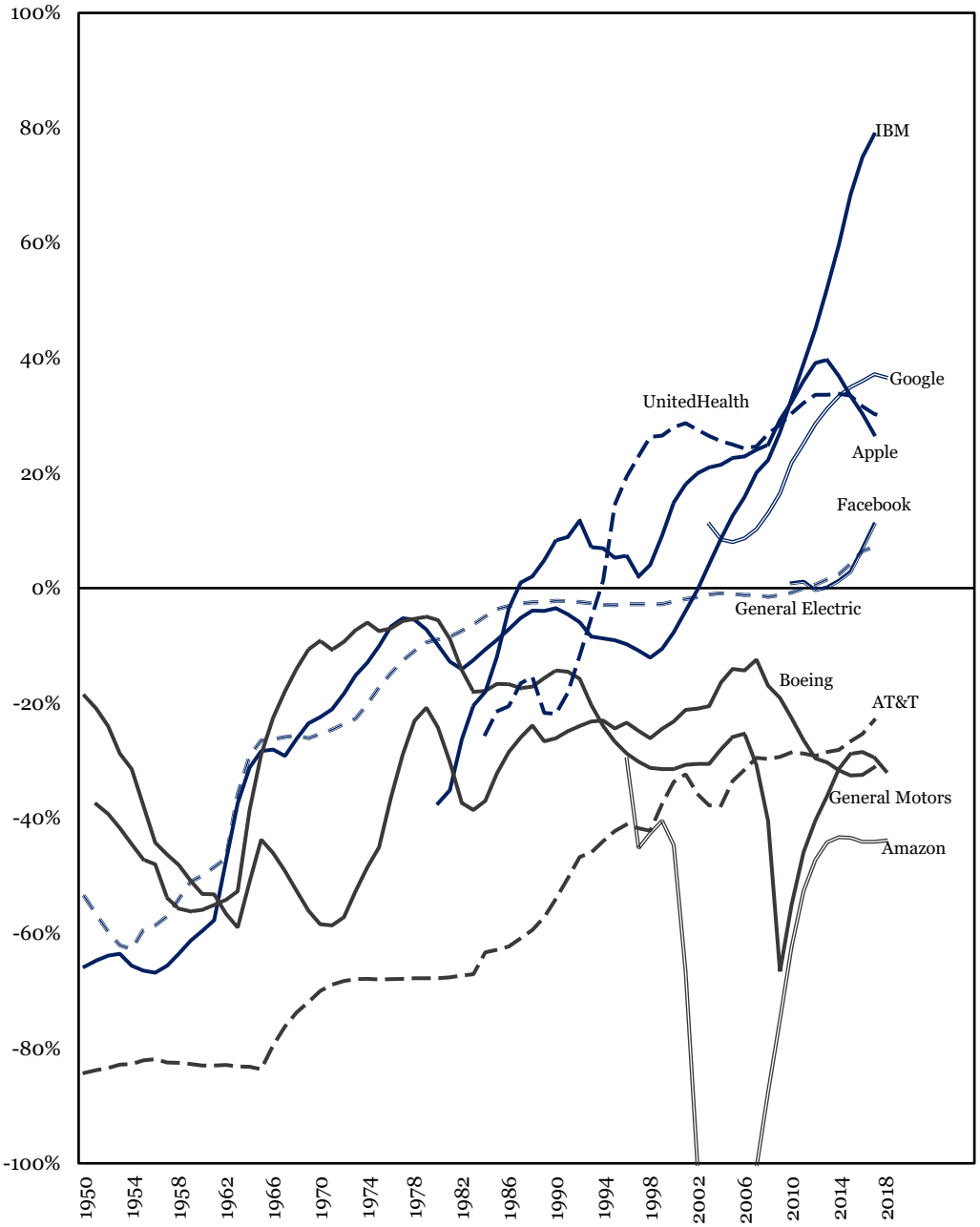
[36] Joseph W. Gruber and Steven B. Kamin, "The Corporate Saving Glut in the Aftermath of the Global Financial Crisis," Federal Reserve System, 2015. https://www.federalreserve.gov/econresdata/ifdp/2015/files/ifdp1150.pdf.
[37] Peter Chen, Loukas Karabarbounis, and Brent Neiman. "The Global Rise of Corporate Saving," National Bureau of Economic Research, March 2017. https://www.nber.org/papers/w23133.pdf.
[38] Roc Armenter, "The Rise of Corporate Savings," Philadelphia Federal Reserve, 2012. https://www.philadelphiafed.org/-/media/research-and-data/publications/business-review/2012/q3/brq312_rise-of-corporate-savings.pdf
[39] Martin Wolf, "Corporate surpluses are contributing to the savings glut," *Financial Times*, November 15, 2015. https://www.ft.com/content/b2df748e-8a3f-11e5-90de-f44762bf9896.
[40] It should also be noted here that the net lending or borrowing position of an individual company is not descriptive of the quality of its investment, which is a limitation of sectoral balance analysis in general. Furthermore, our definition of "nonfinancial asset" in this analysis excludes assets like goodwill and other intangible assets which may not typically be thought of as "financial" in the textbook sense, but are also not real in the way that more physical capital is. Intellectual property for example is more mobile than more physical

Figure 9. Net lending (+) or borrowing (-) by company as a percent of total assets, selected blue-chip stocks 1950-2018.[41]



assets, and its legal exclusion of competition functions as a more direct liability to the rest of the economy. Because much of the rise in goodwill stems from increasing mergers and acquisitions it also functions as more of a financial asset.

[41] Standard & Poors, Compustat database. Values have been modified by an exponential smoothing factor of 0.5. Values are for balance sheet position at the end of the given year, so they are stock positions. Flow positions would appear differently, with values that appear as upward slopes in this chart appearing as positive net financial asset positions. Under both forms however, the business cycles of the 1960s, 1980s, and late 1990s reveal net borrowing by companies, while the current business cycle demonstrates no such movement.

WHO WILL BE THE INVESTOR OF FIRST RESORT?[42]

The overall argument of this balance sheet analysis of business sectors and firms provides a basic case for the occurrence of what has been called "financialization."[43] Comparing these flows of funds to our earlier conception of the traditional view, nonfinancial corporate companies' balance sheets look increasingly like financial institutions' balance sheets, that is, they increasingly borrow and lend for profit.[44] Recall that under the traditional view of the U.S. economy's flow of funds, it was banks and financial institutions that borrowed to finance positions in financial assets, while private business enterprises borrowed to finance capital investment. This assumption is increasingly less true for many large private companies, and is no longer true for the nonfinancial corporate sector as a whole. The nonfinancial corporate business sector now has more financial claims on the rest of the economy than the rest of the economy has on it.

If corporate business is not borrowing and investing, then who is? When a business pays out wages to it workers, it shows up as a cost to the business and income to the workers. Likewise, one person's financial asset is another person's liability – balance sheets depict balance. If businesses have reduced their borrowing, or "net investment," then a balance sheet that accounts for all other actors in the economy must show greater investment elsewhere. Sectors with positive net financial assets, which in this context we could call "savings" that are not backed by the sector's own real assets, must be backed by liabilities in other sectors. The implication of this accounting constraint then, is that such savings should be understood not only by who owns them but also by who is backing them. In the U.S., the main increase in borrowing has unsurprisingly come from the federal government. In the years following the 2008 financial crisis the economic sectors defined by the U.S. Bureau of Economic Analysis saw their net financial position change (see Figure 10). Lending by households, nonfinancial corporate business, and financial business increased, while borrowing increased by government, nonfinancial noncorporate business, and the foreign sector, though the

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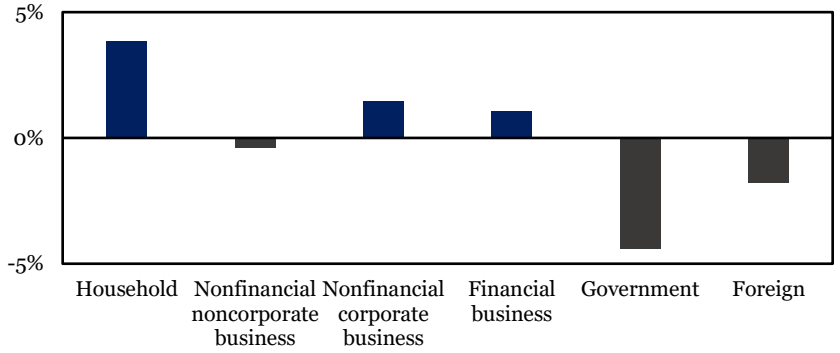
[42] This phrase, "investor of first resort," was to our knowledge initially promoted by the economist Mariana Mazzucato. See, for example, "The Entrepreneurial Society Needs an Entrepreneurial State," *Harvard Business Review*, October 25, 2016. https://hbr.org/2016/10/an-entrepreneurial-society-needs-an-entrepreneurial-state.

[43] Leila E. Davis, "Identifying the "financialization" of the nonfinancial corporation in the U.S. economy: A decomposition of firm-level balance sheets," Journal of Post Keynesian Economics, 39:1, 115-141, 2016. DOI: 10.1080/01603477.2015.1116370

[44] The intended meaning here is in the macroeconomic sense. While the definition includes formal lending in the form of the extension of credit to consumers, more often corporate lending takes other forms, like equity acquisition or direct investment abroad. We are comfortable continuing in this mode because from the perspective of American workers, their skills, and domestic productive capacity, offshore investment might as well be a financial asset that provides returns without current production. See "The financialization of the nonfinancial corporation. A critique of the financial rentieralization hypothesis," by Joel Rabinovich, 2018. hal-01691435.

government by far provided the largest increase in the form of stimulus and other responses to the economic recession.

Figure 10. Percent change in net capital account position [lending (+), borrowing (-)] by sector, 10-year pre-GFC average vs. post-GFC average.[45]



In very general terms, there are three sectors that play the role of the primary net borrower for modern economies: private business, the government or state-owned business, or the foreign sector in the form of a trade surplus. Advanced economies typically see at least one of these three sectors as its primary borrower, for our purposes the "net investor" for the economy. For most of modern American history, the net investor was private business. In Germany today, a sizable trade surplus (and its mirror image, a capital account deficit), has made the foreign sector (the rest of the world) a net borrower. In the U.S. and other Western economies today, it has been the government sector in recent years. In China, the primary net investor is the state-owned enterprise sector, neither exactly government nor private business in our definition, but which produce goods and materials in advanced industries targeted by the Made in China 2025 plan, among other activities.[46] It is rare for households anywhere to be net borrowers sustainably, as the position implies large household debt over incomes, the last occasion of which in the U.S. was in mortgage debt liabilities and ended in the run-up to the financial crisis. We are then left with three options: the business, foreign, or government sectors.

There must be a borrower. The sectoral balances described above are an accounting identity that must sum to zero. It is here that the rise of corporate lending in the U.S. has important implications. If the U.S. were to accept the permanent financial position of private business as net lender, then by definition it must have some other sector be its investor, and by process of elimination we wind up very quickly looking to the federal government to play the role. The U.S. dollar is the reserve currency for most of the world; it is likely for the foreseeable future that the rest of the world will buy more dollar-denominated assets than the U.S. will sell, and the U.S. has consistently run trade deficits in recent

[45] Federal Reserve Financial Accounts.
[46] Jo Michell, "Credit and investment in China: a flow-of-funds analysis," PhD Thesis, University of London, 2012. https://core.ac.uk/download/pdf/19090332.pdf.

years.[47] [48] The U.S. government does not operate state-owned enterprises outside of the government conservatorship of home lending agencies and some energy resource development, nor should it. If the private business sector is a net lender, then by implication the net investor for the economy will be the federal government.

It should be notable, in this light, that the outcome of government-led investment is precisely what has been increasingly called for in American politics, whether in the form of the Green New Deal, a universal basic income, or in the expansion of other transfer programs. Given the other constraints listed above, government is the inverse of reduced business investment. Indeed, the federal government's position as practically the sole net borrower is already the current arrangement of the U.S. economy. While government-led investment might reconcile demand leakages on balance sheet flows, it introduces the risk of new errors as policy practice. Conservative critiques of large government programs, like basic-level inefficiency and tendency for corruption, should apply here, in addition to the risk of government action that widens the current imbalance by further discouraging business investment.

But there are no good options if private business saving in excess of investment is simply taken as a given. The state of the U.S. corporate sector described in this section is not so much a model of traditional capitalism as it is an indiscriminate mass of savings upheld by federal government net borrowing, otherwise known as spending deficits. These savings struggle for yield in a world where the only sources of real economic growth and technological progress are the few corporate business firms that act like capitalists in the traditional sense, investing in uncertain and illiquid projects in which success can only be achieved by innovation under the gun of making good on their liabilities. That they exist at all is now due less to the way the economy orients business enterprise to make profits, and more to the extraordinary strength of their founders' ambitions and their continuous control of ownership,[49] or to the restricting laws and guaranteed demand of federal contracts that require large capital investment in the U.S. to be met. What used to be the normal net investment position for corporate business is now exceptional. It should be telling in this regard that small businesses, whose margins and competition preclude financial asset speculation and force a focus on product development, represent the only business sector left in the Financial Accounts recorded as net borrowers. Large multinational corporations face few such constraints. The economist Hyman Minsky called this system of the American economy "money manager capitalism," for the extent of the financial services required to manage this vast sum of savings, and for the large fees paid to the services that can claim to make good financial investments under such conditions.[50] To apply the definition of enterprise in this analysis to a term of our own, we might say that the corporate sector has gone from a

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[47] Notably, even if the U.S. were to reverse its capital account surplus by means of increasing exports, the precondition for this would likely also have to be increased nonfinancial business investment.

[48] See also L. Randall Wray, "Does America Need Global Savings to Finance Its Fiscal and Trade Deficits?" *American Affairs*, Spring 2019. https://americanaffairsjournal.org/2019/02/does-america-need-global-savings-to-finance-its-fiscal-and-trade-deficits/.

[49] Amazon and Tesla are, in this regard, notable net borrowers.

[50] Hyman Minsky, "Money Manager Capitalism," 1989, Hyman P. Minsky Archive. 13. https://digitalcommons.bard.edu/hm_archive/13.

system marked by free enterprise, to one that is more broadly "enterprise-free." The mirror image of business savings is the absence of a proper level of business investment. In both descriptions the private sector's role as the allocator of capital has been diminished.

Accounting identities like the ones displayed in this section do not explain why these changes have occurred. This report next proceeds to propose an explanation. We are in the midst of a *dis*order in the institutional arrangement of the American economy. If private business is not investing to the extent it is expected, the proper reaction should not be to overturn the American tradition for a new model, but to recover what has been lost. Doing so requires tracing our steps backward to better understand what that was, and how it was lost.

CONSIDERING SHAREHOLDER PRIMACY THEORY

It has been accepted as economic law since the 1970s that returning value to shareholders is the primary function of business activity. This theory, which we will call "shareholder primacy theory" in this section, is not a law of nature, but a system of preferences, or as William Lazonick has called it, an ideology.[51] It is a theory based on a certain set of beliefs about what economic value is, how it is created, and who has what claims to it. Nothing about it guarantees that capital will be deployed to the productive ends described in the previous section as the institutional role of business enterprise. In fact, it disrupts the ability to constructively discuss any such a function at all, by making equity returns the sole criterion for business performance.

The argument of this section is that shareholder primacy theory presents an externality problem to the sustainability of the private enterprise system. Productive business firms are valuable to the U.S. to an extent far beyond their net present value to shareholders. Working properly, they are the centers of economic output upon which functioning markets depend, steady and constant workplaces for the American people, and the holders of tremendous institutional knowledge. It is in capital investment that these factors of production are combined together. The U.S. has historically had and expected a level of business investment in fixed assets that cannot be adequately explained by shareholder primacy theory.[52] Shareholder primary theory provides a framework to reduce or ignore the longer-term, economy-and-society wide negative externalities that result, by placing them outside the realm of business decisions. These externalities in turn threaten the long-term health of the economy and even the individual businesses in question.

Andy Grove, the former founder and CEO of Intel Corporation, offers a compelling description of how Silicon Valley undermined the conditions for its success through such a singular focus:

> *"If profit margins are the problem, we go to work on margins, with exquisite focus. Each company, ruggedly individualistic,*

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[51] This theory, also referred to as "maximizing shareholder value," has been well-covered by the academic literature for its effect on capital investment. See William Lazonick and Mary O'Sullivan, "Maximizing shareholder value: a new ideology for corporate governance," *Economy and Society,* February 2000. https://www.tandfonline.com/doi/abs/10.1080/030851400360541.

[52] J.W. Mason, "The Story of Q," June 26, 2012. https://jwmason.org/slackwire/story-of-q/

does its best to expand efficiently and improve its own profitability. However, our pursuit of our individual businesses, which often involves transferring manufacturing and a great deal of engineering out of the country, has hindered our ability to bring innovations to scale at home. Without scaling, we don't just lose jobs — we lose our hold on new technologies. Losing the ability to scale will ultimately damage our capacity to innovate."[53]

This section argues that the definition of value provided by shareholder-driven finance is incomplete, and results in resource misallocation with bad implications for investment, innovation, and workers.

IMPLICATION #1

Shareholder primacy theory has tilted business decision-making toward delivering returns quickly and predictably to investors, rather than building long-term capabilities through investment and production.

At its heart, the theory of shareholder primacy is a claim about the utility of shareholders as optimal market participants. Arising out of the economic stagnation of the 1970s, shareholder primacy and agency theory refocused corporate management's understanding of economic value as financial return to shareholders, and attempted to align their compensation and incentives with shareholders to ensure the proper execution of that duty.

The long-term result of this shift has been an increasing focus on finance as a primary source of profit generation, both in terms of the financial services sector as an industry, and in increased financial activity of the nonfinancial economy. This represents a major change. The financial sector contributed 2.8 percent of GDP in 1950, 4.9 percent by 1980, and rose to 8.3 percent in the 2000s.[54] The financial sector's share of corporate profits grew from about 10 percent three decades ago to a peak of about 40 percent in the pre-recession 2000s, and after the 2008 recession rebounded to about 30 percent by the mid-2010s.[55] In the 2000s, Ford Motor Company made more from the loans it issued than from car sales.[56] In 1980, the total value of financial assets was about five times U.S. GDP, but by the 2000s it was twice that amount.[57] In the late 1960s and early 1970s, about six percent of Harvard Business School graduates went into finance; by 2008 it was 28 percent, and 29 percent in the class of 2018, against five percent that went into manufacturing.[58] [59]

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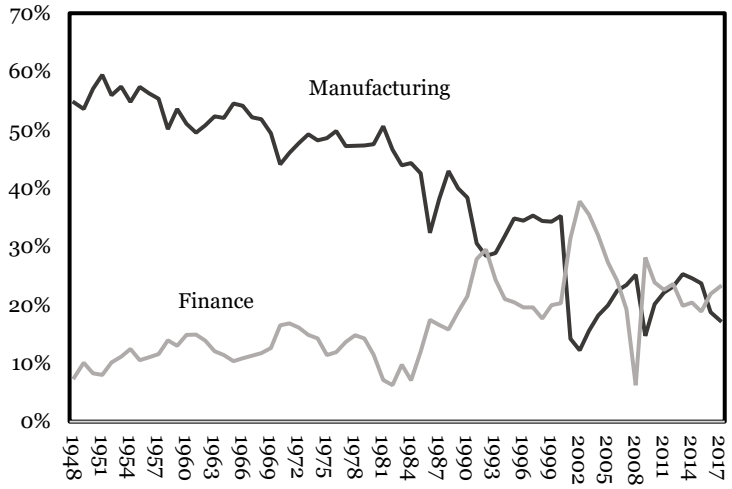
[53] Andy Grove, "How America Can Create Jobs," *Bloomberg Businessweek*, July 1, 2010. https://www.bloomberg.com/news/articles/2010-07-01/andy-grove-how-america-can-create-jobs.
[54] Robin Greenwood and David Scharfstein, "The Growth of Finance," *Journal of Economic Perspectives*, Vol. 27, No. 2. Spring 2013. http://www.people.hbs.edu/dscharfstein/growth_of_finance_jep.pdf.
[55] Jordan Weissmann, "How Wall Street Devoured Corporate America," *The Atlantic*, March 5, 2013. https://www.theatlantic.com/business/archive/2013/03/how-wall-street-devoured-corporate-america/273732/
[56] Mazzucato, *The Value of Everything*, p. 162.
[57] Greenwood and Scharfstein, "The Growth of Finance."
[58] Ibid.
[59] Harvard Business School, Data and Statistics. https://www.hbs.edu/recruiting/data/Pages/industry.aspx.

Figure 11. Manufacturing vs. finance share of corporate profits, 1948-2017. [60]



Does the growth of financial services in the U.S. economy reflect its ultimate productive value? The underlying question is whether the claim of market utility is true. It is not a given fact that this arrangement serves the interests of the U.S. as a whole, or as we have seen, even advances capital investment. Maximizing returns to financial capital does not require investment in the physical economy. As Julius Krein has written, the view of shareholder primacy as characteristic of dynamic business enterprise belies the reality that many of today's institutional shareholders have little "entrepreneurial desire to fundamentally remake an industry or product. If all that matters are annual performance numbers, why pursue a complicated, unpredictable, and risky entrepreneurial investment if it's possible to engage in easily quantifiable financial engineering and profit in the short term?"[61] As Irving Kristol wrote:

> *"stockholders have essentially regarded themselves… as little more than possessors of a variable-income security. A stock certificate has become a lien against the company's earnings and assets-a subordinated lien, in both law and fact – rather than a charter of "citizenship" within a corporate community."*[62]

The coincidence of making resource allocation upon the metric of shareholder value, borne out by the various measures of financialization argued above, with falling investment should force a realization that it is an open question whether a different institutional arrangement might be more productive.

An underlying assumption of shareholder value primacy is that it represents a financial system closest to the natural order of the market, often understood as a thought experiment in which participants with

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[60] U.S. Bureau of Economic Analysis, National income and Product Accounts. Table 6.16.
[61] Julius Krein, "Share Buybacks and the Contradictions of "Shareholder Capitalism," *American Affairs*, December 2018. https://americanaffairsjournal.org/2018/12/share-buybacks-and-the-contradictions-of-shareholder-capitalism/.
[62] Irving Kristol, "On corporate capitalism in America," *The Public Interest*, Fall 1975. https://www.nationalaffairs.com/public_interest/detail/on-corporate-capitalism-in-america.

goods to sell and cash to buy with barter and exchange their way into an efficient outcome. While this is true as far as its internal logic goes, the assumption ignores the institutions that sustain the market in the first place. Remembering this does not require a "you didn't build that"-style inordinate celebration of basic government services' contribution to business formation, but a recognition that even this ideal mental model of the market provides means without an end. The ends must be provided by other institutions like government, community, or culture. As Daniel Bell describes it, "economic guidance can only be as efficacious as the value system which shapes it."[63] In other words, capital is not deployed on its own. Markets are ordered by institutions that provide ultimate meaning and value. Notably, this is true even when national policy and cultural institutions are weak. The absence of such guiding institutions does not lead to a more freely-functioning market, but to greater adherence to an efficiency for its own sake, binding actions to shorter time horizons where certainty is greater.

One manifestation of institutional weakness is the growing concern over corporate "short-termism." Absent forces that orient investment to other ends, markets intensify competition for the efficiency of existing resources, reducing the time horizon of investment due to rising pressure to secure short-term financial return. As described by Clayton Christensen et al., this view argues that "the emphasis on earnings per share as the primary driver of share price and hence of shareholder value creation, to the exclusion of almost everything else, diverts resources away from investments whose payoff lies beyond the immediate horizon," and "creates a systematic bias against innovation."[64]

Evidence for the view can be found in recent trends: short-term pressure for managers, high capital payout, and low investment. In 2014, McKinsey and the Canada Pension Plan Investment Board (CPPIB) commissioned a joint survey of 1,000 corporate board members and executives, later published in the Harvard Business Review. The survey found that while 86% of corporate decision-makers believed that "using a longer time horizon to make business decisions would positively affect corporate performance in a number of ways, including strengthening financial returns and increasing innovation," and while 73% believed they "should use a time horizon of more than three years," a similarly strong 79% "felt especially pressured to demonstrate strong financial performance over a period of just two years or less," and almost half admitted that they set strategy on time horizons of less than three years. When asked the source of this pressure, executives pointed to their boards, which in turn pointed to shareholders – predominantly large, institutional shareholders run by asset managers who are themselves incentivized towards short-term earnings.[65]

This concern is further validated by research from John Graham et al., who demonstrate the extreme market pressure that managers feel to

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[63] Daniel Bell, "The Coming of Post-Industrial Society," *Business and Society Review*, 2001. https://www.os3.nl/_media/2011-2012/daniel_bell_-_the_coming_of_post-industrial_society.pdf.
[64] Clayton M. Christensen, Stephen P. Kaufman, and Willy C. Shih, "Innovation Killers: How Financial Tools Destroy Your Capacity to Do New Things," *Harvard Business Review,* Janaury 2008. https://hbr.org/2008/01/innovation-killers-how-financial-tools-destroy-your-capacity-to-do-new-things.
[65] Dominic Barton and Mark Wiseman, "Focusing Capital on the Long Term," *Harvard Business Review,* January-February 2014 issue. https://hbr.org/2014/01/focusing-capital-on-the-long-term.

privilege the perception of short-term earnings performance over actual long-term value creation. They find that 78 percent of executives would sacrifice the opportunity to create economic value in order to smooth earnings, that 80 percent would decrease discretionary R&D to meet an earnings target, and that a majority would decline to undertake a highly positive net-present value project if it required missing the next quarter's consensus earnings target even slightly. According to the study, this willingness to forgo real economic value in order to manage financial reporting is not the result of the preference of executives so much as of their belief in the market's unwillingness to forgive even minor and temporary deviance from the perception of quarterly earnings performance, even when long-term performance enhancement is on the table. Graham et al.'s research suggests that the corporate managers surveyed believe this market pressure to be over-reactive – even as they acknowledge the necessity of abiding by its demands, and admit that cutting jobs, delaying hiring, forgoing spending on maintenance and R&D, and turning down profitable investment opportunities are an outcome of it.[66]

Short-termism influences the views of corporate managers for the productivity of capital, as evidenced in allocation. Until the 1970s, American corporations paid out to shareholders about 50 percent of their earnings, and retained or invested the rest. Shareholder payout now tops 90 percent of earnings.[67] The average ratio of shareholder payout to corporate profits from 2008-2017 was 100 percent. In 2018 about 85% of the companies in the S&P 500 engaged in share buybacks, and the U.S. corporate sector authorized $1 trillion in share buybacks, the highest figure on record. Given the frequently-offered explanation that share buybacks are often the most efficient allocation of capital when a corporation has no good opportunities for investment, the implication of this figure should be noted. This is $1 trillion for which the U.S. corporate sector suggests it can find no useful investment opportunities, which raises the question of whether there really are no productive investment opportunities within the range of this sum, or whether there are opportunities that are being foregone for shareholder return. Either possibility should be concerning.[68] That shareholder return comes at the expense of investment is underscored by the fact that the vast majority of investment is financed by retained earnings – that is, financed internally. Equity issuance has been net negative since the 1980s, as companies repurchase their own stock and issue debt in what Grantham, Mayo, & van Otterloo analyst James Montier has called "a massive debt for equity swap," further suggesting that "far from providing capital to the corporate sector, shareholders have been extracting it from corporates."[69]

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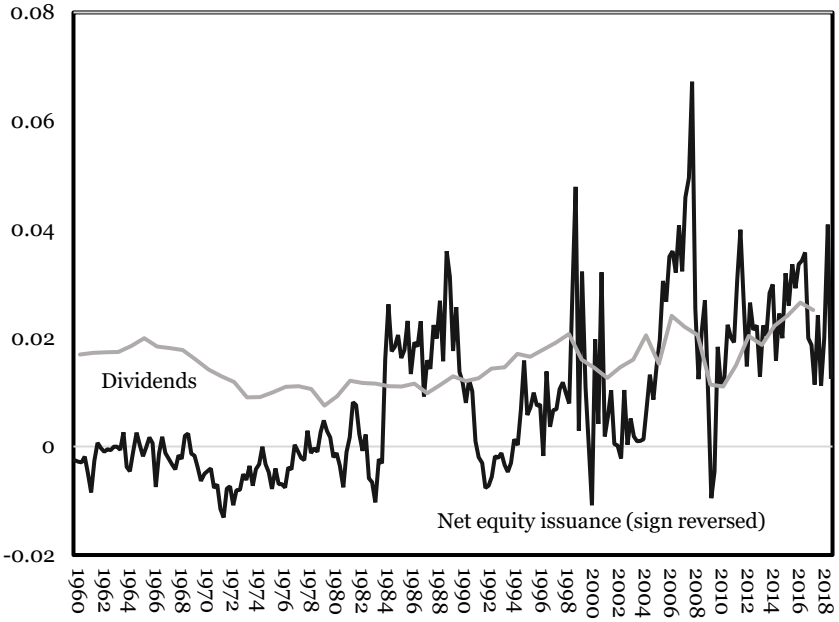
[66] John H. Graham, Campbell R. Harvey, and Shiva Rajgopal, "The Economic Implications of Corporate Financial Reporting," *NBER Working Paper Series,* National Bureau of Economic Research, June 2004.
[67] Lenore M. Palladino, "Ending Shareholder Primacy in Corporate Governance," Roosevelt Institute, February 2019. http://rooseveltinstitute.org/wp-content/uploads/2019/02/RI_EndingShareholderPrimacy_workingpaper_201902-1.pdf.
[68] Krein, "Share Buybacks and the Contradictions of "Shareholder Capitalism."
[69] James Montier, "The World's Dumbest Idea," GMO White Paper, December 2014.

Figure 12. Shareholder payout as a percent of GDP, 1960-2018.[70]



While arguing that corporate finance focuses too much on the short-term at the expense of the long-term has become a truism of sorts, the debate surrounding it provides a useful proxy for understanding the role of institutions in markets. The problems with the short-termist criticism are not that it is descriptively wrong, but that it does not present an alternate way to order business decisions. Without this other framework, "short termism" is just an argument for the market to function less efficiently on its current terms than it otherwise would. The relevant alternative to the status quo should not be a market operating on its current terms, just on a longer time horizon; it should be a market set on other terms, with longer time horizons occurring as a possible, even likely by-product.

It is for this reason that never-ending statistical comparisons of the "performance" of "short term" vs. "long term" companies do little to resolve the debate. A better point of evidence would ask what companies do in systems with different orienting goals. As the business historian Alfred Chandler, Jr. has described, the emergence of professional managers as the permanent decision-makers of the business enterprise in America by 1910 drove the maintenance of organizational capabilities, growing the scale and scope of firms and guarding against the constant threat that "facilities depreciate and skills atrophy."[71] According to Chandler, during this time the orienting goal of firm management to organizational status led to "policies that favored the long-term stability and growth of their enterprises to those that maximized current profits… if profits were high, they preferred to reinvest them in the enterprise rather than pay them out in dividends." This historical development contrasted with earlier forms of governance in America, and a feature of

[70] U.S. Integrated Macroeconomic Accounts.
[71] Alfred D. Chandler Jr., 1990, *Scale and Scope: The Dynamics of Industrial Enterprise*, Harvard University Press. Quoted by William Lazonick in The Chandlerian Corporation and the Theory of Innovative Enterprise, Industrial and Corporate Change, vol. 19, no. 1, 2010. http://www.economicpolicyresearch.org/images/docs/SCEPA_blog/the_financial_crisis/Lazonick_paper_1_panel_6.pdf.

the British system throughout the period, of "family or financial capitalism" marked by a limited ability to manage large and complex corporate structures and high capital payout.[72] American managerial capitalism, Chandler argues, was unique in that family and financial influence "was significant only when the enterprise decided to go to the money markets to supplement retained earnings."[73]

There are also more recent examples. Networks of Chinese state-owned and private-owned enterprises in industries prioritized for development by the state have proved resilient against pressures for capital return, even as more Western forms of finance have become present in China. The most interesting example of this, as described by Razeen Sappideen, is that while Chinese firms increasingly offer stock-based executive compensation as the "received learning of Western capitalism," "these awards are only for show and are almost never exercised by the executives, or if exercised the proceeds are made over to the entity for sharing by all of the employees."[74] Chinese state-owned enterprises pay little dividends to the state and so reinvest most of their earnings. This is not as intuitive as it may appear, as in targeted industries firms appear to behave in similar ways regardless of their formal ownership or financing, As Curtis J. Milhaupt and Wentong Zheng have argued, Chinese firms receive advantages in the form of provisions like monopoly charters and subsidies from the state, instead of through the market, but "one key form of currency used by captor firms is not bribes, but growth potential… The overriding primacy placed on sustained economic growth has enabled some private firms to obtain special benefits from the state by demonstrating the potential to deliver that growth."[75] U.S. private investment in China has grown even as state ownership has increased. Privatization and corporate governance harmonization, as such, are not alone sufficient to cause Chinese firms to behave like American firms in the presence of other policy and cultural institutions that orient the use of capital differently.

Concerns about "short-termism" can be understood as pointing out the absence of a consensus end to which capital should be directed, in this case usually described as long-term prosperity or sustainability. This understanding is demonstrated by the attorney Martin Lipton in his document titled "The New Paradigm," which posits a framework for long-term organizational value. Rather than merely wishing away incentives to maximize short term value, Lipton calls for a "quid pro quo" between corporate organizations and their major institutional shareholders, where in exchange for greater engagement by management, institutional investors provide the "support and patience needed to permit the

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[72] Charles S. Maier, "Accounting for the Achievements of Capitalism: Alfred Chandler's Business History." The Journal of Modern History 65, no. 4 (1993): 771-82. http://www.jstor.org/stable/2124541.
[73] Alfred D. Chandler Jr., 1977, *The Visible Hand: The Managerial Revolution in American Business*," Harvard University Press, 495.
[74] Razeen Sappideen, "Corporate Governance With Chinese Characteristics: The Case Of State Owned Enterprises," *Frontiers of Law in China*, March 2017. https://brill.com/view/journals/flc/12/1/article-p90_7.xml.
[75] Curtis J. Milhaupt and Zheng, Wentong, "Beyond Ownership: State Capitalism and the Chinese Firm" (March 22, 2014). 103 Georgetown Law Journal 665 (2015); European Corporate Governance Institute (ECGI) - Law Working Paper No. 251/2014; Columbia Public Law Research Paper No. 14-391; University of Florida Levin College of Law Research Paper No. 15-8. Available at SSRN: https://ssrn.com/abstract=2413019.

realization of long-term value," and do not support "short-term financial activists…"[76]

At its heart, capital allocation is ultimately about institutional arrangement. Shareholder primacy theory over-prioritizes shareholders relative to managers, workers, and organizational capability.

IMPLICATION #2

Shareholder primacy theory does not properly understand how businesses invest in innovation.

Shareholder primacy theory does not fully account for innovation. For the theory to explain the efficient allocation of resources among market actors with innovation in mind would require perfect future knowledge of what innovation would occur, and how it could translate into net present value. Without such information, the market wouldn't function properly. But innovation is, nearly by definition, not a knowable quantity in this way. It emerges from human and organizational action under conditions of uncertainty. Because market actors lack the foresight prescribed to them by this theory, perfectly competitive markets do not envision firms earning large returns to technological breakthroughs of their own design; innovation is viewed as happening *to* a market, not necessarily emerging *from* it. This is perhaps one reason why technological progress in market economies is often called by this is theory a "miracle," defined literally as an unexplainable event. The deterministic constraints of "long-run equilibrium" have no room for the non-market origins of groundbreaking innovation. The profit-optimizing level of output maximizes the efficiency of known resources, excluding the possibility of innovation almost by definition. As Lazonick puts it, "the optimizing firm is not an innovating firm; indeed it can be characterized as an un-innovating firm."[77]

This theoretical mistake can be followed to the neoclassical theory of business capital allocation decisions, where investment decisions are expected to be made by the quantification of expected returns by similar definition. Under shareholder primacy theory, these decisions can be generalized to the standard of maximizing the net present value of the company for its shareholders. This is often determined, in the language of corporate finance, by comparing the return on invested capital (ROIC) to the weighted average cost of capital (WACC).[78] Defined generally, neoclassical economic theory asserts that if a given investment is expected to generate returns on capital in excess of its original cost, the investment creates value that can either be reinvested in the pursuit of other opportunities that meet this threshold, or returned to shareholders in their absence. For example, say a business is deciding whether or not to make an investment that will produce a 10 percent return. In order to

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[76] Martin Lipton, "The New Paradigm," International Business Council of The World Economic Forum, September 2016. http://www.wlrk.com/docs/TheNewParadigm_ARoadmapforanImplicitCorporateGovernancePartnershipBetweenCorporatio.pdf.

[77] William Lazonick, "The Theory of Innovative Enterprise: Foundation of Economic Analysis," *Alternative Theories of Competition: Challenges to the Orthodoxy*, Routledge, 2013: 127-159

[78] Other terms are often used. The weighted average cost of capital is the weighted average of the costs of debt and equity required to finance a given investment. Return on invested capital is the expected return on a given investment.

determine if the investment creates value for the firm's shareholders, the business must also calculate the return shareholders would earn if their assets were deployed elsewhere, or the "opportunity cost" of making the investment. If the business' shareholders would earn 10 percent or more on a similar investment (that is, an investment of the same level of risk) then the investment being considered would not represent a net positive return to shareholders, and should not be made. The capital that would have been spent on the investment in question would, by definition, be more valuable to shareholders if it was simply given to them to invest elsewhere. Applied broadly, this logic makes business investment a function to the relevant "cost of capital." How, then, does this view explain declining investment in the U.S. economy today? The theory predicts an inverse relationship between the cost of capital and investment levels. In recent decades, however, the falling investment figures this report began by showing have coincided with a falling average cost of capital.[79]

A contributing factor to the gap between investment predicted by economic theory and its actual output may be that, despite widespread consensus among business managers for it in theory, businesses do not in fact make investment decisions based on their firms' precise costs of capital. Firms regularly use an internal "hurdle rate" to assess the worthiness of investment opportunities that is different from, and often higher than, what traditional cost of capital formulas would otherwise determine. Evidence for this differential is abundant. Research published in 2017 by Michael Mankins et al. finds that most large public companies use company hurdle rates between 6.5 and 7.5 percent above their "actual cost of capital."[80] A 2015 paper by researchers at the Federal Reserve Board found that "the average reported hurdle rate has hovered near 15 percent for decades," despite considerable variance in the cost of capital.[81] The first quarter of 2018 edition of the "CFO Outlook Survey" conducted by scholars at Duke University measured an average hurdle rate of 13.5 percent, compared to a reported WACC of 9.3 percent.[82] Calling this phenomenon the "Hurdle Rate Premium Puzzle," Iwan Meier and Vefa Tarhan find, in a sample of 127 firms after the expansion of bonus depreciation in 2003, that managers' selected hurdle rates regularly exceed their externally-calculable WACC by up to 7.5 percent.[83]

If a firm makes investment decisions using a cost of capital over the "real" rate, then by shareholder primacy theory the firm foregoes value. The firm is underinvesting, and so foregoing real future returns to shareholders, by an amount equal to their over-calculation. If the hurdle rate premiums used by businesses for their investments are "sticky," that is, relatively insensitive to changes in the cost of capital, then reductions to the cost of capital alone will not yield the investment expected by theory.

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[79] See Gutierrez and Philippon, Figure 5.
[80] Michael Mankins et al. "Strategy in the Age of Superabundant Capital."
[81] Steven A. Sharpe and Gustavo A. Suarez, "Why isn't Investment More Sensitive to Interest Rates: Evidence from Surveys," Federal Reserve Board, August 2015. https://www.federalreserve.gov/econresdata/feds/2014/files/201402r.pdf
[82] John R. Graham and Campbell R. Harvey, "The Equity Risk Premium in 2018," *National Bureau of Economic Research*, March 2018. http://dx.doi.org/10.2139/ssrn.3151162
[83] Iwan Meier and Vefa Tarhan, "Corporate Investment Decision Practices and the Hurdle Rate Premium Puzzle," January 28, 2007. Available at SSRN: https://ssrn.com/abstract=960161 or http://dx.doi.org/10.2139/ssrn.960161.

This relatively simple and well-documented imprecision of neoclassical investment theory in its application to the real world should cast light on a host of issues related to fundamental innovation. For example, the expectation of capital return to shareholders for investment opportunities under the hurdle rate makes it possible that the historically-high levels of share buybacks mentioned in the previous implication come at the direct expense of capital investment. Contemporary views deny this possibility. According to *The Wall Street Journal* Editorial Board, when a company buys back its shares, "the money doesn't fall into a black hole," because "An investor who sells stock into a buyback will save or reinvest the proceeds."[84] The White House CEA writes in its 2019 annual report that "funds obtained by the shareholder after a buyback are often invested elsewhere," which "ensures that capital flows to new investment opportunities."[85] The view simply assumes that shareholder uses of funds after payout are productive.

To counter this assumption, consider the following example.[86] First, recall from the previous implication that the U.S. economy is a negative net issuer of equity shares on the whole. Next, imagine an investor receives $1 million in shareholder payout, either in the form of dividends or by selling shares back to the issuing firm through a share buyback. The investor uses the capital to purchase shares in another company. Upon what criteria does the investor decide which company to buy shares in? If the first company's share buyback announcement increased the investor's share price before sale, then perhaps the investor would like to buy shares in another company that they expect to buy back shares, which per the assumption would be a company that doesn't have good investment opportunities. In this use, the flows of funds has gone from unproductive to unproductive. Assume the investor decides to buy shares in a company that is not buying back their shares, however (again, by this theory this would be a company that has better investment opportunities). Who does the investor buy the shares from? It is most likely from another, selling investor. If, like the U.S. economy as a whole in 2018, the company is not issuing net new equity, then this sale does not represent new capital supplied to the company. It merely bids up share price. The question then becomes not about whether the investor has supplied their capital to a more productive use – they have not supplied new capital at all – but whether equity asset prices convey perfect information about investment opportunities to begin with. This is a related, but distinct and widely-contested question with so many possible applications and necessary adjustments to our hypothetical example that it would be practically worthless to apply them here. And while this theoretical exercise serves merely to prove the possibility of less productive end uses of shareholder payout, recent empirical evidence suggests the expected flow of shareholder payout from low-growth firms to high-growth firms cannot be proven, and even find flows in the opposite direction.[87] If this is true, then share buybacks provide evidence

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[84] The Editorial Board, "The Stock Buyback Panic," Wall Street Journal, March 10, 2019. https://www.wsj.com/articles/the-stock-buyback-panic-11552256671.
[85] "Economic Report of the President," White House Council of Economic Advisers, March 2019. https://www.whitehouse.gov/wp-content/uploads/2019/03/ERP-2019.pdf.
[86] This example is loosely derived from J.W. Mason, "The Money Has to Go Somewhere," Octboer 19, 2015. http://jwmason.org/slackwire/the-money-has-to-go-somewhere-1/.
[87] For example, Dong Lee et al. find that up until the mid-1990s, capital flowed to firms with the best growth opportunities, but has not since. If share-repurchasing firms are excluded from their sample, however, this earlier functioning of efficient capital markets remains.

of foregone investment in the economy as a whole even if only because external financing is more expensive than internal financing.

The error of capital risk-pricing grows with the level of uncertainty of the investment, leading to underinvestment at the most basic levels of research and development, where expectations for financial return are most uncertain. Uncertainty describes the level of confidence one has in their knowledge. Knowing in advance whether and how much basic research will increase returns, and capitalizing them for the present, is accounting under conditions of high uncertainty, for by definition such returns are unknowable. The mistake of decisions based on the cost of capital in this area is to equate this lack of knowledge with a low probability of return, otherwise determined as risk. Risk describes the known distribution of possible outcomes. It is nearly impossible to assign risk values to uncertain knowledge because the number of possible outcomes are nearly infinite, but under the criteria of capital cost, this is how investment decisions are made.[88] In the absence of institutions that either reduce uncertainty or aim to beat it by their own actions, the equation of uncertainty with probabilistic risk into a single factor of expected return stacks the deck of investment decisions in favor of the knowable and short term, no matter how unsustainable it might be over the long-run.

It should not be surprising then, that the U.S. private sector is in retreat from investment in basic science. While large corporations historically invested in basic research as the precondition of value-creating innovation, this is decreasingly the case. The private sector's share of basic research has declined from around 35 percent in the 1950s, to between 15 and 20 percent in the 2000s. This represents, according to the economist Mariana Mazzucato, "a fundamental shift in the composition of R&D away from basic research," that is "highly likely to reduce future innovation opportunities, which have always been driven by a strong interaction between basic and applied research in both industry and government."[89]

Corporate America's shift away from basic scientific research is "not driven by any decline in the usefulness of science as an input into innovation," Mazzucato argues, nor has the private sector's enthusiasm for benefiting from the profit opportunities presented by basic innovation when it happens declined.[90] R&D spending by the private sector is high, but increasingly weighted towards development rather

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They demonstrate that the inefficiency in capital flows is driven by an increase in share repurchases by high growth opportunity firms. The estimated gap in industry q between high-funded firms and low-funded firms between 1996 and 2014 is 0.30. See Dong Lee, Han Shin, René M. Stulz, "Why Does Capital No Longer Flow More to the Industries with the Best Growth Opportunities?" NBER Working Paper, December 2016. https://www.nber.org/papers/w22924. David Ding et al. find also that from 1996 to 2014, firms making repeat repurchase announcements have higher growth opportunities than firms with a single, or no repurchase program announcements. The difference in average book-to-market ratio, which roughly measures the inverse of q, between non-repeat repurchase firms and repeat repurchase firms in the sample is -0.179. See Ding, David K. and Koerniadi, Hardjo and Krishnamurti, Chandrasekhar, What Drives the Declining Wealth Effect of Subsequent Share Repurchase Announcements? (December 22, 2017). http://dx.doi.org/10.2139/ssrn.3092384

[88] See Sunanda Sen, "Investment Decisions under Uncertainty," Levy Economics Institute of Bard College, December 2018. http://www.levyinstitute.org/pubs/wp_918.pdf.

[89] Mariana Mazzucato, "Innovation, the State and Patient Capital," *The Political Quarterly*, 86: 98-118. doi:10.1111/1467-923X.12235

[90] Ibid.

than research, toward the marginal innovations related to the commercialization of old research than the longer-term pursuit of new discoveries. Ashish Arora et al. describe this combination of private sector eagerness to profit from the results of basic science and private sector disinterest in investing in basic science as "killing the golden goose."[91] In a *New York Times* article titled, "American Innovation Lies on a Weak Foundation," Eduardo Porter writes:

> *"American corporations, constantly pressured to increase the next quarter's profits…are walking away from basic science…. The number of American patent applications keeps rising. Yet increasingly divorced from the scientific advances on which technological progress ultimately rests, the patenting rush that looks less and less like fundamental innovation….Investors may value corporate patents as much as ever, but the stock market places a lower valuation on original research than it did three decades ago… Can innovation survive this realignment?"*[92]

It could reasonably be argued that a healthy public-private dynamic might not require high levels of investment in basic research by the private sector, whose appropriate role may be developing and commercializing the basic research more properly undertaken by public actors. Development and commercialization are, after all, essential to economic growth and should be done by those entities best suited to the task. Even if this argument is true, however, public investment in basic science has also been declining. Federal R&D spending as a percentage of GDP is also at historically low levels, down from slightly above 1.2 percent in the late 1970s to 0.79 percent in 2016.[93] The federal share of U.S. R&D declined to an all-time low in 2016.[94]

The economic researcher David Adler identifies troubling deficiencies in the applied end of the R&D spectrum, as well. The decline of corporate in-house innovation capacity is, he argues, a key driver of deindustrialization. The loss of corporate research capacity hinders the private sector's ability to productively make new things no matter what groundbreaking basic or upstream research is being done elsewhere, to the detriment of manufacturing, and especially small and medium-sized enterprises:

> *"…as large, vertically integrated corporations and conglomerates have been broken up and their central research labs eliminated, more and more of their formerly internal processes have been taken over by external suppliers. Small and medium-sized manufacturing suppliers typically undertake no formal research, nor do they have the resources to take advantage of university research, much less to find ways to commercialize and apply it. The functions of the central*

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[91] Ashish Arora, Sharon Belenzon, and Andrea Patacconi, "Killing the Golden Goose? The Decline of Science in Corproate R&D," *National Bureau of Economic Research*, Janaury 2015. https://www.nber.org/papers/w20902.pdf.

[92] Eduardo Porter, "American Innovation Lies on Weak Foundation," *The New York Times*, May 19, 2015. https://www.nytimes.com/2015/05/20/business/economy/american-innovation-rests-on-weak-foundation.html. smartlock&login=smartlock&auth=login-smartlock.

[93] Ibid.

[94] Mike Henry, "US R&D Spending at All-Time High, Federal Share Reaches Record Low," *American Institute of Physics*, November 8, 2016. https://www.aip.org/fyi/2016/us-rd-spending-all-time-high-federal-share-reaches-record-low.

research labs have not been recreated in this new, disintegrated system."[95]

IMPLICATION #3

Shareholder primacy theory has resulted in a diminished understanding of the role workers play and the risk they undertake in the value creation process.

The decline in business investment has coincided with a decline in investment in American workers.[96] This declining investment in American workers places the future of American innovative capacity at risk, and proceeds from an unfair understanding of the role of labor in the innovation process. Classic nexus of contracts theory holds that, since employees have a guaranteed salary, and since any potential risk – like the possibility of future involuntary job loss – should have been factored into the employee's initial consideration of that contractual offer, risk and reward are already balanced for workers. This view of workers as having already been compensated entirely for their risk is flawed in at least two ways: (1) it under-describes the risk that workers often take in contributing to the value-creation process, and (2) it feeds into a larger pattern of worker-as-input thinking – of workers as inputs to be replaced or discarded through labor arbitrage in the service of shareholder value, rather than as essential contributors to the value-creation process. The prevalence of this view has coincided with meaningful reductions in capital allocated to the development of labor. Corporate profits have not translated into similar growth in workers' earnings. Large numbers of Americans are making less than their parents did at the same age.[97]

Shareholder primacy and contract-nexus theory hold that shareholders, since they undertake the financial risk of investment without any contractual guarantee of a return (unlike employees, suppliers, creditors, etc.), are the proper residual claimants of profits above what is required to pay contractual obligations. Shareholders bear the risk, and therefore appropriately reap the reward of any profits.[98] This obscures the reality that shareholders are not the only stakeholders in the value-creation process who take on risk.

The risk undertaken by workers often exceeds what shareholder value theory accounts for. While in times of economic boom workers do often see better wages and better job opportunities, in times of economic crisis workers tend to bear an outsized portion of the burden, often utilized as a risk shield for shareholders via arbitrage or downsizing. Take, for instance, the U.S. tech boom in the 1990s, which saw both large returns

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[95] David Adler, "The American Way of Innovation and Its Deficiencies," *American Affairs,* Summer 2018. https://americanaffairsjournal.org/2018/05/the-american-way-of-innovation-and-its-deficiencies.

[96] Adler notes that the hollowing-out of U.S. manufacturing, driven in part by a decline in corporate research investment driven by financial pressures, has resulted in manufacturing representing 12 percent of GDP – considerably below Switzerland (18 percent) and Germany (22 percent). This decline is not attributable to overly-high manufacturing wages, which are low comparatively ($35/hour in the U.S. versus $47/hour in Switzerland and $60/hour in Germany). The U.S. is also shedding white-collar as well as blue-collar manufacturing jobs, also in contrast to Europe. Ibid.

[97] Oren Cass, *The Once and Future Worker: A Vision for the Renewal of Work in America*, (2018) Encounter Books.

[98] Ibid.

to shareholders and rising real wages for many workers. When the boom ceased, however, many workers found themselves jobless, while shareholders' return was maintained through the offshoring of jobs and, in many cases, large-scale share buybacks.[99] Consider also 2008, in which 2.6 million American jobs were lost in a single year, which is only a portion of the 7.5 million American jobs lost between 2007 and 2009.[100] [101]

Nexus of contracts theory also under-describes the relative negotiating power of workers in agreeing to the employer-employee contract in the first place – the contract under which all employee risk has already supposed been accounted for. Take, for instance, the widespread proliferation of non-compete agreements for low- and medium-wage workers, which represent an explicit and direct attempt to make the sacrifice of future negotiating power a condition of a successful present employment negotiation.[102] Failure to adequately account for the risk workers undertake implies similar short-sightedness as failing to account for the necessity of investment for long-term growth. As Mazzucato and Lazonick argue, "the participation of large numbers of people in the innovation process means that inherent in the innovation process is a rationale for the widespread and equitable distribution of the gains to innovation."[103]

Workers are dependent on the firms that employ them to make the kinds of business investments that will boost their own productivity and future economic well-being. Despite being essential to the value-creation process, workers will have little ability to drive management-level decision-making regarding whether their employers will make investments that result in the future productivity gains that their futures depend on. Shareholder primacy theory, by failing to accurately understand the value-creation process as inherently collaborative and dependent on employee contribution, only serves to justify the view of workers as inputs only, which in turn promotes further arbitrage and failure to make investment decisions with long-term productivity in mind. This not only undermines long-term growth and social stability, but the well-being of individual workers and their families.

Manhattan Institute Senior Fellow Oren Cass puts it sharply:

> *"…people are not products… An insolvent family can't be acquired and restructured; an oversupply of workers can't be written off like obsolete inventory. That is what our current policy framework too often does: it writes people off. Labor becomes one economic input among many."*[104]

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[99] William Lazonick and Mariana Mazzucato, "The risk-reward nexus in the innovation-inequality relationship: who takes the risks? Who gets the rewards?" *Industrial and Corporate Change,* Volume 22, Number 4, 2013. https://static.uni-graz.at/fileadmin/sowi-zentren/Schumpeter-Centre/Download/GSSC/Ind_Corp_Change-2013-Lazonick-1093-128.pdf.

[100] David Goldman, "Worst year for jobs since '45," CNN Money, January 9, 2009. https://money.cnn.com/2009/01/09/news/economy/jobs_december/

[101] Mazzucato, "Patient Capital."

[102] See Senator Marco Rubio's proposal to ban this practice for a discussion on this point, "Rubio Introduces Bill to Protect Low-Wage Workers from Non-Compete Agreements", Janaury 15, 2019. https://www.rubio.senate.gov/public/index.cfm/press-releases?ContentRecord_id=D33C65E5-E799-4A44-9B29-2AA80E63424E

[103] Lazonick and Mazzucato, "The Risk-Reward Nexus."

[104] Cass, *The Once and Future Worker*, 51-52

INVESTMENT: A NATIONAL PRIORITY

Developing productive, long-life capital assets is physically arduous and financially uncertain. It is also the primary task required of a successful economy. Society-wide skills and institutional knowledge for how to implement complicated technologies and build advanced machinery generates wealth for the workers involved in the production process and for the owners and managers with the wisdom to plan, direct, and finance them. Think of the highest-value American exports: goods like high-end passenger vehicles and aircraft, pharmaceuticals, and oil, gas, and petroleum products. These goods are the products of a long and careful development of capital assets that can churn out products at quality and costs that beat global competitors. They are the valuable endpoints of many decades of research and development and iterations of management to produce at the greatest level possible.

At the conclusion of his book *Scale and Scope: The Dynamics of Industrial Capitalism*, the business historian Alfred Chandler, Jr. offered a summary of how companies like Ford Motor Company, General Motors, General Electric, Exxon, and DuPont built American industrial capacity:

> *"...organizational capabilities, of course, had to be created, and once established, they had to be maintained. Their maintenance was as great a challenge as their creation, for facilities depreciate and skills atrophy. Moreover, changing technologies and markets constantly make both existing facilities and skills obsolete... Such organizational capacities, in turn, have provided the source – the dynamic – for the continuing growth of enterprise. They have made possible the earnings that supplied much of the funding for such growth. Even more important, they provided the specialized facilities and skills that gave the enterprise an advantage in foreign markets or in related industries. Because of these capabilities the basic goal of the modern industrial enterprise became long-term profits based on long-term growth – growth that increased the productivity, and so the competitive power, that drove the expansion of industrial capitalism."*[105]

The description is remarkable, in light of today's discussion of economic policy, for the weight it gives to human and organizational agency. According to Chandler's history, the economic success of the U.S. in the 20th century was not inevitable, and not calculable in hindsight based on what the "efficient allocation of capital" would have been under the relevant market conditions. What was the net present value of Ford Motor Company's bomber factories, or of Bell Laboratories at the time of its creation in the 1920s? How significant were the agency costs of General Electric's decision to reduce its financial ownership's role in

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[105] Alfred Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (1990). Balknap Press. As quoted by William Lazonick, The Chandlerian Corporation and the Theory of Innovative Enterprise (April 2010). Industrial and Corporate Change, Vol. 19, Issue 2, pp. 317-349, 2010. Available at SSRN: https://ssrn.com/abstract=1593994.

business management? The criteria of maximizing utility would have been a very poor way to understand these strategies.

The decisions of these large, world-beating American firms were not "rational" in a cost-to-benefit mode of analysis, at least not by the determination of these factors in cash flow terms like what is done today. These firms maintained "organizational capabilities,"[106] the labor intensity Chandler described as the output of knowledge, skill, experience, and teamwork to exploit the potential of technological processes to achieve competitive advantage, instead of optimizing for current values. Their decisions were made under conditions of great uncertainty, and on proximate rather than ideal terms: preserving existing capacity, investing in research without guaranteed upside, and upgrading skills and hiring in areas of expected demand. As the economist and historian Robert Gordon has documented, during the period of America's greatest productivity growth and invention, the economy endured the "lights out" periods of World War I, the Great Depression, and World War II, when the economic norms upon which such capital cost sensitivities are dependent were somewhat suspended. Emerging from this period was the tremendous growth and optimism which Gordon describes as "some mysterious elixir" which "converted the Arsenal of Democracy into a postwar cornucopia of houses, automobiles, and appliances."[107] The picture painted of this era by Gordon's work among others is not of continual adaptation by American companies to externally-defined equilibria, but of companies making decisions based on their abilities and conquering competitors on the quality of their investments.

The economic productivity of these firms, therefore, was highly contingent. Business' decisions created markets as much as they responded to them. Their decisions were oriented to the maintenance and growth of products, to developing capital assets that could improve and mass produce at the scale necessary for global competition. Advanced machinery, chemical formulas and testing facilities, multi-thousand acre industrial parks, managerial structures, and institutional knowledge are not assets that can developed as *ad hoc* or temporary responses to shifts in consumer preferences or interest rates. These capital assets outlive the working lives of any single business executive or equity owner, and often outlive even the particular business entity centered on their production — witness the convertibility of automobile factories to the war effort in the 1940s, for example, or the commercialization of midcentury defense technologies into mass-produced telecommunications equipment. The successful deployment of these capital assets determined businesses' earnings and market share, increased the wealth of its owners and workers, and drove the technological progress that benefited the entire country.

As a contingent development, however, economic success is not guaranteed. There is no utopia waiting in the real world in which the right combination of policies, or the right deregulation of markets, by some internally-consistent law of ideology inevitably unleashes new

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[106] John Kenneth Galbraith described this motive of business operation as "technical virtuosity for its own sake," in *The New Industrial State*, 3rd edition, 1967.
[107] Robert J. Gordon, *The Rise and Fall of American Growth: The U.S. Standard of Living since the Civil War*, (2016) Princeton University Press, pp. 536. https://www.amazon.com/Rise-Fall-American-Growth-Princeton/dp/0691147728/ref=tmm_hrd_swatch_0?_encoding=UTF8&qid=&sr=

technologies and enhances the standing of American companies and workers. Increasing productivity is difficult and fraught with risk. Gains are difficult to make, and easy to lose. The danger that public policy runs is making development even more difficult to achieve by imposing barriers to growth, or easier to lose by making paths of lesser resistance more attractive. Chandler describes the possibility of decline as ever-present so long as it is financially rewarding to opt out of the rigors of development:

> *"The continuing productivity, competitiveness, and profitability of these enterprises and of the industries and nations in which they operate depend on constant reinvestment in order to maintain and improve product-specific facilities and to develop and maintain product-specific technical and managerial skills. A crucial theme of this history of the modern industrial enterprise is that creating and maintaining such capabilities is a continuing, long-term process – a process that requires sounds, long-term perspectives from the decision-makers responsible for the health and growth of their enterprise… where these developments [of increased global competition] have encouraged short-term gains – where decisions and actions have been motivated by the desire to obtain high current dividends or profits based solely on the transactions involved in the buying and selling of companies – at the expense of maintaining long-term capabilities and profits, they appear to have reduced and even destroyed the capabilities essential to compete profitably in national and international markets."*[108]

A politics that recognizes these natural inclinations of private and public purpose would more closely resemble what Michael Lind has called "the developmental state,"[109] in which policy plays the role of aligning institutions toward to economic development in line with its values and traditions. In the U.S., the main institutional driver of economic development has been the private business sector. The American tradition is a story of the prosperity that can be created when the private business sector is the allocator of capital investment, training society's wealth and resources into the growth of new products and technologies. In American capitalism, the private business enterprise has been tasked with the development of productive, long-life capital assets which determine the wealth of the country.

This report argues that the decline of business investment in the U.S. is not due to inexplicable secular shifts in the economy, nor a lack of capital available for investment, but a misallocation of productive resources. This misallocation is driven by the choices of political and social institutions that do not properly prioritize the obligation of the American economy to reproduce itself. The poor incentives created by such misalignment reveals a flawed set of economic priorities, and suggests a political opportunity to change them.

National economic decisions do not fit neatly into theoretical constraints of market efficiency. Nations determine through their political processes what economic success means according to their fundamental

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[108] Chandler, 627
[109] Michael Lind, *Land of Promise: An Economic History of the United States* (2012), Harper. https://www.amazon.com/Land-Promise-Economic-History-United/dp/0061834815.

commitments, and structure policy to advance them. In the U.S., the economic values have traditionally been mass employment, productive business that compete on relatively liberal terms, and the proper role of government as oriented primarily to protecting national security. Markets are then built and maintained as facilitators of resources around these goals, not usually as ends unto themselves, unless states cede their political role of acting in the public interest, or if the private purpose is so tightly aligned with the public purpose that allowing it alone to determine goals renders the state redundant. As Hayek once wrote: "This is not a dispute about whether planning is to be done or not."[110] The failure in American government to knowingly make the distinction between rhetoric and reality about the usefulness of markets has justified deindustrialization and value chain decline under the guise of supporting markets as a general or abstract policy end goal, instead of as a tool to efficiently achieve shared priorities.

The most pressing example of this may be found in the relative decline of American investment and long-term productive capacity against its competitor states. Nations often prioritize manufacturing and innovative strength, as China is doing now, and as other nations such as South Korea and Japan have done in the recent past, and as the United States did for much of our history. A pre-market definition of interests and the direction of investment aimed at accomplishing them is the story of many successful American firms. AT&T's Bell Laboratories, the corporate research and development unit out of which came most of the foundational technologies for modern telephone and internet communication, came about as a condition of the U.S. government's allowance of AT&T's telephone monopoly.[111] Microsoft famously did not pay dividends until 2003, and from its founding in 1975 through 1989 reinvested all of its earnings.[112] In areas of U.S. advantage like digital technology, the sum of American domestic policy has sometimes functioned as state prioritization of development through the use of markets.[113] The U.S. Small Business Administration (SBA)'s Small Business Investment Company program helped form the venture capital financial sector, giving early-stage investment to then-startup companies like Intel and Apple. President Ronald Reagan's tax cuts released capital for newly-productive use during a time of international stagnation, while increased defense spending and import quotas created industrial investment opportunities for its use. Much of what we know as Silicon Valley today represents returns to commercialization from the work of Cold War-era defense research budgets and space program innovations. As this report demonstrates, however, the returns from this older era of productive capital formation are diminishing.

We have presented our case in four parts. Business investment is falling by various measures. The areas in which year-over-year capital expenditures may grow are increasingly in financial asset-like

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[110] Friedrich A. Hayek, "The Use of Knowledge in Society," Public Domain. https://www.econlib.org/library/Essays/hykKnw.html
[111] Mariana Mazzucato, "The Innovative State" *Foreign Affairs*, January 2015. https://www.foreignaffairs.com/articles/americas/2014-12-15/innovative-state
[112] William Lazonick and Mariana Mazzucato, "The risk-reward nexus in the innovation-inequality relationship: who takes the risks? Who gets the rewards?" Industrial and Corporate Change, Volume 22, Number 4, pp. 1093–1128 doi:10.1093/icc/dtt019
[113] Robyn Klingler-Vidra, "Building the Venture Capital State," *American Affairs*, 2018, https://americanaffairsjournal.org/2018/08/building-the-venture-capital-state/ see also Mariana Mazzucato, "The State Behind the iPhone," in *The Entrepreneurial State*, 93-108. New York: Anthem, 2015.

capital, such as energy commodities and real estate, or simply do not meet the traditional definition of capital, showing up in statistical datasets as "intangible" or "other." Private business has been the historical driver of American economic investment, but in recent years it has carried out this role to a much lesser extent. This decline in business investment can be traced, in large part, to ideological and related material changes to how businesses make decisions about capital allocation. Understanding the proper use of capital to be defined by the market-set equilibrium of shareholder preferences does not recognize, nor even provide the language to describe, the formation and maintenance of hard-won organizational capabilities composed of institutional goals and strategy, investment in innovation under conditions of uncertainty, and the technical skills of the workforce. These capabilities are, or were, the core of American business competitiveness.

We wrote earlier in this report that the proper reaction to this case should not be to seek out a new economic model by government fiat, or to allow the current disordered arrangement to continue until it is resolved by something much worse, but instead to recover what has been lost. What is needed today is not so much an alternate framework to shareholder primacy, but a prior view of realism regarding the ultimate sources of prosperity. Thankfully, American economic and business history is rich with examples to draw from. This application of politics to economics has already begun, and should continue as more businesses, shareholders, and government officials discover that the "efficient use of capital" has often meant financing the investment opportunities created by competitors like China for strategic gain, economic theft, and the abuse of human rights. In the case of China, that these investment opportunities are recognizably not the product of naturally-occurring comparative advantage, but of decisions by the Chinese government, should help to prove our broader point. Economic growth is *built*, not unlocked or managed. Productivity is a project. Decisions about ultimate value must be decided somewhere, or by someone. In the U.S., we have outsourced these decisions so fully to mere market preference that we have made it easy to deny that a decision must be made at all.

This realism should put a renewed emphasis on the business firm as the primary and necessary allocator of capital in the American economy. The decline of business investment demonstrates clearly that its role as the institutional "decider" has been reduced. One of the fundamental premises of market capitalism is that, properly defined, businesses will play the role of investor for the economy as a whole. Something is wrong with the institutional arrangement of the American economy if that is not happening. Instead of outsourcing investment decisions to financial markets based upon the false promises of rational capital decisions, or allowing paths of lesser resistance than physical investment to financial return, private businesses should be relied upon once more to be the main driver of economic development. Such an emphasis would understand capital investment, not portfolio allocation, as the main mechanism upon which businesses make their mark in the economy. An American politics that understands this would build an institutional arrangement ordered to this end.

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