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The Laggard Leader: A Historiography of the Origins of Wage and Income Inequality in the United States, 1973-84

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**The Laggard Leader:
A Historiography of the Origins of
Wage and Income Inequality in the
United States, 1973-84**



Honors Thesis

Nathan Sikora

Department: History

Advisor: William Trollinger, Ph.D.

April 2019

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Abstract

Since 1973, wage and income inequality has increased dramatically in the United States. Workers who entered the labor market after the 1970s did not experience the same level of economic security as workers in the 1950s and 1960s during the “Golden Age of Capitalism.” Jobs paid relatively lower wages, there was less opportunity for collective bargaining, and fewer jobs offered healthcare coverage and pensions. When earnings increased after 1973, the gains disproportionately accrued to the top earners of the income distribution while workers at the bottom experienced stagnant and declining real incomes. What economic factors during the 1970s created a distinct shift towards rising income inequality? Lacking consensus among scholars, this work historiographically analyzes various explanations put forth by economic historians and labor economists regarding the origins of income inequality in the United States.

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Introduction: Productivity and Wages

Post-War Leverage: the Keynesian Paradigm

At the conclusion of World War II, the United States became the largest industrial producer in the world. By war's end, the U.S. contained over 60% of all capital stock of the advanced capitalist nations and produced nearly 60% of the world's total output. The task of rebuilding the world economy created tremendous aggregate demand domestically, and the political economy that came to fruition unleashed in the United States the greatest period of economic growth in history. President Roosevelt's vision of a New World Order led to the Bretton Woods institutions in 1944 to promote global trade relations that included the World Bank, the International Monetary Fund (IMF), and the General Agreement on Trade and Tariffs (GATT) that would later become the World Trade Organization (WTO) in 1995. Additionally, Roosevelt was instrumental in chartering the United Nations at the San Francisco Conference in 1945. Stability was the goal, and European nations looked to the United States as the chief operator in achieving that end.

The onset of the Cold War altered economic incentives towards rebuilding and stabilizing the economies of allies in Western Europe, even if it economically disadvantaged the United States. Learning from the economic downturns of the 1930s, the lack of international coordination during the Great Depression created a consensus among policymakers that the United States could not prosper in a world of other poor economies. Additionally, the long-term economic prosperity of the U.S. was in jeopardy by security issues posed by the Soviet Union in Europe. Under the influence of foreign policy protocols like NSC-68, the post-war American market became "the Cold War's

incubator for alliance prosperity” that provided the U.S. with significant political leverage and exclusive access to European markets.¹

The post-war economic boom is unique to American economic history because it was a period when economic growth soared, income equality increased, and the poverty rate fell. Categorized by economic historians and labor economists as the “Age of Compression” (1947-1973), American workers in the post-war labor market experienced rising real incomes, a narrowing of the income distribution, and a rising standard of living. An increase in the relative demand for low-skilled labor in the 1940-50s along with minimum wage increases bolstered incomes at the bottom of the wage distribution. At the same time, the influx of more skilled workers into the labor market during the 1950s and 60s with the help of the G.I. Bill depressed the price of skilled labor to conserve the “egalitarian impact of the Great Compression.”² From 1947-73, productivity gains increased disposable incomes by 15% in real terms, boosting the purchasing power of American workers. Over one-third of the work-force was unionized and enjoyed paid vacations, healthcare benefits, pensions, and holidays that became associated with the traditional working-class lifestyle.

Workers who entered the labor force in the 1950s and 1960s reaped the benefits of their productivity gains. Rising real incomes along with cheaper goods provided the necessary conditions to increase the country’s standard of living. The application of mass-production from war materials to consumer goods made products more affordable

¹ Judith Stein, *Pivotal Decade: How the United States Traded Factories for Finance in the Seventies* (New Haven: Yale University Press, 2010), 7-8.

² Claudia Golden and Robert Margo, “The Great Compression: The Wage Structure in the United States at Mid-Century,” *Quarterly Journal of Economics* 107, no. 1 (February 1992), 32.

to millions of families for the first time in history: “The washing machine, refrigerator, and vacuum cleaner had come to the working class.”³ The automobile became more readily available and affordable to consumers, as car owners increased from 49 million in 1950, 62 million by 1960, and 119 million by 1972. Federal investment in highway construction with President Eisenhower’s Federal Aid Highway Act of 1956 increased domestic employment and facilitated the migration of middle-class families westward and into new urban and suburban communities around the nation. Families were able to purchase homes at affordable prices and relatively low interest rates, which allowed more Americans to accumulate wealth as real home prices increased. Evidence of rising incomes at all levels of the earnings distribution produced the wisdom of “a rising tide that lifts all boats.” This held true during this period from 1947 to 1973, when both median and mean family income doubled, and the poverty rate decreased by more than sixty percent.⁴

The economic prosperity from the public works projects and successful government planning further promoted a Keynesian economic philosophy towards government spending and regulation that lasted into the early 1970s. Post-war economic success and the relative stability of New Deal programs formed an ideological paradigm that accepted the need for effective government intervention in the economy. It was mutually acknowledged during the Age of Compression that the government had important functions to society that included fair taxation, funding of social programs, and

³ Judith Stein, *Pivotal Decade*, 2.

⁴ Sheldon Danziger and Peter Gottschalk, *America Unequal* (Cambridge: Harvard University Press, 1995), 41.

aid for employment; the neoliberalist ideal of shrinking the size of government and cutting taxes did not become a popular mantra until after 1980.⁵ During the early post-war period, the ideological consensus behind Keynesian economics was so pervasive neither conservative Presidents Dwight D. Eisenhower nor Richard Nixon made any significant attempt to dismantle the framework of Roosevelt's New Deal programs. According to Judith Stein, the prosperity experienced in the three decades after the war altered the ideological lens used to analyze society. In academic literature, important works like John Kenneth Galbraith's *The Affluent Society* (1957), Daniel Bell's *End of Ideology* (1959), and Gunnar Myrdal's *Challenge to Affluence* (1963) argued the historic conflict between capital and labor had resolved itself and America's great prosperity could end poverty in the country.⁶ There was a vision of a United States without poverty, and a belief that public policy was the appropriate avenue to make it a reality.

The movement embodied itself politically in President Lyndon Johnson's "Great Society" campaign and "War on Poverty" agenda in the late 1960s. A lens focused on reducing poverty and investing in education and jobs programs led to the greatest expansion in social welfare programs since Roosevelt's New Deal legislation in the 1930s. Legislative achievements include the Food Stamp Act of 1964, Equal Opportunity Act of 1964, the Head Start Program, and the Social Security amendments of 1965 that established Medicare and Medicaid.⁷ The economic prosperity and success in reducing the nation's poverty rate led two key economic advisers to President Johnson, Robert

⁵ Judith Stein. *Pivotal Decade*, 25.

⁶ John Kenneth Galbraith, *Affluent Society* (Boston: Houghton Mifflin, 1958); Daniel Bell, *End of Ideology: on the exhaustion of political ideas in the fifties* (Cambridge: Harvard University Press, 1962); Gunnar Myrdal, *Challenge to Affluence* (New York: Pantheon, 1964).

⁷ Sheldon Danziger and Peter Gottschalk, *America Unequal*, 19-20.

Lampan and Jams Tobin, to confidently project the elimination of poverty by 1980. The 1967 *Economic Report of the President* declared, “The United States is the first large nation in the history of the world wealthy enough to end poverty within its borders.”⁸ The continuation of economic growth was taken for granted because the success of social programs were based on the premise that high rates of growth would continue. Just as policymakers began to capitalize on economic growth to tackle poverty and inequality, the growth suddenly stopped. Seemingly unabated prosperity was put to an end in 1973. It was not until the early 1970s did the U.S. begin to experience significant economic downturns. When the troubles arrived, the political and economic fallout dramatically reshaped policy dogma in the United States and forever transformed the U.S. labor market.

The U-turn

The post-war economic stimulus remained into the 1960s, but the economic advantages enjoyed by the United States were temporary. The international landscape shifted dramatically in the 1970s as Japan and Germany became major industrial competitors, eventually surpassing the U.S. in productivity growth. “In 1945, U.S. economic superiority was so vast that one-sided trading policies did not matter. Over time, they ultimately did. And when high oil prices and economic competition from Japan and Germany battered the economy in the 1970s... The Age of Compression officially ended.”⁹ Wage growth for American workers began to stagnate after the consecutive quarterly declines in productivity growth in 1973.

⁸ *Economic Report of the President*, 16, 1967; Danziger and Gottschalk, *America Unequal*, 21.

⁹ Judith Stein, *Pivotal Decade*, xi.

Traditionally, the OPEC Oil Embargo is viewed as the main catalyst for the productivity downturn. While the United States remained the largest producer of oil in the world in 1972, making 11.2 million barrels of oil a day, it was also the world's greatest consumer at 17.4 million a day. This took place while OPEC nations were producing around 7 to 8 million barrels a day but consumed relatively little themselves. With Texas production maxed, oil producers like Saudi Arabia, Venezuela, Iran, and Iraq used their leverage in the oil market to their collective advantage: "This changing strategic balance allowed the new oil producers to flex their muscles."¹⁰ Data reveal rising energy prices coincided with productivity slowdowns in all industries in the U.S. starting in 1973: "Higher energy prices contributed to inflation...the net results was higher unemployment and a poorer investment climate, which in turn fed back on productivity."¹¹ Additional research suggests the oil crisis was one of many factors influencing the economic environment at the time, but its disruption to the international market makes it a viable explanation for initiating the slowdown.

Destabilizing market conditions along with increased government involvement in the economy shifted perceptions about the effectiveness and role of government in economic affairs. The OPEC oil crisis, compounded with poor economic conditions in the 1970s and 1980s, contributed to high unemployment and high inflation at the same time the federal government increased social welfare spending. Increased spending on social programs with lackluster results on poverty rates and economic stability caused disillusionment about the effectiveness of antipoverty programs and the government's

¹⁰ Judith Stein, *Pivotal Decade*, 77.

¹¹ Danziger and Gottschalk, *America Unequal*, 4; Sar A. Levitan and Diane Werneke, *Productivity: Problems, Prospects, and Policies* (Baltimore: John Hopkins University Press, 1984), 29.

ability to control fluctuations in cyclical and structural unemployment. As a result, pundits, policymakers, and the public developed a more pessimistic view, in which government was the problem, and that “throwing money” at social programs failed to solve the issues facing the nation’s poor.¹²

Lagging productivity growth in the United States occurred simultaneously as other nations like Japan experienced rates of productivity growth three times that of the U.S.¹³ The fall in U.S. productive competitiveness caused domestic capital investment – a critical component for rising productivity growth – to fall substantially. Cheaper manufacturing competition overseas motivated American corporations to divest from their home operations and move capital abroad. From 1976-1980, American companies and banks tripled their overseas investments.¹⁴ The productivity decline quickly captured the attention of labor economists, academics, and policymakers because of its perceived threat to the U.S.’s long-term economic superiority. What about declines in productivity growth worried economists and policymakers? Labor productivity still grew year to year during the seventies, but it grew at slower *rates*. Why is productivity growth important, and what does it mean for American workers and their compensation?

The economic transformations of the 1970s are of major significance to U.S. labor history. The declines in productivity beginning in 1973 ended the proportional relationship between productivity growth and wage growth in the American workforce. During the Age of Compression, increases in productivity growth correlated to increases

¹² Sar A. Levitan and Diane Werneke, *Productivity: Problems, Prospects, and Policies*, 22-23.

¹³ Harold Arnett and Neill Schmeichel, *Increasing Productivity in the United States: A Political, Social, and Economic Policy Approach* (Montvale: National Association of Accountants, 1984), 11.

¹⁴ Judith Stein, *Pivotal Decade*, 206.

in wage growth. The distribution of wealth was shared more equitably, where workers producing more on average per year and were proportionally compensated for their additional output per hour of work. But after consecutive years of declining productivity growth starting in 1973, wage growth began to stagnate for low and middle-income workers and has continued to do so for four decades.

Since 1973 in the United States, it is statistically accurate to state that the rich have been getting richer while the poor have been getting poorer. Workers who entered the labor market in the 1970s, 1980s, and 1990s did not inherit the same economic security as their predecessors. Their jobs paid relatively lower wages, unionization rates were half the rate they were in the 1950s, and fewer jobs offered the benefits associated with the traditional middle-class lifestyle. Furthermore, when new “tides” of economic growth came after 1973, they tended to only lift those at the top of the income distribution while leaving low-income earners behind – furthering income inequality over time.¹⁵ Technological innovation, access to new markets, and improvements in capital flows across countries increased international competition and forced American corporations in the 1970s to rethink profit-maximizing decisions from a global labor market perspective, which initiated a dramatic shift in the structure and makeup of the American labor market.

Why Does Productivity Matter? Theories and Concepts

Labor productivity matters because it is used to measure a nation’s standard of living, which incorporates the general level of wealth, goods, and necessities provided to citizens of a given country. A comprehensive definition of labor productivity “measures

¹⁵ Danziger and Gottschalk, *America Unequal*, 2.

the relationship between the quantity of goods and services produced during a period of time and the input of labor, capital, and natural resources used in the production process.”¹⁶ One way to compose a nation’s Gross Domestic Product (GDP) – the total value of all final goods and services produced in a country within a given period – is by multiplying labor productivity by the aggregate hours of labor to get total factor production. Economists often calculate a nation’s standard of living by its Real GDP per capita, or the average wealth generated per person in the country. Under this economic understanding of national production, the more a nation produces the more income there is to be shared among those participating in the economy.

Growth in labor productivity is the key to increasing the real purchasing power of workers. By definition, growth occurs when output increases more than hours worked. Fundamental labor economic theory claims a worker’s wage is equal to his or her marginal productivity of labor, which is calculated by multiplying a worker’s marginal productivity by the product’s price ($MP * P = MPL = W$). Under this theory, keeping all things equal, increases in real output per worker should correlate with higher real wages. Increased real incomes allow workers to consume a greater amount of goods for the same level of work as before: “For workers to experience rising living standards over any substantial period, labor productivity must also rise. That is, for a worker to be paid more for an hour’s work, the value of that worker’s economic output must increase.”¹⁷ Increasing productive efficiency is critical to creating rising real incomes for workers. It is important to measure productivity growth because it is the economic factor that leads

¹⁶ Sar A. Levitan and Diane Werneke, *Productivity: Problems, Prospects, and Policies*, 5.

¹⁷ Jay Shambaugh, et al., “Thirteen Facts about Wage Growth,” *Brookings Institution: The Hamilton Project* (September 2017), ii-iii.

to more leisure time and higher incomes. In spurring productivity growth, the economy can experience growth in labor income, profits to firms, and tax revenue to the public sector to fund social programs and public works projects.

The foundations of contemporary productivity growth theory are the result of two key twentieth century economists: Nicholas Kaldor and P.J. Verdoorn. Through their research on taxation and growth in the 1930s, 40s and 50s, the European scholars generated fundamental laws in economics regarding long-run productivity trends. The Kaldor-Verdoorn Law, sometimes referred to as *cumulative causation*, claims that the growth of a nation's manufacturing sector was the key to spurring further economic growth across industries of the economy. "Rapid growth of demand and output leads to an increase in the growth of productivity due to increasing returns to scale, which increases capital accumulation...this leads to competitive advantages, and consequently to faster growth of exports, which in turn contributes to the growth of demand and to a virtuous circle in process of cumulative causation."¹⁸ The theory claims that developed nations with heavy manufacturing industries would "embark on a virtuous cycle of productivity and income growth."¹⁹ The critical factor with cumulative causation theory is its assumption of continuing increasing returns to the manufacturing sector and a focus on research and development for technological change. This understanding of a "spillover effect" from the manufacturing sector and increasing returns to scale laid the blueprint for understanding productivity growth.

¹⁸ Ferdinando Targetti, "Nicholas Kaldor: Contributions to Development Economics," *Development and Change* 36, no. 6 (November 2005), 1191.

¹⁹ Steven Pressman and Richard Holt, "Nicholas Kaldor and Cumulative Causation: Public Policy Implications," *Journal of Economic Issues* 42, no. 2 (June 2008), 368.

Many factors contribute to productivity growth. Technological advancements, research and development, investment in human capital, and other improvements increase output per hour of work. In terms of international trade, obtaining comparative advantages in goods production increases a country's total market share. If the nation is able to maintain superiority in *relative* productivity growth, then it can also maintain its market share and increase its standard of living as well as fund social programs to combat poverty and inequality. If growth begins to lag behind other industrialized nations, however, the laggard nation will have to compete by offering workers lower real wages to offset the negative effects of lower productivity.²⁰ The latter case is the situation American firms, workers, and policymakers confronted in the 1970s that upended the traditional Keynesian economic paradigm.

The economic and political history of the 1970s illustrates the diffusion of the post-war Keynesian paradigm in the United States. Under the Keynesian paradigm, capital and labor prospered together during times of growth and proper government intervention could stabilize the economy.²¹ The combination of global forces and legislative actions that took place in the 1970s and 1980s in response to the crises did not solve the issue but, rather, depressed the long-term prosperity for the average American worker. The economic relationship between growth in labor productivity and growth in wages remains a controversial topic in academic circles as economists struggle to pinpoint the factors associated with wage stagnation: "Wage stagnation has been a staple

²⁰ *Productivity Policy: Key to the Nation's Economic Future*, Committee for Economic Development (April 1983), 23-25.

²¹ Sarwat Jahan, et. al, "What is Keynesian Economics?" *Journal of Finance and Development* 51, no. 3 (September 2014); Judith Stein, *Pivotal Decade*, xi.

of economic analysis and commentary for a while now, though perhaps predictably there's little agreement about what's driving it."²² What has mystified researchers is accurately identifying the sources responsible for causing stagnant wage growth and a widening earnings distribution between low-income workers and high-income workers.

A Guide for the Perplexed

The topic of income inequality has remained central to the American political conscience since the late 1970s. The study of wage and income inequality highlights the *relative* earnings gap between high-earners at the top of the income distribution and low-earners at the bottom income distribution in a given country. Despite extensive literature on the subject, some fundamental questions remain. What factors contributed to the “U-turn” in productivity and wage earnings in the early 1970s? What contributed to the loss of productive superiority and market leverage for the United States? What structural changes led the Age of Compression – when wealth was shared more equitably – to become an economic anomaly instead of the rule?

Numerous arguments have been offered by labor economists that attempt to explain the expanding earnings gap. Explanations range from international competition, the influx of baby-boomers and women into the labor force, less demand for low-skilled workers, an increasing college wage premium, and changes in corporate management culture. Researchers continue to disagree over which factors are most responsible for the 1970s productivity woes and its corollary relationship in expanding the earnings gap between low-earners and high-earners in the United States. “Although shifts in relative

²² Drew DeSilver, “For most workers, real wages have barely budged for decades,” *Pew Research Center*, October 9, 2014.

labor demand against less-educated and ‘less-skilled’ workers undoubtedly are a major reason for these shifts in the labor-market outcomes, research on the underlying reasons for these demand shifts (e.g., technological change, increased international competition, etc.) is still incomplete.”²³ Despite methodological disputes, labor economists are in agreement that today’s working individuals face a radically different labor market than previous generations.

A gap exists in the literature about the failure of the marginal productivity theory and its relationship to wage determination. Since 1973, labor productivity has continued to increase steadily – albeit not as high of a rate as during the Age of Compression. The stark difference post-1973, however, is productivity gains have not transferred into higher earnings for workers like they did from 1947 to 1973. Alongside economics, the cultural transformation caused by the growth and prosperity experienced in three decades after the war further engrained the belief in American meritocracy: the belief that workers could advance up the economic ladder no matter their standing by working hard and playing by the rules. The legitimacy of this notion, which has evolved to be a core principle of the American identity, has now become a statistical falsehood. In this context, what are we to make of statistics about income disparity, wage stagnation, and lackluster growth in the average standard of living for working Americans? Does it matter that there is more income inequality, lack of upper mobility, and less opportunity for personal growth in the United States? If so, what (if anything) should be done to address it?

²³ David Cutler and Lawrence Katz, “Rising Inequality? Changes in the Distribution of Income and Consumption in the 1980’s,” *AEA Papers and Proceedings* 82, no. 2 (May 1992), 550.

The history of the American wage structure since 1973 raises the question of whether *morality* can be included in the construction of economic theory and policy. Data and studies consistently disprove foundational economic principles regarding wage determination, yet the facts have failed to significantly overturn traditional dogma surrounding labor productivity and compensation. Economists declare the existence of inequalities are simply the result of “free market forces,” merely a byproduct of the capitalist system at work.²⁴ Is morality mutually exclusive from economics? Popular opinion towards economics and social welfare policy has shifted since the late 1970s away from notions of the common good to amoral absolutism of the invisible hand of the market. Furthermore, economic theories are often laden with biased assumptions. Economic models are merely simplifications of reality based upon simplifying assumptions and are many times disproven by real data, yet the field adheres to them as sacrosanct. As time has progressed, certain simplifying assumptions within labor economic theory no longer apply to the statistical evidence, particularly with wage determination and income distribution.

The purpose of this work is to historiographically organize the numerous explanations put forth by labor economists and historians to explain the sharp decline in productivity growth that occurred in the early 1970s and its relation to subsequent decades of wage stagnation and rising income inequality. The project will assess the key variables influencing the decline in U.S. productivity growth in the 1970s and contextualize its long-term effect on the U.S. labor market and income inequality. Part I provides an abstract of income inequality statistics and examines the variables

²⁴ John Cassidy, “The Great Productivity Puzzle,” *The New Yorker*, August 10, 2016.

economists use to measure and graphically depict inequality among individuals and families. Part II examines the historiography of the explanations from notable scholars in the field. The conclusion offers an assessment of the proceeding explanations and argues the existence of a new developing economic paradigm.

There is no simple explanation for why wages have stagnated over the past half-century in the United States. Presenting the historiography of economic research on the topic, this paper attempts to create a concise overview of wage and income inequality in the United States. Properly identifying the sources of slower growth and rising inequality can help labor economists predict future trends. A greater understanding of the variables contributing to increasing income inequality can better inform public policy decisions, which can enable governments and businesses to partner to help firms and workers adjust to an evolving labor market. Put best by labor economist Alan Blinder in 1982:

“What this country needs now in the realm of income distribution policy is exactly what it needs, and has often been unable to get, in so many other problem areas: An economic policy with a hard head and a soft heart. A hard head to remind us of the wondrous efficiency of the marketplace, and how foolish it is to squander this efficiency without good reason. And a soft heart to remind us that championing the cause of the society’s underdog has long been, and remains, one of the noblest functions of government.”²⁵

The purpose of this work is to provide a digestible abstract of the origins of wage and income inequality in the United States that best fits the data and evidence available. By

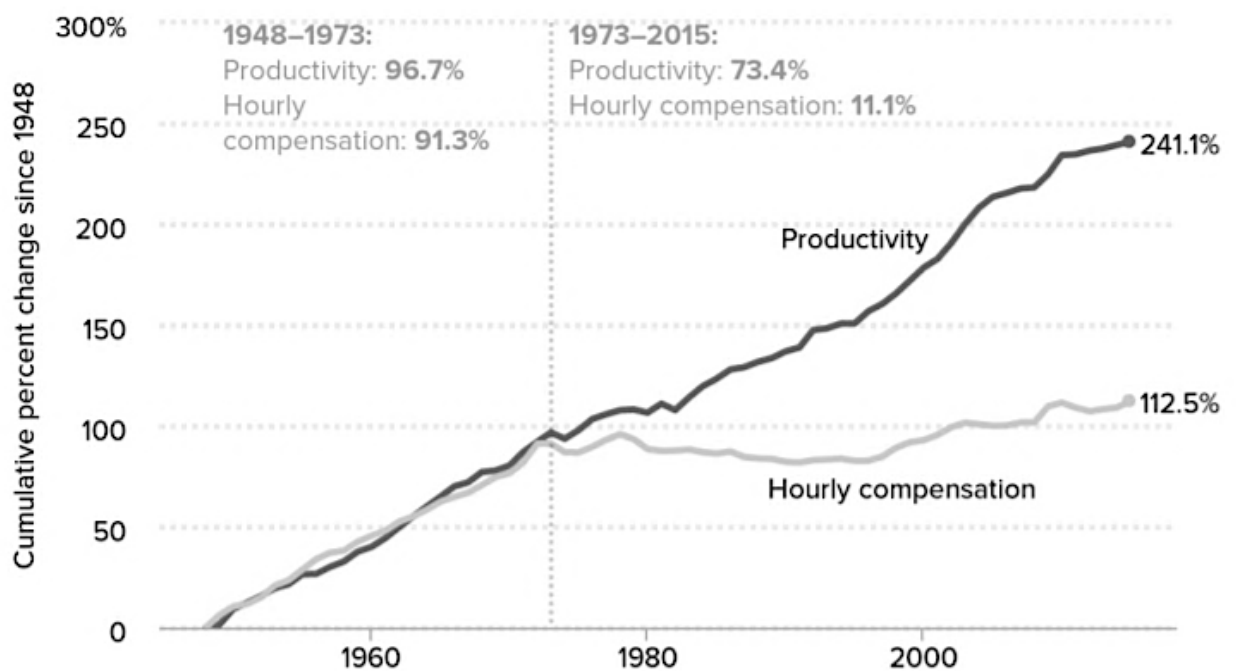
²⁵ Alan Blinder, *The Truce in the War on Poverty: Where Do We Go From Here?* (Washington, D.C.: National Policy Exchange, 1982), 30.

placing the experts in conversation with one another, this work presents a concise historiography of a critical economic phenomenon that still lacks consensus in the field of economics.

Part I: Divergence

The Productivity Puzzle

Figure 1. Change in Productivity and Hourly Compensation, 1948-2015



(Source: Bureau of Labor Statistics and the Economic Policy Institute, 2017)

Figure 1 illustrates the breakdown in the proportional relationship between productivity growth and wage growth in the U.S. labor market. From 1947 to 1973, productivity and wages grew in tandem by 2 to 3% per year. Annual growth in labor productivity averaged 3.3% per year from 1947-1966 and 2.2% from 1966-1973. The high and consistent rate of growth over these years led to the doubling of both labor productivity and labor income. The U.S. economy encountered economic troubles when

productivity dropped sharply to an average of 1.2% from 1973-1977 and eventually reached a negative growth rate of -0.4% by the end of 1980.²⁶

It is clear from Figure 1 that gains in productivity since 1973 have not gone to workers in the form of higher compensation. Thomas Kochan, Co-Director for the Institute for Work and Employment Research, argues the disconnect between productivity growth and wage growth reflects a breakdown in the modern American social contract, where he defines *social contract* as “the expectation that wages for average workers will grow in rough tandem with aggregate productivity growth in the U.S. economy.”²⁷ Since 1945, the U.S economy has experienced two diametrically opposing economic eras. In the first, the early post-war era was an economy where growth was shared more equitably, productivity gains translated into greater real incomes for working Americans, and the phrase “a rising tide lifts all boats” held true. In the second, the post-1973 economy restructured itself towards industries that offered lower wages, less benefits, and less job security to the American workforce. And when economic growth occurred, the benefits disproportionately accrued to those at the top of the income distribution.

Figure 1 represents the foundation of this thesis: revisiting the legitimacy of classical labor economic theory regarding wage determination. Thomas Picketty, a contemporary researcher on the topic, critiques classical labor economic theory: “The most striking failure of the theory of marginal productivity and the race between

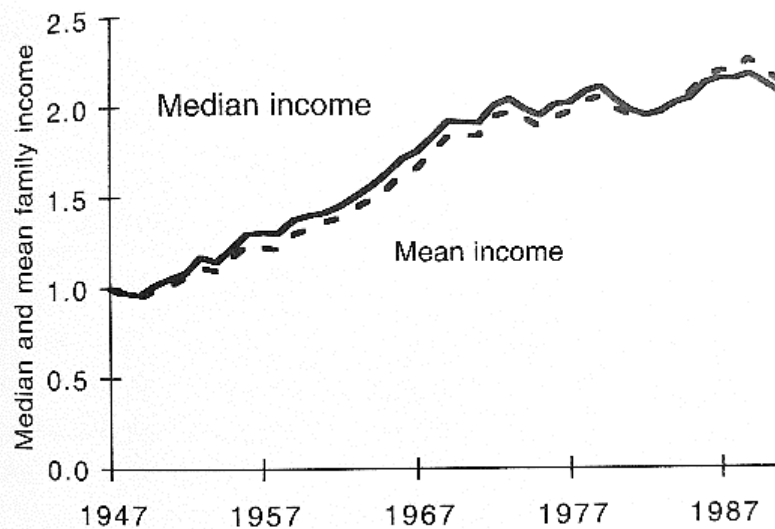
²⁶ Harold Arnett and Neill Schmeichel, *Increasing Productivity in the United States: A Political, Social, and Economic Policy Approach* (Montvale: National Association of Accountants, 1984), 11.

²⁷ Thomas Kochan, “The American Jobs Crisis and its Implication for the Future of Employment Policy: A Call for a New Jobs Compact,” *Industrial Relations and Labor Review* 66, no. 2 (April 2013): 293-94.

education and technology is no doubt its inability to adequately explain the explosion of very high incomes from labor observed in the United States since 1980.”²⁸ Why are workers not being equitably compensated for the productivity of their labor? Why did economic theory regarding a worker’s productivity and compensation hold true during the Age of Compression but suddenly break down after 1973?

The “Golden Age” of Capitalism

Figure 2. Median and Mean family income, 1947-1991



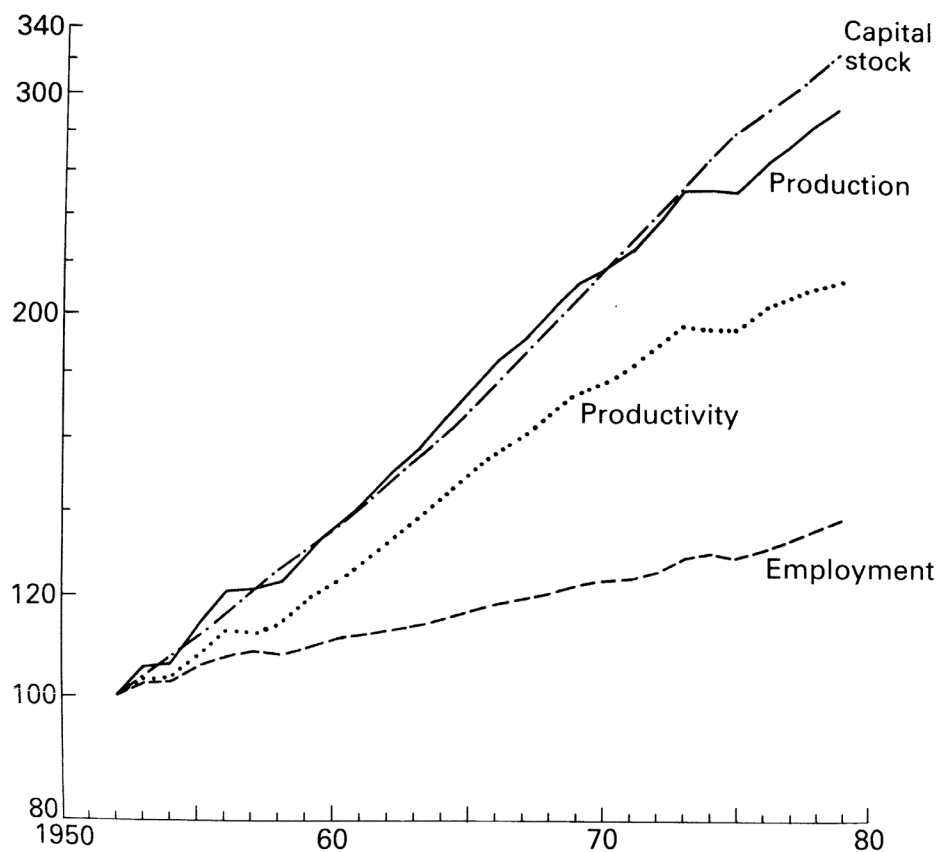
(Source: Danziger and Gottschalk, 41)

In terms of family income, the “good old days” fall within the years of the Age of Compression (1947-1973). There are two main variables often used to assess family incomes that provide context for the nation’s standard of living: median and mean income. Median income shows how the average or “typical” American family is doing in the economy, where half of Americans are faring worse and the other half are faring better. Mean income, on the other hand, is relatively more affected by changes in the

²⁸ Thomas Picketty, *Capital in the Twenty-First Century*, 314.

levels of income at the upper and lower ends of the income distribution. Figure 2 tracks both variables using 1947 indexed at 1.0. Both median and mean family income grew in tandem from 1947 to 1973 similar to productivity and wages. Parallel growth reveals income growth was relatively constant across income levels. In the late 1970s and early 1980s, however, the mean grew faster than the median, which indicated that inequality started to rise.²⁹ Figure 2 visually captures the shift towards inequality in the 1980s when growth in mean income outpaced growth in median income.

Figure 3. ACC production, capital stock, productivity, & employment, 1955-1980



(Source: Glyn, et. al., 49)

²⁹ Sheldon Danziger and Peter Gottschalk, *America Unequal*, 40-41.

The first six years after the Second World War, defined as the “reconstruction period” from 1945 to 1951, are considered by scholars to be the critical years when institutional shifts created long-term implications for the international economy. This is due partially to the rise of new international situations such as the Cold War and a movement towards internationalism in Europe. The political and economic effects of the Marshall Plan and the collective effort to rebuild the European economy laid critical foundations for trade relationships. For example, the turnaround in economic productivity for Western European countries was so fast that France, Italy, Germany, and the Netherlands “caught up with their own highest prewar level of production in an impressively short span of time, reaching it between 1947 and 1951.”³⁰ There were fears the end of the war would initiate another elongated depression around the globe. Instead, the conclusion of the war unleashed the most unprecedented worldwide growth in history. Armstrong, Glyn, and Harrison (1984) in *Capitalism since 1945* attribute the exponential growth to newly forged international relationships: “Reconstruction involved the formation of the basic relationships between labour and capital within each country and of the relations between the various countries, which were to underpin the subsequent boom.”³¹ The movement toward internationalism instead of isolationism allowed for new forms of capital, information, and people to connect that laid the groundwork for what would become “globalization,” as it is defined today.

The quarter-century after the reconstruction period created unprecedented prosperity for the world economy. Specifically, the *rates* of growth were “historically

³⁰ Fernando Rugitsky, “Inconvenient glow: cliometrics and the ‘golden age’ of capitalism,” *Brazilian Journal of Political Economy* 34, no. 4 (2014): 594.

³¹ Philip Armstrong, et. al, *Capitalism since 1945* (Oxford: Basil Blackwell, 1984): xiv.

unprecedented” for advanced capitalist countries (ACCs), where GDP and GDP per capita from 1950 to 1973 grew twice as fast as any period since 1820. Additionally, the golden age experienced historical rates of productivity growth and capital accumulation (Figure 3). Between the early 1950s and 1970s, total world output in manufacturing more than quadrupled and the amount of world trade increased eightfold. Research on the early post-war economy by Andrew Glyn, Alan Hughes, Alain Lipietz, and Ajut Singh (1990) defines the golden age by two key characteristics: “The central features of the macroeconomic pattern during the golden age were: (i) rapid and parallel growth of productivity and capital stock per worker; and (ii) parallel growth of real wages and productivity.”³² According to scholars, the two factors permitted sustained economic growth during the period defined as the Golden Age of Capitalism.

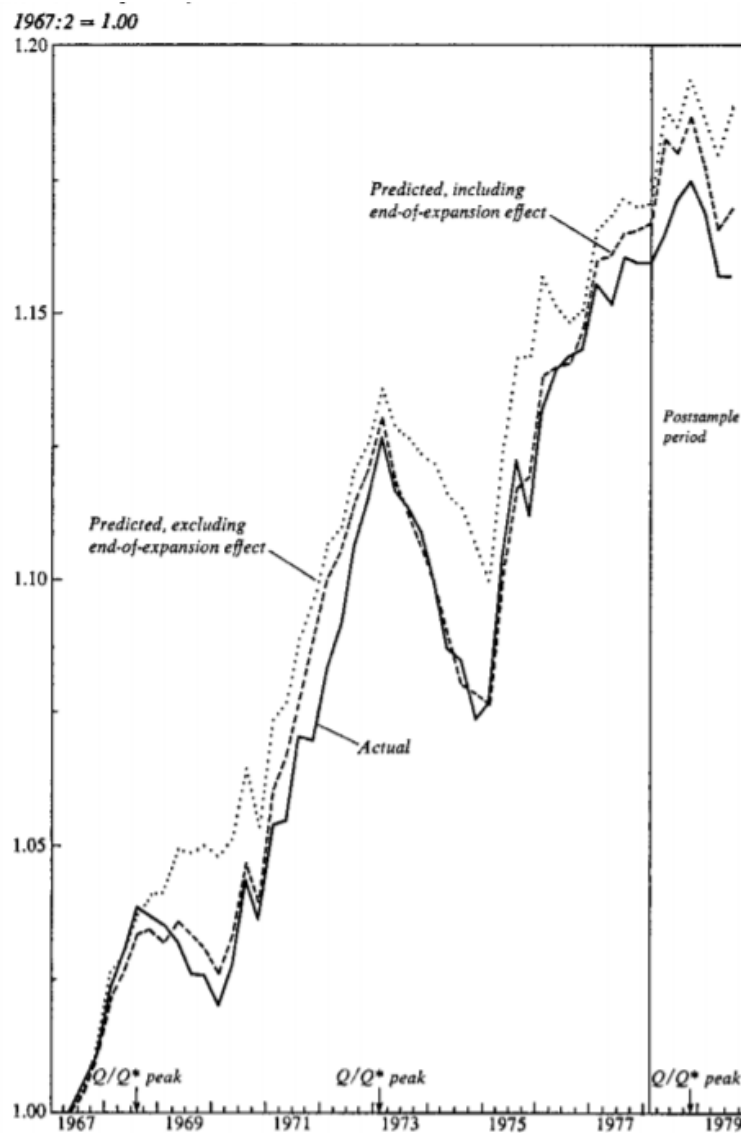
Economists agree that the economic environment during the early post-war period was the result of multiple short-run stimuli for the demand for labor and “of institutional changes brought about by the war and the command economy that accompanied it.”³³ Evidence of problems became apparent when the U.S. labor market began to experience a full-employment profit squeeze in the late 1960s, where wage acceleration started to outpace productivity growth resulting in smaller profit shares to firms. Profits strongly influence investment, and decreased investment often correlates to decreases in productivity growth. The late 1960s profit squeeze was a key precursor to productivity declines. As the authors point out, the slowdown in productivity growth “was not a

³² Andrew Glyn, et. al., “The Rise and Fall of the Golden Age,” in *The Golden Age of Capitalism: Reinterpreting the Postwar Experience* (Cambridge: Oxford University Press, 1990): 41-43, 48.

³³ Claudia Golden and Robert Margo, “The Great Compression: The Wage Structure in the United States at Mid-Century,” 32.

phenomenon associated with business ‘cycles,’ ...but the result of a long period of sustained growth, rising wages, high employment, and increasing economic security for working people.”³⁴ Cross-country data supports the argument that the slow decline in profit shares in the late 1960s correlated to firms decreasing their levels of investment, further contributing to the slowdown process. Then 1973 hit.

Figure 4. Output per Hour in Nonfarm Business Sector, Actual and Predicted, 1967-1979



(Source: Gordon, 459)

³⁴ Andrew Glyn, et. al., “The Rise and Fall of the Golden Age,” 19.

The U-Turn and “Quiet Depression”

For economists, the 1970s were bewildering: “Several important studies have documented a slowdown in the secular growth rate of productivity that has taken place...and most studies appear to leave the causes of a large portion of the deceleration as an unresolved puzzle.”³⁵ Labor productivity took a sharp decline from its steady growth during the 1950s and 1960s. Labor productivity in the private business sector from 1973 to 1978 grew at only one-third the rate of growth from 1948 to 1965. Figure 4 tracks non-farm business sector productivity from 1967 to 1979, which depicts three noticeable slowdowns after peaks in 1969, 1973, and 1979.³⁶ The distinct slowdown from 1973 to 1975 represents the turning point regarding the long-term nature of productivity growth and wage growth.

Some of the earliest research on the productivity slowdown concerned short-run variables. Economist Robert J. Gordon (1979) discussed “End of Expansion” effects during the 1970s reflecting fluctuations in the business cycle. Viewing the issue with short-run implications, Gordon’s analysis suggested economic trends such as lags in the hiring process and high turnover rates were the main factors responsible for the abrupt productivity slowdown that occurred both in 1973 and again in 1979.³⁷ Other researchers like J.R. Norsworthy, Micheal Harper, and Kent Kunze (1979) attributed the productivity slowdown from 1973 to 1978 to a decrease in capital formation: “In the second period [1973-78], capital effects contribute nearly 80 percent of the observed slowdown in labor

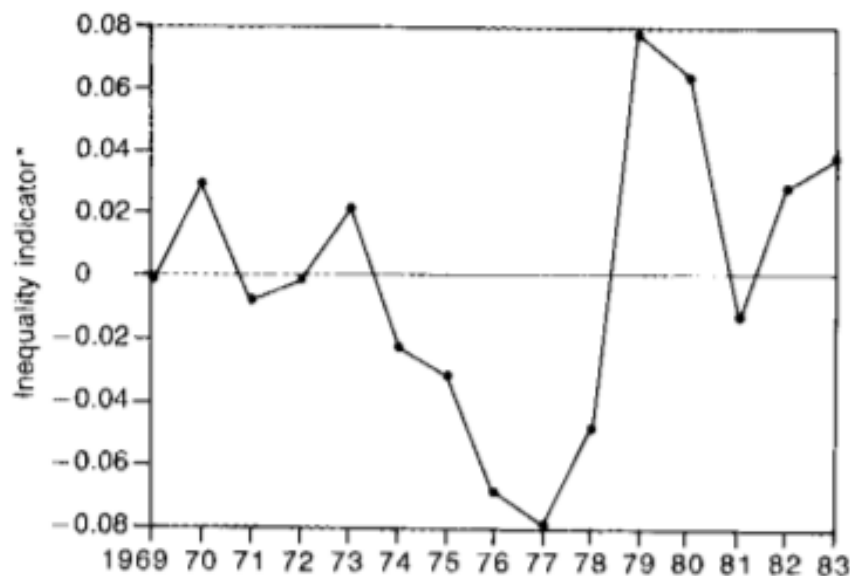
³⁵ Robert Gordon, “The ‘End of Expansion’ Phenomenon in Short-Run Productivity Behavior,” *Brookings Papers on Economic Activity* 2, (1979): 461

³⁶ *Ibid.*, 459

³⁷ *Ibid.*, 447-448, 456.

productivity.”³⁸ The authors agree with the general consensus that the rise in energy prices starting in 1973 is a potential catalyst for causing the slowdown: “If capital and energy are compliments, the rise in energy prices would have retarded capital formation.”³⁹ These explanations, among others, will be discussed further in Part II but are mentioned here as some of the earliest reactors to the phenomenon. Later scholars, with the help of hindsight, view the 1973 shock as the pivotal shift between two economic eras rather than short-run behaviors: “It is clear in retrospect that 1973 marked the watershed between the golden age years of rapid growth and the stagnation which followed.”⁴⁰

Figure 5. Wage Inequality Accounting for Business Cycle, Baby Boom, and Strong Dollar, 1969-1983



(Source: Harrison, et. al, “Wage Inequality Takes a Great U-Turn,” 31)

³⁸ J.R. Norsworthy, et. al., “The Slowdown in Productivity Growth: Analysis of Some Contributing Factors,” *Brookings Papers on Economic Activity* 2, (1979): 387-88.

³⁹ J.R. Norsworthy, et. al., “The Slowdown in Productivity Growth: Analysis of Some Contributing Factors,” 387-388.

⁴⁰ Andrew Glyn, et. al, “The Rise and Fall of the Golden Age,” in *The Golden Age of Capitalism* (Cambridge, Oxford University Press, 1990), 72.

The distribution of wages and salaries took a distinctive U-turn between 1975 and 1978 (Figure 6), which established a trend of inequality that has persisted to this day for low-wage workers. The recession of 1973 was the longest economic downturn since the 1930s, lasting sixteen months. Figure 4 created by labor economists Harrison Bennett, Chris Tilly, and Barry Bluestone (1986) reveals how income inequality became a lagging indicator from the recession after accounting for business cycles, the entrance of baby boomers into the labor force, and a strong dollar. The authors point out, “This was before the election of Ronald Reagan, before the passage of the sharply regressive tax act of 1981, and even before the official commencement of the monetarist experiment in 1979.”⁴¹ For reasons economists and historians still debate, there was a fundamental shift in the distribution of earnings in the 1970s towards greater inequality. The transformation, however, was subtle. Economist Frank Levy in *Dollars and Dreams* (1987) labeled the decade from 1973 to 1982 as the “quiet depression” in which median income fell while the poverty rate increased.⁴²

Table 1 shows the trend in median income from 1949 to 1991 and its relation to the poverty line. There are two key takeaways. The first column shows the doubling of median real income from 1949 to 1969 (99.3%) but a complete stagnation in median family income growth from 1973 to 1991 (3.4%). Second, the average American’s standard of living peaked in 1989 – much after the 1973 woes began. This does not mean, however, that all Americans were better off in 1989, only that there was a larger

⁴¹ Bennett Harrison, Chris Tilly, and Barry Bluestone, “Wage Inequality Takes a Great U-Turn,” 26.

⁴² Frank Levy, *Dollars and Dreams: The Changing American Income Distribution* (New York: Russell Sage, 1987).

aggregate amount of income at the end of the decade than at the beginning.⁴³ Steady economic growth occurred in the late 1980s, but it was not shared evenly: “Although the economic recovery of the 1980s lasted longer than most recoveries, its effects on living standards were modest.”⁴⁴ The 1970s and 1980s produced negligible improvement in median standard of living in the United States.

Table 1. Trends in median family income and median adjusted income divided by the poverty line, 1949-1991

| | Real median family income ^a | Real median adjusted income for all persons ^b |
|--------------------|--|---|
| 1949 | \$15,699 | 1.24 |
| 1959 | \$22,386 | 1.86 |
| 1969 | \$31,292 | 2.51 |
| % change 1949–1969 | 99.3% | 102.4% |
| 1973 | \$33,370 | 2.84 |
| 1979 | \$34,595 | 3.05 |
| 1982 | \$32,037 | 2.87 |
| 1989 | \$36,062 | 3.31 |
| 1991 | \$34,488 | 3.14 |
| % change 1973–1991 | 3.4% | 10.6% |

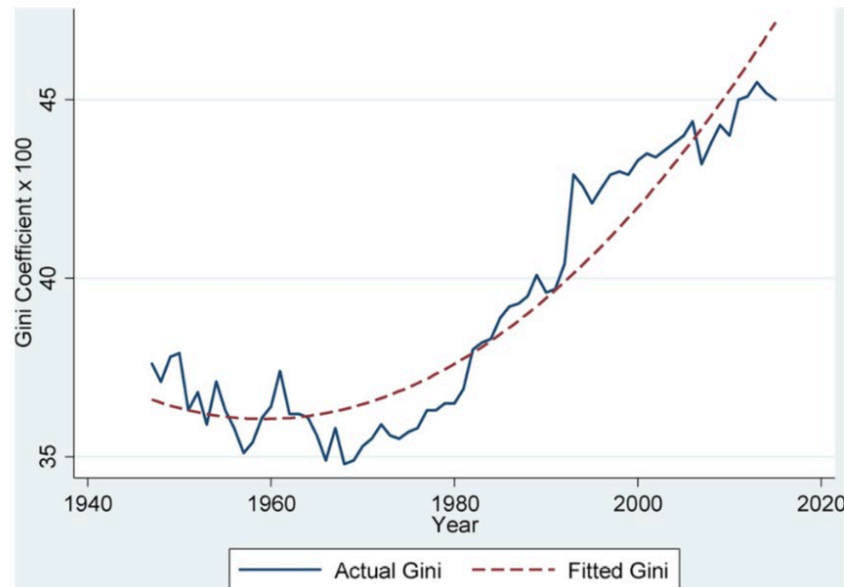
(Source: Danziger and Gottschalk, 46)

⁴³ Sheldon Danziger and Peter Gottschalk, *America Unequal*, 47.

⁴⁴ *Ibid.*, 7, 43.

Inequality on the loose

Figure 6. U.S. Gini Coefficient, 1947-2015 (with projection to 2020)

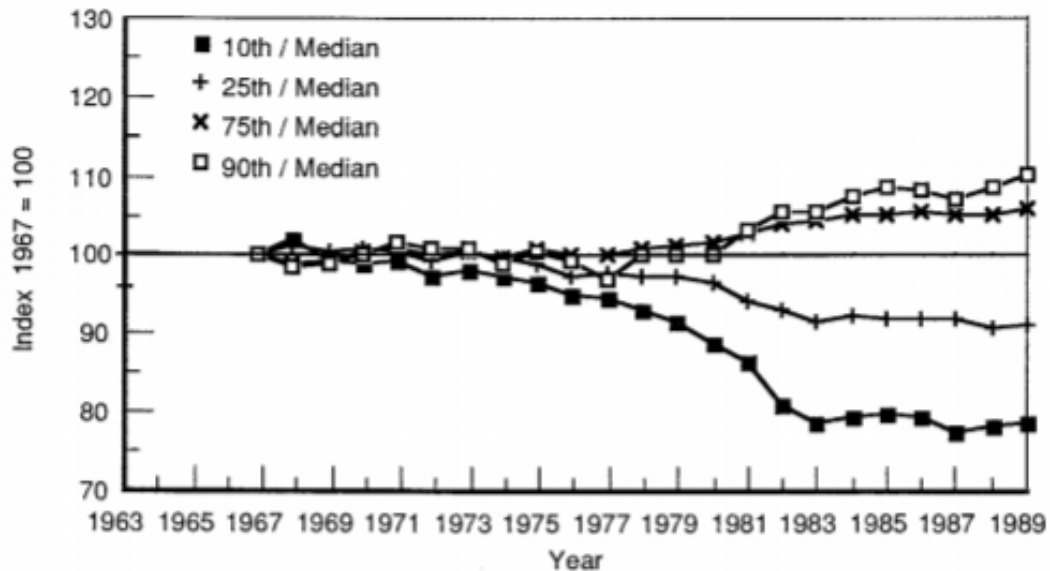


(Source: Kollmeyer, 2)

One of the most often used statistics to assess inequality is the Gini Coefficient, which is a ratio ranging from zero (complete equality) to one (complete inequality) representing the wealth distribution of a nation's citizens. It is derived from the Lorenz Curve, which tracks the percentage of aggregate income earned by each percentile of the population. The Gini Coefficient reached its minimum level in 1967 and 1968 of around 0.35 then drastically peaked in 1989 at roughly .40, revealing the stark U-turn in the income distribution in the 1970s. The measurement flaw with the Gini coefficient is that it does not reveal *where* in the income distribution the inequality is occurring. It does not tell the whole story about inequality, but the ratio does provide significant context for assessing the *magnitude* of inequality taking place in a given country.⁴⁵

⁴⁵ Christopher Kollmeyer, "Trade union decline, deindustrialization, and rising income inequality in the United States, 1947 to 2015." *Research in Social Stratification and Mobility* 57, (2018), 2.

Figure 7. Inequality among Families: Percentiles Relative to Median Income, 1963-1989

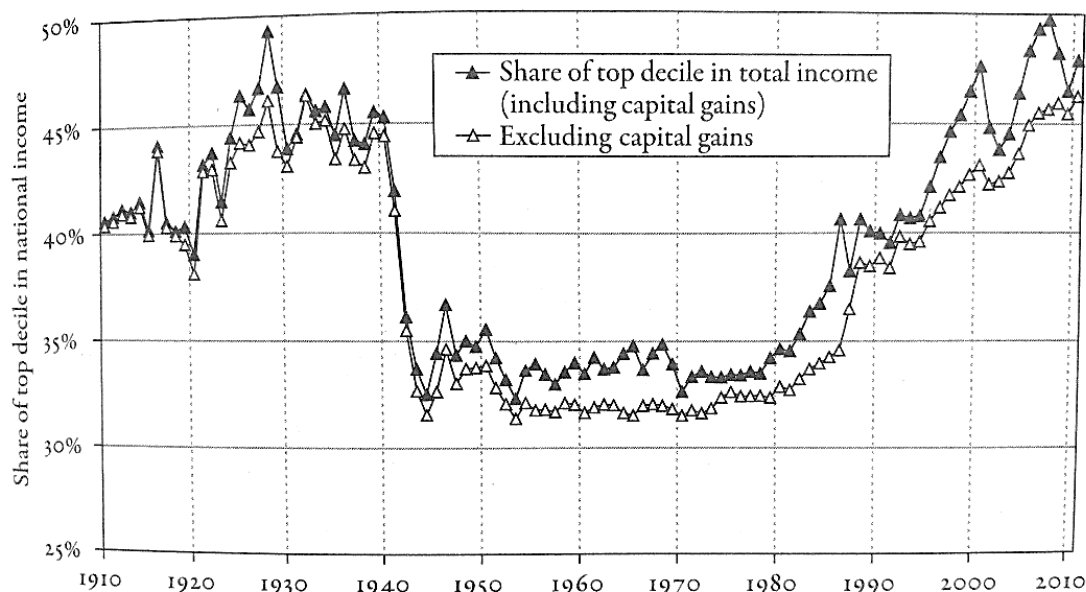


(Source: Karoly, 17)

Economist Lynn Karoly's study of income inequality among families, workers, and individuals in 1992 provides ample evidence of increasing income inequality. Figure 7 shows the changing shape of the income distribution, where incomes at the top of the income distribution grew faster than the median and incomes at the bottom of the distribution have declined relative to the median. "Regardless of the unit of analysis or the income measure, families and individuals at the bottom of the distribution lost ground in real terms, while the ground gained by those above the median was greater the higher their level of income."⁴⁶ The increase in the *relative* earnings gap along with evidence of increases in the number of citizens in the lower and upper classes have supported the notion of a shrinking middle class.

⁴⁶ Lynn Karoly, "The Trend in Inequality Among Families, Individuals, and Workers in the United States: A Twenty-Five-Year Perspective," *Rand* (1992): 11.

Figure 8. Income share of top decile (10%) in the United States, 1910-2010



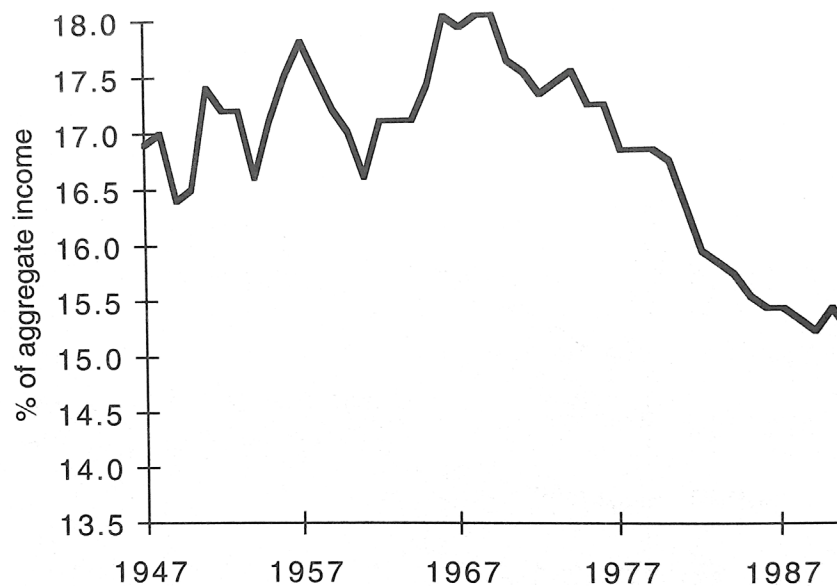
(Source: Thomas Picketty, 291)

Analysis by French economist Thomas Picketty in *Capital in the Twenty-First Century* (2014) shows the top decile's share of income remained steady from 1940 to 1980 but rose exponentially thereafter. The upper decile's share of income increased from around 35% in the 1970s to nearly 50% by 2000 – similar levels on the eve of the 1929 crash. “The shape of the curve is rather impressively steep, and it is natural to wonder how long such a rapid increase can continue: if change continues at the same pace, for example, the upper decile will be raking in 60 percent of national income by 2030.”⁴⁷ Scholars like Picketty attribute the rise in income inequality to the dramatic increase in very high incomes to supermanagers: “The increase was largely the result of an unprecedented increase in wage inequality and in particular the emergence of

⁴⁷ Thomas Picketty, *Capital in the Twenty-First Century* (Cambridge: Harvard University Press, 2014), 294.

extremely high remunerations at the summit of the wage hierarchy, particularly among top managers of large firms.”⁴⁸ His argument will be discussed at greater length in Part II, but it is important to note the statistical phenomenon revealing growing inequality through rapidly increasing earnings at the top of the income distribution.

Figure 9. Share of aggregate income received by bottom 40 percent of families, 1947-1991



(Source: Danziger and Gottschalk, *America Unequal*, 50)

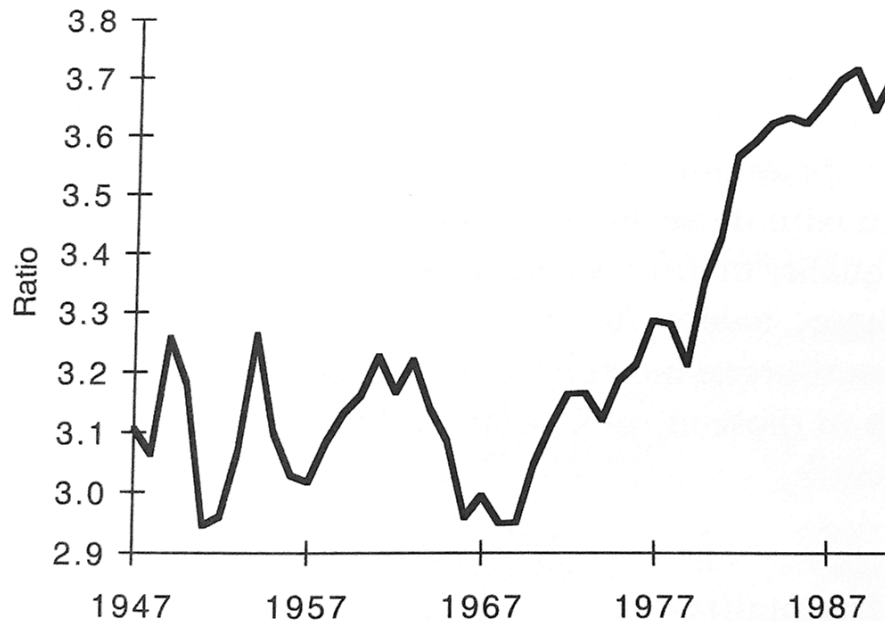
Figure 9 charts the aggregate income earned by bottom forty percent of families from 1947 to 1991. From 1947 to 1969, the income shares of the bottom forty percent of earners grew while the share of the top quintile declined. Between 1969 and 1989, however, the bottom forty percent of earners saw their income share fall from 18 percent to 15.2 percent between 1969 and 1989, an 18% decline of their income share.⁴⁹ Decline

⁴⁸ Thomas Picketty, *Capital in the Twenty-First Century*, 298.

⁴⁹ Sheldon Danziger and Peter Gottschalk, *America Unequal*, 50-52.

in real incomes at the bottom of the distribution occurred simultaneously as the share of incomes rose for those at the top of the income distribution in the 1970s and 1980s.

Figure 10. 80/20 Ratio: income of family at 80th percentile to that of a family at 20th percentile, 1947-1991



(Source: Danziger and Gottschalk, *America Unequal*, 48)

The same scenario is evident in Figure 10, which charts the ratio of real income of families at the 80th percentile to that of families at the 20th percentile. For example, using data from the U.S. Bureau of the Census, the ratio value of 3.71 in 1991 “indicates that the family at the 80th percentile received an income (\$62,991) almost four times as large as that of the family at the 20th percentile (\$17,000).”⁵⁰ The number of graphs measuring inequality are vast, and what is clear is that income inequality has increased dramatically in the United States since 1973.

⁵⁰ Sheldon Danziger and Peter Gottschalk, *America Unequal*, 48-49.

Was the Age of Compression an economic anomaly? Economists Sheldon Danziger and Peter Gottschalk believe it was an anomaly. The scholars claim the breadth of theoretical and historical evidence supports the notion that inequality is the norm: “There is nothing about a market economy that ensures that a rising standard of living will be accompanied by reduced inequality.”⁵¹ Offering general labor economic theory regarding the supply and demand of labor and wage determination, they conclude “economic theory predicts neither that a market economy will yield an equitable distribution of earnings nor that the distribution will be stable over time.”⁵² Prices adjust to clear the market with supply and demand, and when demand for skilled labor exceeds the supply, the wages of skilled workers increases while the wages of lower-skilled workers remain stagnant. The long-run historical record supports the claim that changes in inequality are the rule and not the exception. Jeffrey Williamson and Peter Lindert (1980) analyzed inequality beginning in the nineteenth century, documenting numerous cases of severe fluctuations in the distribution of income with “antebellum surges” during war times during the nation’s lifetime.⁵³ In this context, what are we to make of the post-World War II economic surge that moved the economy towards greater equality?

⁵¹ Sheldon Danziger and Peter Gottschalk, *America Unequal*, 126-27.

⁵² Ibid.

⁵³ Jeffrey Williamson and Peter Lindert, *American Inequality: A Macroeconomic History* (New York: Academic Press, 1980).

Part II: Historiography

The “Catch-Up” Hypothesis: Productivity Convergence

The first explanation is the “Catch-Up” hypothesis. The historiography begins with this explanation for two reasons. First, it presents the longest data trend ranging from 1870 to 1979 from research conducted by Angus Maddison in tracking long-run economic development.⁵⁴ Secondly, its premise will connect to nearly all other explanations in this work. The hypothesis claims that being “backward” in labor productivity at the end of the 19th century presented nations with the potential for rapid technological advance in the future. By backwards, it is meant to define the relative gap in levels of technology between underdeveloped and advanced nations. Statistically, there is a strong inverse correlation between a country’s productivity standing in 1870 and its average rate of productivity growth since then. Data shows nations with the lowest GDP per work hour in 1870 ended up having the highest average rate of productivity growth overall in the century that followed: “the proposition is that in comparisons across countries the growth rates of productivity in any long period tend to be inversely related to the initial level of productivity.”⁵⁵ Nations behind in obtaining the best technology have the opportunity to “catch-up” to the industrial leader.

The logic is based on the technological capabilities of a country’s capital stock, whether the country is “technologically backwards” in relation to its counterparts, and its social structure. Determining a nation’s potential for advancement takes into

⁵⁴ Angus Maddison, *Phases of Capitalist Development* (New York: Oxford University Press, 1982).

⁵⁵ Moses Abramovitz, “Catching Up, Forging Ahead, and Falling Behind,” *The Journal of Economic History* 46, no. 2 (June 1986), 386.

consideration the level of a country's social capabilities such as education, business environment, and government institutions. The diffusion of knowledge and technology is also a critical factor for initiating the catch-up process: "The flow of knowledge from leader to followers is, of course, the very essence of the catch-up hypothesis."⁵⁶ In this context, countries behind in technology have the potential for rapid economic growth, provided that they are socially capable of exploiting the new technology transferred from the productivity leader to followers.

The main drawback of the catch-up process, however, is to be found in a fundamental law of economics: decreasing marginal returns. Data reveal productivity levels eventually plateau among countries over time, and that a follower's ability for further growth diminishes the more the technological gap closes with the leader: "The catch-up process is self-limiting because as a follower catches up, the possibility of making large leaps by replacing superannuated with best-practice technology becomes smaller and smaller."⁵⁷ Followers capitalize on contemporary technologies from the industrial leaders, but as time progresses they become nearly identical in productive capability. Economic problems arise when relative productivities converge and the industrial leader switches positions and becomes a laggard. If the follower can exploit the new technology and exhibits the proper social capabilities for product maximization, then competition begins. Comparative advantages determine trade, which can retard the growth of the industrial leader if they fall behind in productivity growth.⁵⁸ The economic

⁵⁶ Moses Abramovitz, "Catching Up, Forging Ahead, and Falling Behind," 401.

⁵⁷ *Ibid.*, 387.

⁵⁸ *Ibid.*, 399.

burdens associated with convergence, therefore, become shared mainly by the industrial leader. The practical application of this hypothesis, as one may infer, is the United States.

One of the first economists to present a theory resembling convergence was American economist Thorstein Veblen in 1915 with his study of Germany's industrialization prior to World War I. Veblen argued the existence of long-term drawbacks for being an industrial leader. In his assessment of the production capacity of Imperial Germany as an industrial leader in Europe, he states, "In many accounts current of German economic achievement during the Imperial era much is made of the handicap under which the German people came into the concern of industrial communities in the nineteenth century... This handicap is made up of the several difficulties that beset the newcomer who goes to work with scant means and slight experience."⁵⁹ Veblen realized from Germany's industrialization the flaw with being the industrial leader: there is less ability to free-ride. The labor productivity of followers increases and converges with the industrial leader because, with the adequate capital and social capability, followers exploit best-practice technologies that result in greater total output. Information sharing and capital transfers close the technological gap between the leader and follower, eventually reaching a peak (i.e. convergence) because of diminishing marginal returns.

Veblen's notion of convergence reentered economic discussions in the 1950s by economic historian Alexander Gerschenkron, in a series of essays that led to his 1962 book, *Economic Backwardness in Historical Perspective*. The former head of the Institute of Economic History at Harvard University, Gerschenkron criticized "the grand Marxian generalization" that industrialization occurred in a uniform process with

⁵⁹ Thorstein Veblen, *Imperial Germany and the Industrial Revolution* (New York: Macmillan, 1915), 73.

universal characteristics. He refuted Marx, arguing “every historical event that takes place changes the course of all subsequent events...the Industrial Revolution in England, and for that matter in other countries, affected the course of all subsequent industrializations.”⁶⁰ Under this interpretation, Gerschenkron claimed underdeveloped nations can capitalize on new forms of technology used by advanced nations. Provided the opportunity, underdeveloped nations borrowing the latest forms of technology are more apt to succeed in industrialization. Even further, they can industrialize more efficiently. This brings greater legitimacy to the inverse correlation between “backwardness” in relative levels of technology and the potential for future higher rates of growth. Gerschenkron stressed the importance of the interactions between advanced and underdeveloped nations, claiming a symbiotic relationship exists where further industrialization of advanced nations changes depending on the relative backwardness of underdeveloped followers.⁶¹ Through his critique of classical Marxist economic theory, Gerschenkron’s theories about relative standing in terms of technological capability added critical pillars to the catch-up hypothesis.

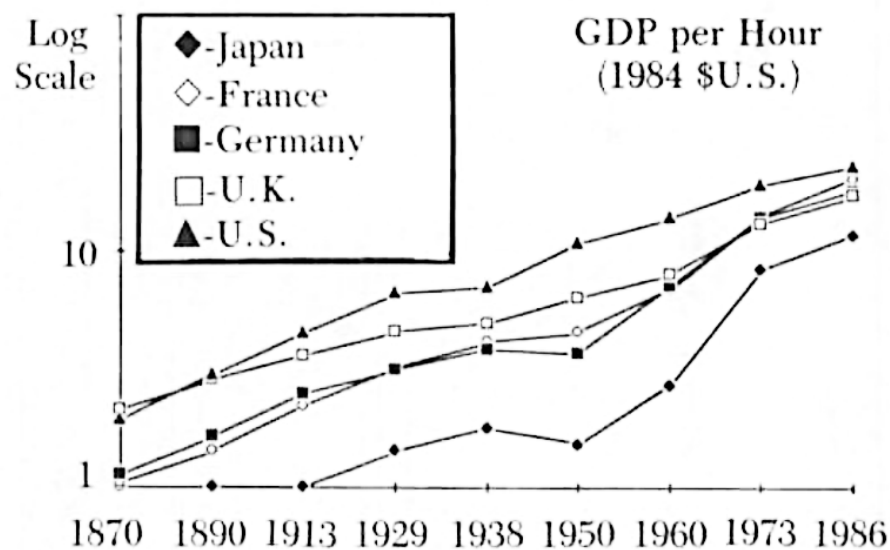
Edward Ames and Nathaniel Rosenberg (1963) provided significant support for the hypothesis they define as the “penalty for taking the lead” or “theory of the late starter.” The authors claimed the problem surrounding productivity and the legitimacy of the convergence thesis comes down to three critical variables: a nation’s technology, its output, and transition costs. In keeping with authors like Gerschenkron, Ames and

⁶⁰ Alexander Gerschenkron, *Economic Backwardness in Historical Perspective, a Book of Essays* (Cambridge: Harvard University Press, 1962), 41.

⁶¹ *Ibid.*, 47.

Rosenberg agreed the relative timing of industrialization matters: “It is certainly a fact that the countries whose industries have grown fastest in the past one hundred years are not those which grew most rapidly in the preceding century.”⁶² After going through hypothetical situations of technological transfers, access to banking, and state intervention, the authors put forth a thesis concluding “that late comers will surpass early starters, partly because the latter will cease to develop.”⁶³ Their research added greater emphasis to the effects of decreasing marginal returns. Additionally, they make clear that late-comers have certain advantages over the leader, but the advantages they obtain as laggards does not outweigh the net benefits of being the leader.

Figure 11. Gross Domestic Product per Work-Hour, 1870-1986



(Source: Maddison, 212; Nelson and Wright, 1932)

⁶² Edward Ames and Nathaniel Rosenberg, “Changing Technological Leadership and Industrial Growth,” *The Economic Journal* 73, no. 289 (March 1963), 14.

⁶³ *Ibid.*, 29.

Publications in the mid-1980s added significant support for the hypothesis with quantitative macroeconomic history and graphical analysis. The economic historian accredited with amassing the productivity data from 1870 to 1979 was British economic historian Angus Maddison. In his 1982 work, *Phases of Capitalist Development*, Maddison gathered productivity data from sixteen industrialized countries that led to the creation of critical figures and tables visually depicting the process of convergence. His data analysis from 1982 is supported with additional research in 1986 by two other notable economists, William Baumol and Moses Abramovitz.

*Table 2. Total Growth from 1870 to 1979
Productivity, GDP Per Capita, and Exports (%Δ)
Sixteen Industrialized Countries*

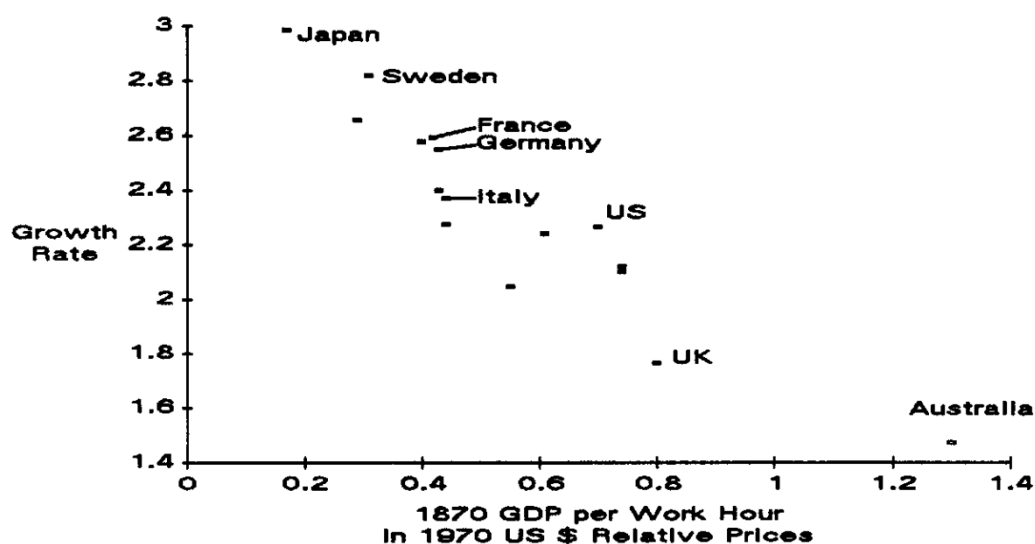
| | Real GDP per Work-Hour | Real GDP per Capita | Volume of Exports |
|-----------------------|---------------------------------------|------------------------------------|----------------------------------|
| Australia | 398 | 221 | – |
| United Kingdom | 585 | 310 | 930 |
| Switzerland | 830 | 471 | 4,400 |
| Belgium | 887 | 439 | 6,250 |
| Netherlands | 910 | 429 | 8,040 |
| Canada | 1,050 | 766 | 9,860 |
| United States | 1,080 | 693 | 9,240 |
| Denmark | 1,098 | 684 | 6,750 |
| Italy | 1,225 | 503 | 6,210 |
| Austria | 1,270 | 643 | 4,740 |
| Germany | 1,510 | 824 | 3,730 |
| Norway | 1,560 | 873 | 7,740 |
| France | 1,590 | 694 | 4,140 |
| Finland | 1,710 | 1,016 | 6,240 |
| Sweden | 2,060 | 1,083 | 5,070 |
| Japan | 2,480 | 1,661 | 293,060 |

(Source: Maddison, 8, 212, 248-53; Baumol, 1074)

William Baumol's 1986 article "Productivity Growth, Convergence, and Welfare" deconstructs the economic phenomenon associated with Maddison's data research. Table 2 reveals a noticeable contrast in development between the sixteen nations. In the first column, growth in GDP per work-hour ranged from approximately 400 percent in Australia all the way up to nearly 2,500 percent in Japan. The performance of the United States ranks in the middle of the group at around 1100 percent, where the median increase in productivity among the 16 countries was 1150 percent. The impact of these levels of productivity growth resulted in dramatic increases in output per capita: "The rise in productivity was sufficient to permit output per capita [column 2] to increase more than 300 percent in the United Kingdom, 800 percent in West Germany, 1700 percent in Japan and nearly 700 percent in France and the United States."⁶⁴ The rankings in rates of growth represented in the first column of Table 2, with Australia being last and Japan being first in overall average growth since 1870, offers significant insight into which nations began as "backwards" in 1870 and by what degree.

⁶⁴ William Baumol, "Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show," *The American Economic Review* 76, no. 5 (December 1982), 1074.

Figure 12. Average Productivity Growth Rate, 1870-1979 vs. 1870 Base Level



(Source: Maddison, 212; Baumol, 1076)

Baumol quantified the inverse correlation between a nation's productivity level in 1870 and its average rate of growth until 1979. The convergence phenomenon, Baumol argues, is confirmed by Figure 12. The horizontal axis represents Maddison's calculations for each country's absolute level of GDP per work-hour in 1870. On the vertical axis is the average growth rate of GDP per work-hour since 1870. A visible correlation is evident from the figure, and Baumol calculated the correlation coefficient of the equation to have R^2 equal 0.88.⁶⁵ Supporting Ames and Rosenberg, Baumol argues the strong correlation exists because improvements in technology transfers allowed for the benefits of technological advancement to be contagious: "one country's successful investment policy will also raise productivity and living standards in other industrialized countries."⁶⁶ Specifically after World War II, the rise in information sharing and

⁶⁵ William Baumol, "Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show," 1076.

⁶⁶ *Ibid.*, 1078.

increases in employment in “information activities” through U.S. manufacturing investment in Europe, along with technology transfers from multinational corporations, exacerbated the forces of convergence. “This encourages reinterpretation of the postwar growth period as one of temporary catch-up, merely making up for opportunities previously forgone.”⁶⁷ He also notes, however, that high rates of growth contributed by the catch-up process will fade and competition will rise based on relative productivity growth rates, which, as stated earlier, can result in economic downturns for the industrial leader.

Moses Abramovitz (1986) deconstructed the characteristics that define a nation’s social capability and its ability to advance technologically. Abramovitz affirmed differences among countries in productivity levels creates a strong potential for subsequent convergence of levels, provided that said countries have a social capability to absorb new technologies from abroad: “The trouble with absorbing social capability into the catchup hypothesis is that no one knows just what it means or how to measure it.”⁶⁸ Filling this void, he claimed social capability depended on “education and the organization of firms...their openness to competition, to the establishment of new firms, and to the sale and purchase of new goods and services.”⁶⁹ Additionally, institutional and human capital components develop slowly as education and technology adapt to innovation. The potential for catch-up also depends on additional variables such freedom of information and knowledge, logistics, and rates of investment. Abramovitz’s

⁶⁷ William Baumol, “Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show,” 1082.

⁶⁸ Moses Abramovitz, “Catching Up, Forging Ahead, and Falling Behind,” 388.

⁶⁹ *Ibid.*, 389.

sociological examination raises the consideration that a nation's unique social capability can influence its technological growth: "In the one case, the evolution of social capability connected with catching up itself raises the possibility that followers may forge ahead of even progressive leaders. In the other, a leader may fall back..."⁷⁰ Here, the hypothesis directly connects to the case of lagging productivity growth in United States in the 1970s and its loss in being the industrial leader internationally.

Richard Nelson and Gavin Wright (1992) support Abramovitz and reflected on the rise and fall of America's technological leadership in the late 1970s. "Over the post-World War II era, commodity and resource trade, business and finance, and technological communities, have all become increasingly transnational rather than national."⁷¹ The scholars agreed with the general consensus of prior research stating that the unique post-war economic environment aided in the supremacy of U.S. technological leadership and growth, but the post-war increase in technological transfers allowed other industrializing nations to join the "convergence club" and compete with the United States for the first time.⁷²

The premise of the catch-up hypothesis is bold. It implies only one variable, GDP per work-hour in 1870, determined a nation's projected growth rate for the next 110 years as if no other variables mattered. Not geographical location, access to markets, culture, or government structure. "What is striking is the apparent implication that *only one variable*, a country's 1870 GDP per work-hour...matters to any substantial degree, and that other

⁷⁰ Moses Abramovitz, "Catching Up, Forging Ahead, and Falling Behind," 389.

⁷¹ Richard Nelson and Gavin Wright, "The rise and fall of American technological leadership: postwar era in historical perspective," *Journal of Economic Literature* 30, no, 4 (1992): 1960.

⁷² *Ibid.*, 1961.

variables have only a peripheral influence.”⁷³ Was it merely fate? As proper historians and economists, the authors reject the idea of fate. Instead, they point to a more rational interpretation: technology acts like a public good. The improvement of technology transfers in the second half of the twentieth century made for the newest forms of capital to be available and nonexcludable to nearly all industrialized countries, strengthening the powers of convergence and further decreasing the productivity differential between laggards and the leader.

There are economic downsides to lagging productivity growth, and the burden lands upon the workers of the country through decreased real wages. According to the experts, the economic impact of lagging productivity will not diminish trade significantly but rather decay the nation’s standard of living: “The exchange rate *and standard of living* of the country with lagging productivity will bear the brunt of the burden as it is forced, increasingly, to compete by means of relatively low wages.”⁷⁴ The catch-up hypothesis directly connects to the stagnation of American wages beginning in the 1970s when US economic hegemony frayed. Whether the catch-up process is the only culprit for initiating U.S. productivity slowdown remains unclear, but the historical evidence offers significant context for why the 1970s proved to be the pivotal decade in altering the economic affairs of the United States.

In the Short-Run

Transitioning from century-long data, there are four general opinions about the decline in productivity growth in 1973 that entail short-run factors: rises in energy prices,

⁷³ William Baumol, “Productivity Growth, Convergence, and Welfare,” 1077.

⁷⁴ *Ibid.*, 1083.

declines in research and development expenditures, decreases in capital formation, and monetary policy to control inflation. Some scholars attribute the 1973-74 decline in productivity growth to be caused by the significant rise in OPEC oil prices. Harold Arnett and Neill Schmeichel (1984) claim “some feel the continuing high prices and changeable patterns of scarcity through 1981 (depending on the production schedules of OPEC countries) had a negative impact on productivity.”⁷⁵ Energy prices effect productivity as firms are forced to siphon funds away from capital investment and research and development in order to compensate for higher costs of production, which diverts funding away from the factors necessary for sustained productivity growth.

Research proves increases in energy prices beginning in 1973 contributed to inflation and a reduction in U.S. total output. According to the Committee for Economic Development in 1983, the rise in energy prices hurt the economy but contributed little to overall productivity declines: “Most statistical studies have shown that although the energy problem influenced productivity slowdown, its direct contribution was probably small. This is because the share of energy as an input is small compared with those of other inputs for U.S. industry as a whole.”⁷⁶ The Committee does claim, however, that the energy crisis had a significant indirect effect on the productivity slowdown through discouragement of investing in new capital.

Tracing the rise of the OPEC organization in the 1960s, historian Judith Stein (2010) highlighted how the demand and supply of the U.S. oil market was headed toward

⁷⁵ Harold Arnett and Neill Schmeichel, *Increasing Productivity in the United States*, 35.

⁷⁶ *Productivity Policy: Key to the Nation's Economic Future*, Committee for Economic Development, 1983, 37.

conflict in the 1970s when domestic oil production maxed its capacity: “Beneath the radar, American demand was rising while domestic supply fell. Once, excess capacity in Texas protected the West from supply disruptions. No more.”⁷⁷ OPEC’s economic influence became so powerful that Saudi oil chief Sheik Yamani bragged the oil coalition could single-handedly “dictate the flow of oil and the price of oil.”⁷⁸ No longer could oil producing nations increase production when oil prices fell to maintain revenue streams. OPEC would instead use its market power to receive similar revenue levels by raising oil prices, *not* production. The sudden rise in energy prices caused Organization for Economic Cooperation and Development (OECD) countries to experience rates of inflation greater than ten percent, and it switched the United States’ trade surplus into a trade deficit for the first time in over a century: “The oil bill of consuming countries rose from \$50 billion in 1973 to over \$130 billion in 1974. This arithmetic changed a trade surplus [for the U.S.] of \$15 billion into a deficit of \$60 billion.”⁷⁹ Sar Levitan and Diane Werneke (1984) claimed higher energy prices led to demand-side policy responses resulting in high inflation, high unemployment, and a poor investment environment. Additionally, higher energy prices created a substitution effect for less-productive alternatives to energy. “The United States, which had the lowest-priced oil among the major industrial countries and the most energy-intensive economy, was forced to make abrupt adjustments.”⁸⁰ The oil crisis represented a key fissure in the economic hegemony of the United States in the twentieth century.

⁷⁷ Judith Stein, *Pivotal Decade*, 77.

⁷⁸ *Ibid.*, 78.

⁷⁹ *Ibid.*, 85.

⁸⁰ Sar Levitan and Diane Werneke, *Productivity: Problems, Prospects, and Policies*, 30.

The second popular opinion is firms significantly reduced investments in research and development (R&D). Expenditures in R&D are expected to increase productivity through the development of best-practice technologies and equipment to improve the efficiency of the production process. Data analysis from economists John Kendrick and Elliot Grossman (1980) affirmed declines in R&D was the variable with the strongest correlation with productivity trends: “Of the six variables, only research and development (R&D) spending had a significant and stable relationship with productivity over the two periods [1948-66, 1967-76].”⁸¹ During the Age of Compression, small businesses were the main source of new innovations. According to the Office of Management and Budget (OMB) in 1980, small businesses accounted for over nearly half of the nation’s innovations from 1953 and 1973. The agency also noted, however, private R&D expenditures dropped 13 percent between 1968 and 1978. Some scholars argue that additional government regulations created a hostile environment toward innovation in terms of cost, time, and discouraging risk.⁸²

Most scholars do not consider the reduction in R&D expenditures to be the main source of the productivity slowdown in the 1970s. Levitan and Werneke dismiss the impact of declining R&D investments: “Because of the relatively long time lag between investments in basic research, patenting, and commercialization of new products or processes...it is unlikely that the slowdown in R&D expenditures has played a major role in domestic productivity performance.”⁸³ Even though total expenditures declined,

⁸¹ John. W. Kendrick and Elliot Grossman, *Productivity in the United States, Trends and Cycles* (Baltimore: John Hopkins University Press, 1980), 10.

⁸² Arnett and Schmeichel, *Increasing Productivity in the United States*, 32; Roberta Graham, “Small Business: Beset, Bothered, and Beleaguered,” *Nation’s Business* 68, no. 2 (February 1980), 30.

⁸³ Levitan and Werneke, *Productivity: Problems, Prospects, and Policies*, 30.

research and development funding by private industry accounted for roughly one percent of Gross National Product (GNP) during the 1960s and 1970s and continued to increase to an estimated 1.4 percent of GNP by the 1980s. According to economists Nadiri, Kendrick, Griliches, and Denison (1983), the slowdown in R&D expenditures only contributed to an average of 16 percent to the overall productivity slowdown.⁸⁴

Economist Edwin Mansfield in his 1982 work *Technology Transfer, Productivity, and Economic Policy* viewed the R&D situation through a lens of international competition.

After World War II, nations feared becoming technologically dependent on the United States. For example, nations like Japan did not like the creation of R&D sites of

American multinational firms within the country because there was a subtle belief that the sites were designed to cause a “brain drain” of the host country’s top scientists and researchers.⁸⁵ Fears dissipated in the 1970s and 1980s as non-U.S. multinational firms

became more prevalent in world markets. Mansfield concluded there was generally a negligible impact to a firm’s sales and its level of R&D spending. Firms investing in

research and development is a critical component to innovation and the development of new best-practice technologies and machinery. Although important, the decline in

research and development expenditures in the 1970s had a minimal impact on overall labor productivity slowdown.

⁸⁴ *Productivity Policy: Key to the Nation’s Economic Future*, Committee for Economic Development, 1983, 35.

⁸⁵ Edwin Mansfield, *Technology Transfer, Productivity, and Economic Policy*, 23-24.

Table 3. Capital and Labor Effects on Growth of Labor Productivity,
Private Nonfarm Nonmanufacturing Sector, 1949-78

| Annual average | | | | |
|---|---------------------------------|-----------------------|---------------------|--------------------------------|
| <i>Item and period</i> | <i>Total labor productivity</i> | <i>Capital effect</i> | <i>Labor effect</i> | <i>Effect of other factors</i> |
| <i>Rate of growth (percent)</i> | | | | |
| 1948-65 | 2.57 | 0.78 | 0.11 | 1.68 |
| 1965-73 | 1.78 | 0.95 | -0.10 | 0.93 |
| 1973-78 | 0.80 | 0.11 | -0.22 | 0.91 |
| <i>Contribution to slowdown (percentage points)</i> | | | | |
| 1965-73 slowdown | -0.79 | 0.17 | -0.21 | -0.75 |
| 1973-78 slowdown | -0.98 | -0.84 | -0.12 | -0.02 |
| Total | -1.77 | -0.67 | -0.33 | -0.77 |

(Source: Norsworthy, Harper, and Kunze, 418)

Decreases in capital formation is the third popular short-run explanation. Three scholars from the Bureau of Labor Statistics – Norsworthy, Harper, and Kunze – claim there were two distinct phases in the slowdown of American labor productivity: 1967-73 and 1973-78. The slowdown in the first period was caused by unexplained factors while the second period was driven mainly by reduced capital formation. The scholars calculated in the second period that “Capital effects account for 0.79 percentage point out of the total decline of 1.12 percentage points. In this period the decline in growth of the capital labor ratio contributes the largest effect,” which led them to conclude, “The 1973-78 slowdown is dominated by the effects of reduced capital formation.”⁸⁶ The middle columns in Table 3 reveal how nearly all of the second slowdown from 1973 to 1978 was caused by capital and labor effects.

⁸⁶ J.R. Norsworthy, M.J. Harper, and K. Kunze, “The Slowdown in Productivity Growth: Analysis of Some Contributing factors,” *Brookings Papers on Economic Activity* 2 (1979), 415.

The committee on Economic Development in 1983 interpreted the situation differently. The capital-labor ratio declined not because firms cut back on capital investments but because there was a large influx of new workers into the labor market. Nonetheless, the Committee agreed capital stock became an important economic indicator: “The evidence suggests that the role of capital formation – that is, the increase in new plant and equipment – was relatively unimportant before 1973 but probably did become significant during the second phase [1973-78].”⁸⁷ Review of the literature suggests capital accumulation affected each industry differently because of differences in capital intensiveness, leading researchers to claim insufficient capital formation was only a partial cause of the productivity slowdown.

Fourthly, monetary policy further depressed labor productivity, prolonged the 1979 recession, and shifted financial policy priorities away from productivity, wages, and capital formation towards controlling inflation. Sar Levitan and Diane Werneke proclaimed, “The key feature of the post-1973 economy was accelerating inflation.”⁸⁸ High energy costs, rising food prices, and stagnating wage growth depressed the purchasing power of working families. Additionally, restrictive policies implemented by the Federal Reserve caused interest rates to soar and aggregate demand to decrease, worsening productivity growth and stifling GDP growth. Federal Reserve Chairman Paul Volcker and U.S. Treasury Secretary William Miller in 1980 admitted efforts to reduce inflation would result in a decrease in the real purchasing power working Americans. In a

⁸⁷ *Productivity Policy: Key to the Nation's Economic Future*, Committee for Economic Development, 1983, 32.

⁸⁸ Levitan and Werneke, *Productivity: Problems, Prospects, and Policies*, 37.

report to President Carter in 1980, Miller believed “long-term reductions in inflation will have to come from reduced growth in wages, salaries.”⁸⁹ Policy priorities within both the Carter and Reagan Administrations, influenced by growing inflation, abandoned traditional Keynesian policy solutions for monetary policy to rein in inflation. “By limiting the growth of money, the Fed made wage increases impossible and raised unemployment rates. At the same time, high interest rates and subdued demand hobbled industry requiring capital to improve the anemic productivity that Volcker had fingered as critical.”⁹⁰ Short-run policy responses to combat inflation hindered the long-term growth outlook for the United States. Other nations, on the other hand, were able to weather the inflation storm without experiencing significant productivity growth declines and rising unemployment like the United States. In this manner, international competition and policy responses by lawmakers led to the crumbling of America’s hegemony over market competition and productive competitiveness.

Supply-Side: Entrance of Baby-boomers and Women

A popular explanation by labor economists for the decline in labor productivity in the 1970s was the result of demographic changes in the U.S. labor market, specifically the entrance of the “baby-boom” generation (born 1946-64) and women into the workforce. From 1950 to 1980, the American labor force increased by more than 44 million workers – a 70 percent increase. More than half of these new workers entered the market during the 1970s.⁹¹ The argument follows that the entrance of youth and women

⁸⁹ Judith Stein. *Pivotal Decade*, 237; William Miller, “Memorandum for President,” July 30, 1980.

⁹⁰ Ibid.

⁹¹ Martina Morris and Bruce Western, “Inequality in Earnings at the Close of the Twentieth Century,” *Annual Review of Sociology* 25, (1999), 628-630.

into the labor force dragged down overall labor productivity for the country because of their relative inexperience: “The substantial inflow of less-experienced workers into the labor market during the same period when inequality began to increase led some analysts to suggest that changes in labor supply were the primary causal factor.”⁹² The majority of the baby-boomers reached working age by 1965, and the ratio of women in the workforce rose dramatically in the 1970s. Following classical economic theory, an increase in the supply of labor should lead to decreases in overall wages.

According to Ronald Kutscher, Jerome Mark, and John Norsworthy of the BLS (1977), the entrance of women and youth into the labor force in the late 1960s and early 1970s led to the decrease in the output per man-hour. “Output per man-hour tends to be relatively low among women and among new entrants into the labor force.”⁹³ The Council of Economic Advisors in 1979 estimated demographic shifts accounted for a 0.4 percent decline in productivity from 1968 to 1973 and 0.3 percent from 1973 to 1979.⁹⁴ Its claims of causality are far from conclusive, however. Cross-country comparisons by David Bloom, Richard Freeman, and Sanders Korenman (1987) on wage premiums indicated the large increase in cohort size in the United States played a minimal role in reducing wages for young workers and women.⁹⁵

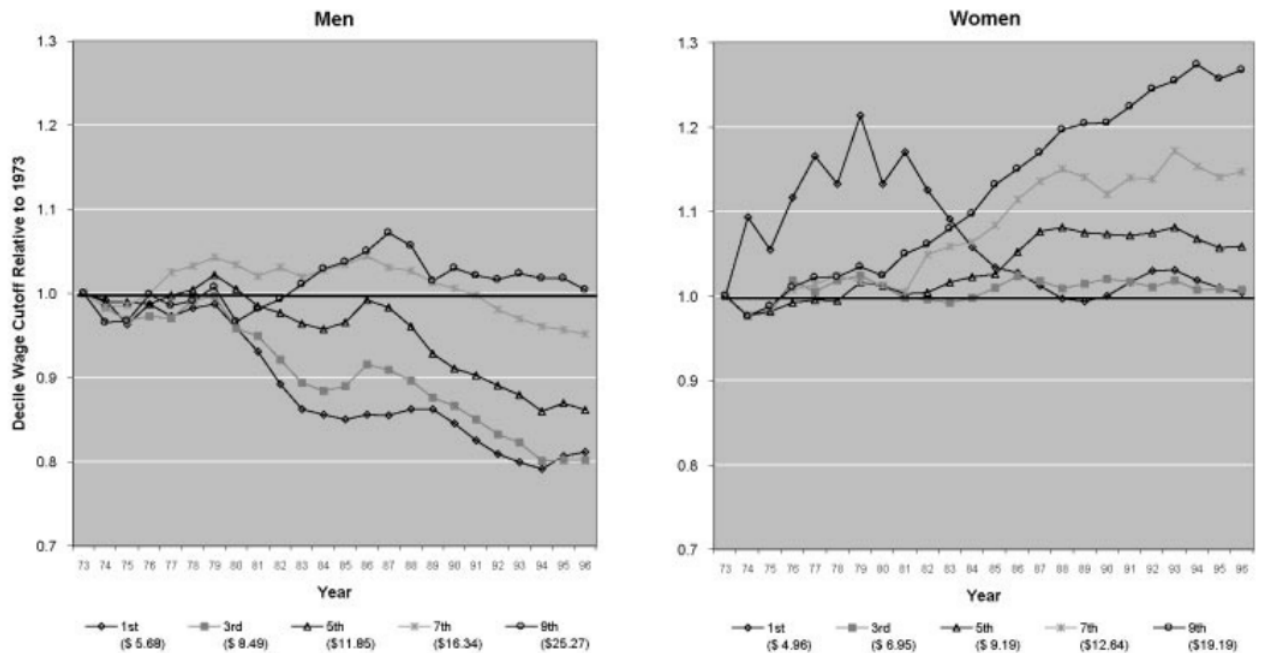
⁹² Sheldon Danziger and Peter Gottschalk, *America Unequal*, 132.

⁹³ Edwin Mansfield, et al., *Technology Transfers, Productivity, and Economic Policy* (New York: W.W. Norton, 1982), 110; Ronald Kutscher, Jerome Mark, and John Norsworthy, “The Productivity Slowdown and the Outlook to 1985,” *Monthly Labor Review* 100 (1977).

⁹⁴ Council of Economic Advisors, *Economic Report of the President* (1979), 69.

⁹⁵ David Bloom, et. al., “The labor-market consequences of generational crowding,” *European Journal on Population* 3, (1987): 131-76.

Figure 13. Growth in real value of wages, each decile relative to 1973 value



(Source: Morris and Western, 627)

In fact, *real wages for women increased* during the 1970s and 1980s while real wages for men fell. The gender-pay gap decreased, revealing the increase in the supply of women in the workforce clearly did not suppress their wages. Inequalities between sexes decreased, but inequality grew rapidly within sex. According to Martina Morris and Bruce Western, the 90:10 earnings ratio for men increased from 3.6 to 4.4 from 1980 to 1996 while the ratio for women grew from 2.9 to 4.0. Real wages for women increased, but the relative earnings inequality within sex increased: “the sharp polarization in earnings among women, as among men, made it clear that the benefits of this new era were going to be distributed more unequally than before.”⁹⁶ The demographic shift of young workers and women into the workforce is not considered by scholars to be a significant contributor to productivity declines that occurred in the early 1970s.

⁹⁶ Martina Morris and Bruce Western, “Inequality in Earnings at the Close of the Twentieth Century,” 630.

Greater women's participation in the workforce and entrance of baby boomers had a minimal impact on earnings inequality. Richard Easterlin (1980) speculated the dramatic increase in the supply of inexperienced workers would depress the overall wages of less-skilled labor, subsequently widening the relative wage gap by lowering wages at the bottom of the distribution.⁹⁷ The flaw in Easterlin's supply-side explanation is the assumption about the human capital of these two demographics. First, even though young persons and women were inexperienced in terms of years of labor experience, they entered the labor market with a much higher level of educational attainment than the national average. Second, there are issues in measuring productivity because of the difficulty to discern the influence of labor market discrimination. "Because wages are used as an approximation of productivity, the lower rates paid to women may reflect pay discrimination rather than lower productivity."⁹⁸ In this context, lower wages for women concerns discrimination based on sex rather than an actual difference in labor productivity.

Figure 13 shows the increase in stability of earnings for women at all deciles of the earnings distribution. Rising income inequality within sex along with overall rising real wages for women led Morris and Western to believe other economic factors are to blame for causing inequality: "To the extent that both men's and women's earnings distributions reflected the same residual polarizing trend, rising earnings inequality could not be explained by the changing sex composition of the labor force."⁹⁹ A rise in the

⁹⁷ Richard Easterlin, *Birth and Fortune: The Impact of Numbers on Personal Welfare* (New York: Basic Books, 1980); Martina Morris and Bruce Western, "Inequality in Earnings at the Close of the Twentieth Century," 629.

⁹⁸ Levitan and Werneke, *Productivity: Problems, Prospects, and Policies*, 32.

⁹⁹ Martina Morris and Bruce Western, "Inequality in Earnings at the Close of the Twentieth Century," 630.

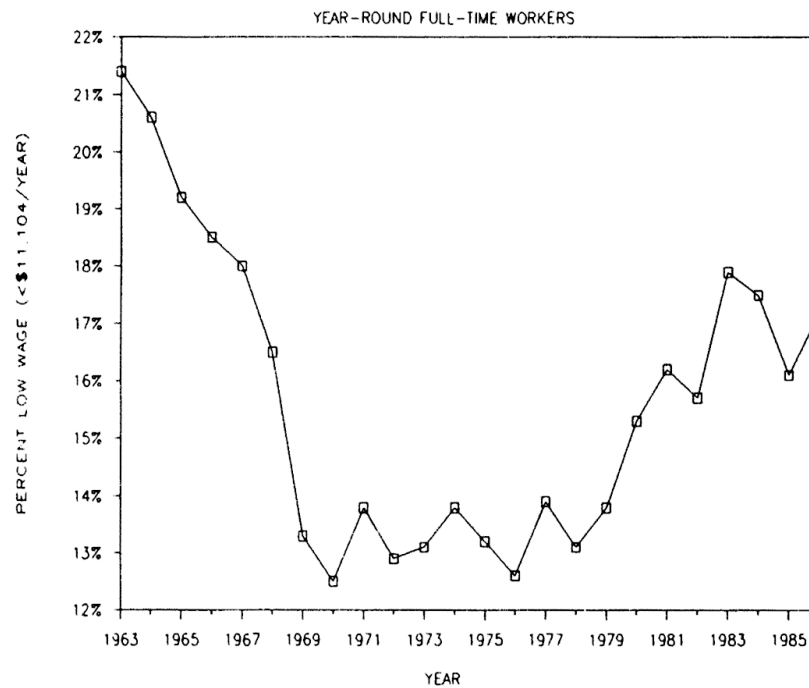
supply of labor is expected to cause decreases in wages, but the application of the basic theory fails when placed in the context of the data. The wage disparity between men and women still exists today, but relative incomes for women made modest gains from 1963 to 1987.

Demand-Side: Education, Skill, & Industry

Individual educational attainment became an increasingly important factor in wage determination because the demand for skilled labor increased steadily from the 1970s to 1990s. Political economists Barry Bluestone and Bennett Harrison (1988) assessed the rise in low-wage employment in the United States. America during the post-war era was considered the “Great Jobs Machine,” but what were the quality of the jobs? The U.S. labor market in the 1960s experienced a dramatic drop in the share of low-wage employment, decreasing from 21.4 percent of the labor force in 1963 to 12.5 percent in 1970. The percentage share rises in the late 1970s eventually reaching 17.2 percent by 1986 (Figure 14).¹⁰⁰ The two economists rule out the influence of business cycles and the entrance of the baby boom generation and women into the labor force as reasons for the proliferation of low-wage labor. The shift to low-wage employment, according to Bluestone and Harrison, was the result of a combination of factors such as industry shifts from manufacturing to service, a decline in union membership, erosion of the real value of the minimum wage, and other factors.

¹⁰⁰ Barry Bluestone and Bennett Harrison, “The Growth in Low-Wage Employment: 1963-1986,” *American Economic Review* 78, no. 2, 125-26.

Figure 14. U.S. Low-Wage Employment Share, 1963-86



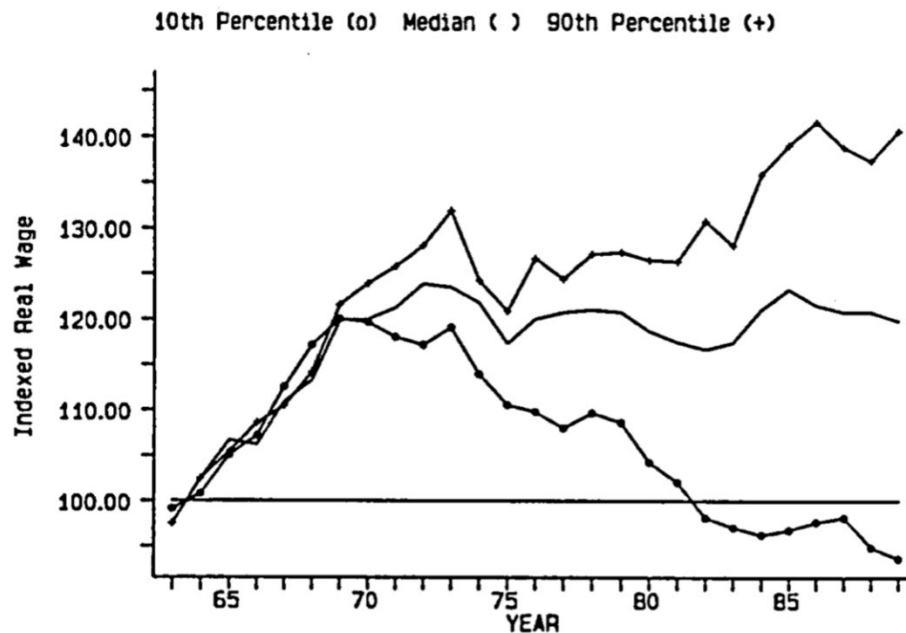
(Source, Bluestone and Harrison, 126.)

Economists Lawrence Katz and Kevin Murphy (1992) analyzed changes in the U.S. wage structure using a simple supply and demand framework. Their research led to three findings: a sharp rise in the relative earnings of college graduates from 1963 to 1987, average wages of older workers increased relative to young workers for those with lower levels of education, and earnings inequality increased within narrowly-defined demographics and skill groups.¹⁰¹ The authors indicate the labor environment shifted in favor more-educated, more-skilled labor: “We conclude that rapid secular growth in the relative demand for ‘more-skilled’ workers is a key component of any consistent explanation for rising inequality and changes in the wage structure over the last 25

¹⁰¹ Lawrence Katz and Kevin Murphy, “Changes in Relative Wages, 1963-1987: Supply and Demand Factors,” *Quarterly Journal of Economics* 107, no. 1 (February 1992), 35.

years.”¹⁰² Katz and Murphy agree with the general consensus: the rise in the earnings gap is mainly the result of a steady rise in demand for highly-skilled workers at the same time low-wage labor began to proliferate, leaving minimal agency for low-skilled workers.

Figure 15. Indexed real weekly wages for men by percentile, 1963-89

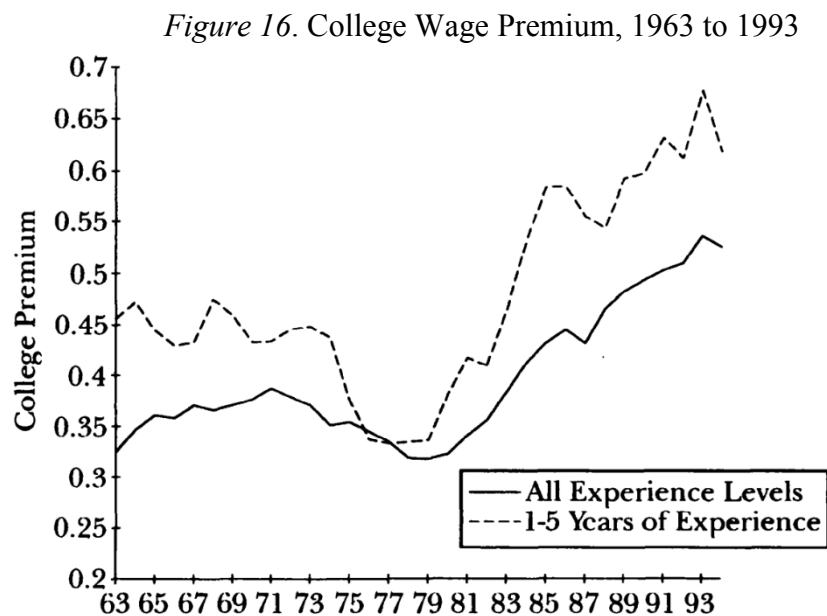


(Source: Juhn, et. al., 416)

Chinhui Juhn, Kevin Murphy, and Brooks Pierce (1993) researched wage differentials and observable skills. Figure 15 graphs the tenth, median, and ninetieth percentiles of real weekly wages for men from 1963 to 1989. For the lower 10th percentile of earners, real wages increased by 20 percent from 1963 to 1970 and then declined by 25 percent from 1970 until 1989. While the real wages for the 90th percentile steadily increased all the way through to 1989: “After about two and one-half decades, workers in the top 10 percent of the wage distribution have gained almost 40 percent,

¹⁰² Lawrence Katz and Kevin Murphy, “Changes in Relative Wages, 1963-1987: Supply and Demand Factors,” 37.

whereas workers in the bottom 10 percent have lost over 5 percent in real terms.”¹⁰³ What caused this significant disconnect between real wage growth between top earners and low earners? During the 1960s and 1970s, the supply of educated workers increased dramatically. Theoretically, an increase in the supply of labor should correspond with decreases in wages for that demographic, yet the wage premium for highly-educated workers remained high. Contrary to traditional economic theory, wages for educated workers remained high in spite of an increase in the supply of educated workers because *demand for skilled labor increased*. From the data, Juhn, Murphy, and Pierce concluded the demand for skill increased from 1963 to 1989.¹⁰⁴ The shift in demand for high-skilled workers and low-skilled workers is a significant cause for the rise in wage and income inequality.



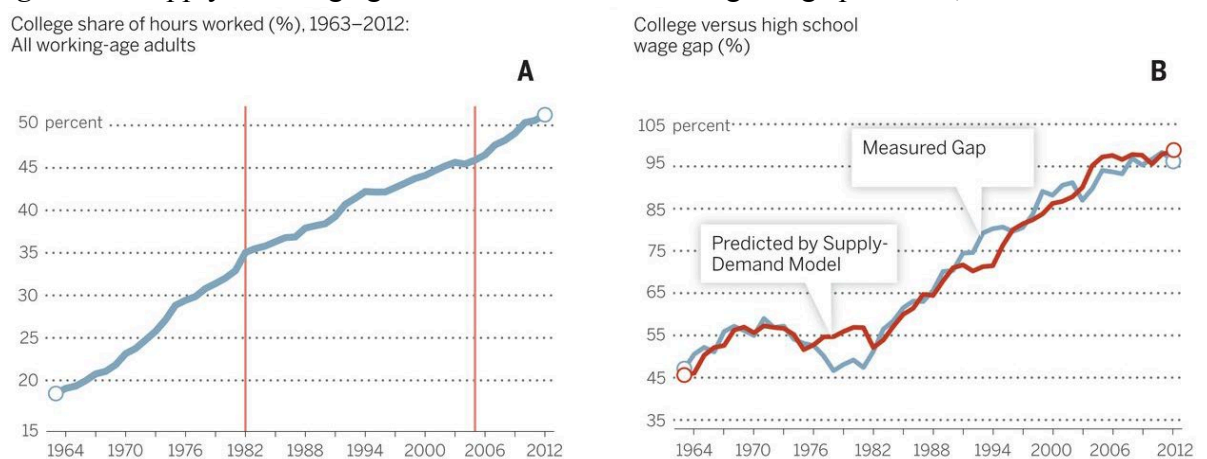
(Source: Gottschalk, “Inequality, Income Growth, and Mobility,” 31)

¹⁰³ Chinhui Juhn, et. al., “Wage Inequality and the Rise in Returns to Skill,” *Journal of Political Economy* 101, no. 3 (1993), 416.

¹⁰⁴ Juhn, et. al., “Wage Inequality and the Rise in Returns to Skill,” 458.

The earnings gap between college and high school graduates has more than doubled in the United States over the past three decades. Figure 16 plots the college wage premium – the coefficient showing how much more a college graduate makes than a high school graduate holding all else constant. The graph shows how the college premium remained steady in the 1960s, declined during the 1970s, then increased dramatically in the 1980s. By 1993, the college premium was 53 percent. Per Gottschalk, the increase in earnings inequality was caused by two opposing processes: the increase in relative wages for more educated and experienced workers and a sharp decline in the real wages of less-skilled workers. Later work by Gottschalk and Robert Moffitt (2009) stressed the implications of the economic burden concentrated on lower-skilled workers: “That the increase was concentrated in the lower-skilled portion of the population should raise concerns about whether consumption and well-being in that portion of the population that has been adversely affected.”¹⁰⁵ The implications of personal well-being will be discussed further in the conclusion.

Figure 17. Supply of college graduates and the U.S. college wage premium, 1963-2012

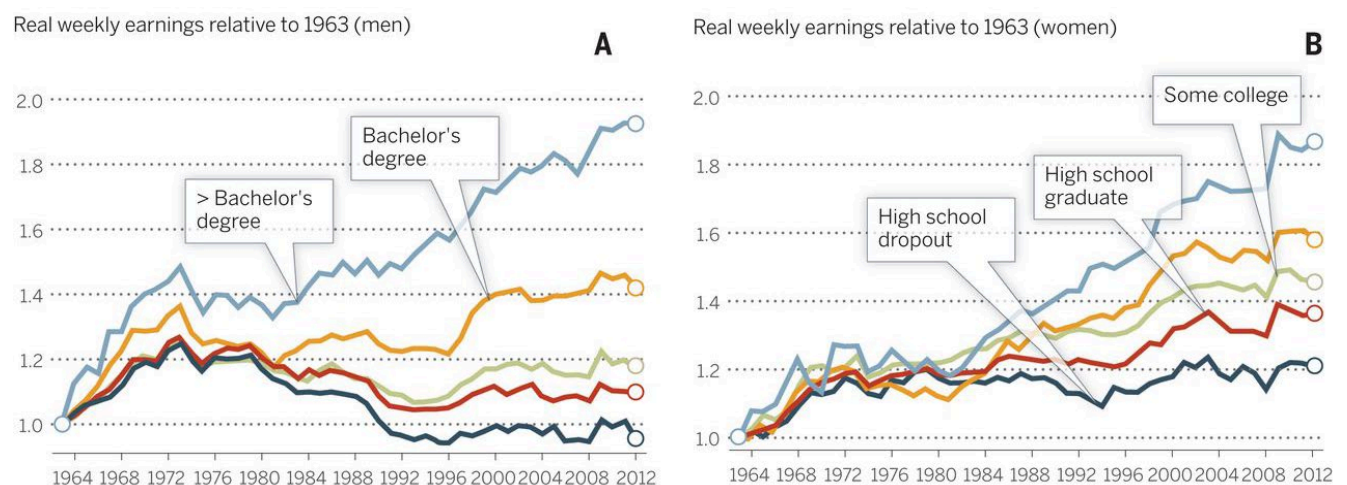


(Source: Autor, “Skills, education, and the rise of earnings inequality...,” 846)

¹⁰⁵ Gottschalk, “Inequality, Income Growth, and Mobility: The Basic Facts,” 22.

Economist David Autor (2014) researched the growth in the wage premium and decreases in economic mobility for low-skilled workers. Figure 17 shows two graphs. The left graph depicts the increase in the number of college-educated workers through a rising college share of hours worked from 1963 to 2012. The right graph depicts the same data as Figure 16 but adds additional data for years 1993 to 2012. During that period, the college wage premium continued to rise to exceed 95 percent in 2012. “In the United States, about two-thirds of the overall rise of earnings dispersion between 1980 and 2005 is proximately accounted for by the increased premium associated with schooling in general and postsecondary education,” Autor claims.¹⁰⁶ Based on the data, economists developed the “education race” model which argues earnings of educated and skilled workers will continue to increase so long as the supply of educated labor continues to fall behind the continual outward shifts in the demand for skills.¹⁰⁷

Figure 18. Changes in real wages of full-time U.S. workers by sex and education, 1963-2012



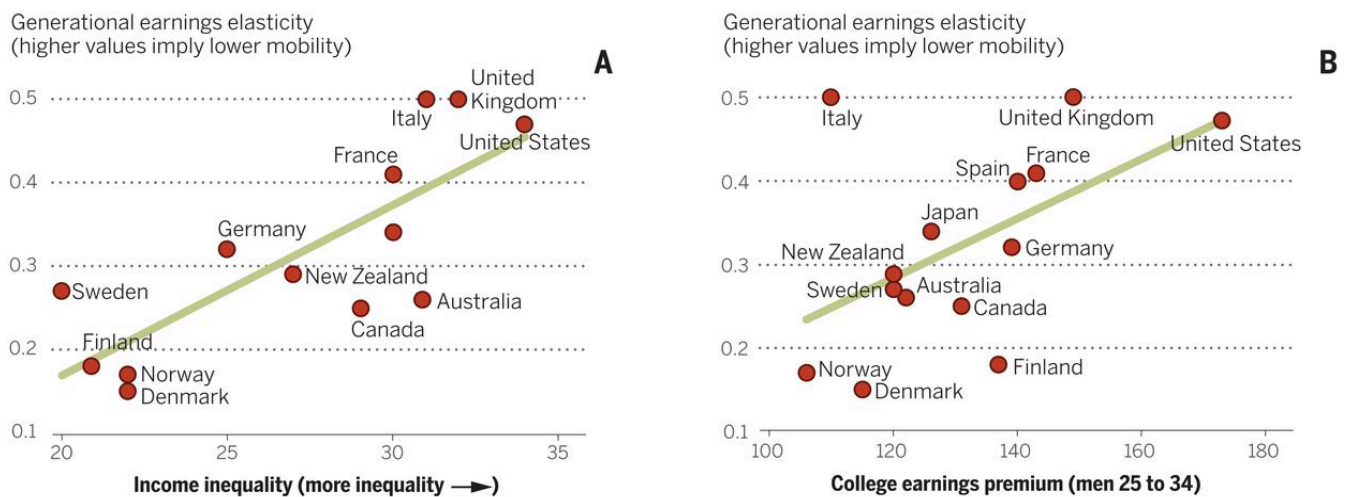
(Source: Autor, “Skills, education, and the rise of earnings inequality...,” 849)

¹⁰⁶ David Autor, “Skills, education, and the rise of earnings inequality among the ‘other 99 percent,’” *Science Magazine* 344, no. 6186 (May 2014), 843.

¹⁰⁷ *Ibid.*, 846.

The increasing earnings gap is not only due to relative increases in earnings for college-educated workers but also because of a decrease in the real earnings of non-college educated workers. The left graph in Figure 18 shows the real earnings of men based on education level from 1963 to 2012. Real earnings for males with a high school degree or less decreased by 22% among dropouts and 11% among high school graduates, while real earnings for those with a college degree or more increased from 20% to 56% with the highest returns to those with post-baccalaureate degrees. The right graph shows modest gains in real earnings among women, although relative wages compared to men remains high.¹⁰⁸

Figure 19. Earnings inequality and economic mobility: cross-national relationships



(Source: Autor, “Skills, education, and the rise of earnings inequality...,” 849)

Autor’s cross-country analysis of earnings mobility to provides international context for the case of the United States. His findings reveal intergenerational mobility in the United States is relatively low. The left graph in Figure 19 shows the proportional relationship between cross-sectional inequality and earnings mobility of 13 OECD

¹⁰⁸ David Autor, “Skills, education, and the rise of earnings inequality among the ‘other 99 percent,’” 849.

countries. Where there is more income inequality, there is less economic mobility. The right graph in Figure 19 shows the relationship between earnings mobility and a country's college wage premium for men. The proportional relationship reveals countries with high "returns to skill" often have the lowest mobility. The striking conclusion from the study is the United States has the lowest mobility and highest inequality out of the 13 OECD countries.¹⁰⁹

Technological change through automation eliminated employment opportunities in production, clerical, and administrative support positions that were substituted with cheaper technological alternatives. David Autor, Frank Levy, and Richard Murnane (2003) assessed the shift in employee tasks and its impact on labor demand. The authors claim computerization acted as a substitute for routine labor but a complement to workers who performed nonroutine problem-solving tasks: "within industries, occupations, and education groups, computerization is associated with reduced labor input of routine manual and routine cognitive tasks and increased labor input of nonroutine cognitive tasks." The authors attribute 60% of the demand shift favoring college labor to the task changes within occupations from 1970 to 1998.¹¹⁰ Improvements in technology in the workplace overall produced a net benefit for educated and skilled workers and a net negative for less-skilled labor.

Labor economist Alan Krueger (1993) published a significant article on whether employees who used computers at work earned a higher wage as a consequence of their computer use and skills. His data research concluded "employees who directly use a

¹⁰⁹ David Autor, "Skills, education, and the rise of earnings inequality among the 'other 99 percent,'" 848.

¹¹⁰ Ibid., 1279.

computer at work earn a 10 to 15 percent higher wage rate...the estimates imply that the proliferation of computers can account for between one-third and one-half of the increase in the rate of return to education observed between 1984 and 1989.”¹¹¹ Although one explanation is unlikely to account for the entire change in the wage structure, Krueger argued technological change – specifically the use of computers – contributed to changes in the wage structure.

Two notable sociologists, Tali Kriksol and Yinon Cohen (2014, 2016), differed from Krueger and presented an explanation known as Skill-Biased Technological Change (SBTC). “Instead we posit for complex dynamics between computerization and fading pay-setting institutions, arguing that the latter is a mechanism by which the former operates.”¹¹² The most striking implication of Kristol and Cohen’s research is that computerization reduced labor share of income and “indirectly by exacerbating union decline.”¹¹³ Computers improved automation in the production process, eliminating many manual, mostly unionized laborers. In effect, computers had a polarizing effect on the wage structure. Technological change hurt blue-collar workers directly by eliminating employment opportunities and indirectly by eroding the leverage of wage setting institutions. Prior studies suggest computers allowed skilled-workers to experience “up-skilling” while manual laborers experienced “de-skilling.”

Technological change restructured demands in the U.S. labor market during the 1970s to 1990s in favor of more educated, higher-skilled workers while it decreased its

¹¹¹ Alan B. Krueger, “How Computers have changed the Wage Structure: Evidence from Microdata, 1984-1989,” *Quarterly Journal of Economics* 108, no. 1, 54-55.

¹¹² Tali Kristal and Yinon Cohen, “What do computers really do? Computerization, fading pay-setting institutions and rising wage inequality,” *Research in social Stratification and Mobility* 42, (2015), 33.

¹¹³ *Ibid.*, 34.

demand for low-skilled workers. Douglas Massey and Deborah Hirst (1998) described the shift in the U.S. wage structure as a movement “From Escalator to Hourglass,” where the economy offered high wage jobs for people with advanced educations, low wage jobs for people with minimal schooling, and relatively little job in the middle for people with average educational attainment:

“By 1989, male workers face a difficult socioeconomic ladder that increasingly lacks the middle rungs. Examination of occupational wage distributions...reveals that the hourglass is actually a composite of a pyramid for high school dropouts, an inverted pyramid for college graduates, and an hourglass for high school graduates. Thus, one’s position in the new hourglass economy depends very much on one’s educational attainment.”¹¹⁴

Human capital, reflected through years of educational attainment, became an increasingly important variable in determining estimated income projections. Furthermore, economic mobility became increasingly difficult in the United States. Lack of upward mobility has led to the development of generational inequalities, where a child born poor is likely to stay poor and a child born rich is likely to stay rich. The life chances of American children are becoming more and more associated with the educational attainment of their parents and guardians.

Deindustrialization & Globalization: from Stakeholders to Shareholders

The rise of low-wage employment in the United States is often associated with the complex and controversial processes of globalization and deindustrialization in post-

¹¹⁴ Douglas Massey and Deborah Hirst, “From Escalator to Hourglass: Changes in the U.S. Occupational Wage Structure 1949-1989,” *Social Science Research* 27, no. 1 (March 1998), 69.

industrial societies. The negative effects of international competition and labor shifts are taken into consideration for causing the slow decay of the manufacturing sector, the rise of the service sector, and a new wage structure offering relatively lower paying jobs in industries with less security and benefits. The U.S. economy post-1973 experienced systematic disinvestment in domestic manufacturing industries such as auto, steel, and machinery. Researchers generally link the outsourcing of higher paying manufacturing jobs out of the United States during the 1970s to 1990s with the growing forces of globalization. Globalization is commonly defined by two key economic features: increasing financial links between countries through trade, capital flows, and direct investments, and the growing influence of transnational corporations. The two processes caused structural shifts in the U.S. economy, employment, and income distribution. This section will cover the shift from manufacturing to service, financialization of the nonfinance sector, decline of unions, monetarism and the dismantling of the welfare state, and the rise of super-managers.

According to the deindustrialization hypothesis, “changes in industrial structure directly caused distributional changes” in workers’ incomes. Increases in foreign competition pressured firms to uproot domestic sites and transport them abroad. Sheldon Danziger and Peter Gottschalk (1995) revealed how the decline in manufacturing employment corresponded with rising income inequality: “Inequality increased as manufacturing declined from about 30 percent to about 20 percent of the workforce between the mid-1960s and the late 1980s.”¹¹⁵ The popular argument about the American

¹¹⁵ Gottschalk, “Inequality, Income Growth, and Mobility: The Basic Facts,” 22.

labor market during the 1980s was “there were fewer jobs for auto workers and more jobs for ‘hamburger flippers,’” and the data supports this conclusion.¹¹⁶ The economists caution, however, shifts between industries only played a small role in rising inequality; the data also revealed inequality increased *within* industries. Eli Berman, John Bound, and Zvi Griliches (1994) researched the shift away from unskilled to skilled labor within U.S. manufacturing in the 1980s and concluded that changes in the industrial structure contributed little to inequality. The shift in demand for more-skilled workers was rather the result of “biased technological change” reflecting “skill upgrading” within industry standards that caused increased inequality *within* industries more so than between them.¹¹⁷ In essence, deindustrialization’s effects on the U.S. wage structure benefited the skilled and educated while it diminished the real standard of living for lower-skilled workers.

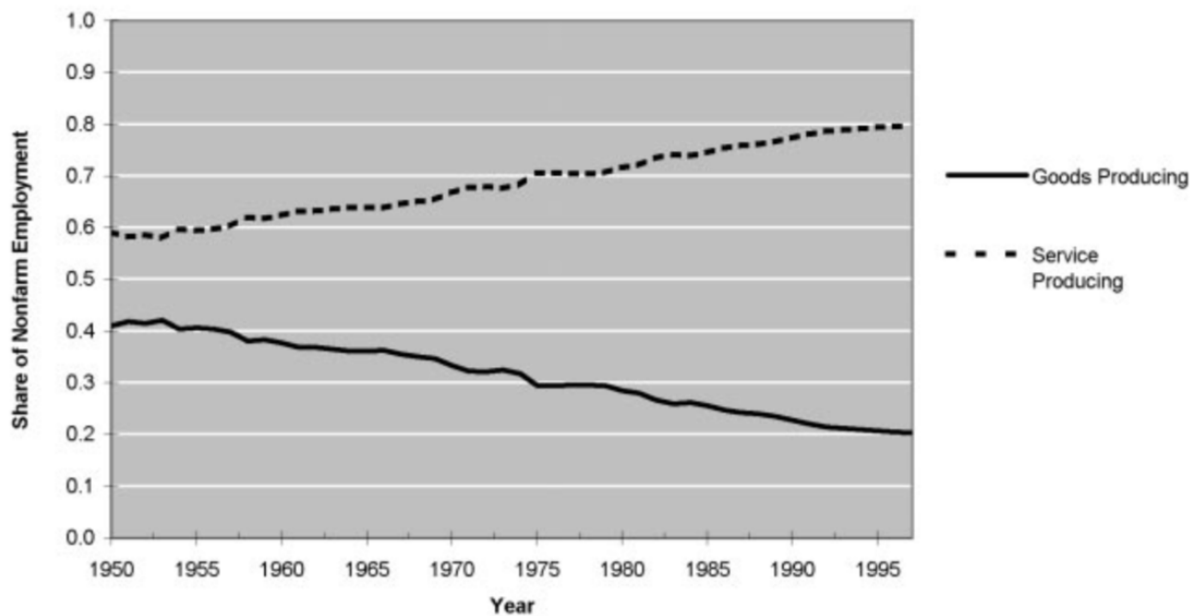
The globalization hypothesis, on the other hand, argues increased foreign competition and the rise in the consumption of imported goods decreased the demand for American-made goods. As a result, the decrease in demand for American goods caused a decrease in the demand for the labor needed to produce those goods, consequently leading to decreases in domestic wages and employment. Simultaneously, firms moved capital and jobs overseas. In order for American firms to compete against cheap foreign labor, less-skilled U.S. workers had to accept lower wages in order for firms to make up for a relative disadvantage in productivity. Globalization connects directly with income

¹¹⁶ Danziger and Gottschalk, *America Unequal*, 137

¹¹⁷ Eli Berman, John Bound, and Zvi Griliches “Changes in the Demand for Skilled Labor within U.S. Manufacturing: Evidence from the Annual Survey of Manufacturers,” *Quarterly Journal of Economics* 109 (May 1994), 391.

inequality because the process – similar to deindustrialization – increased wages for more-skilled workers while it devastated less-skilled workers who experienced reductions in wages and job losses: “Many such jobs disappeared altogether as firms ‘outsourced’ the production of components to foreign subsidiaries. Good jobs for less-educated workers disappeared, while high-skilled jobs for workers...proliferated.”¹¹⁸ The globalization hypothesis presents a clear case of rising inequality and a decay in the standard of living for low-skilled and less-educated Americans.

Figure 20. Share of total nonfarm employment in service and goods producing sectors, 1950-1997



(Source: Morris and Western, 637)

Deindustrialization is the result of demand-side labor factors, and the process is commonly associated with the substitution of “good” jobs with “bad” jobs. The new service sector jobs paid less on average relative to the former manufacturing jobs, offered fewer benefits, and included more part-time employment. “The restructuring took two

¹¹⁸ Danziger and Gottschalk, *America Unequal*, 138-39.

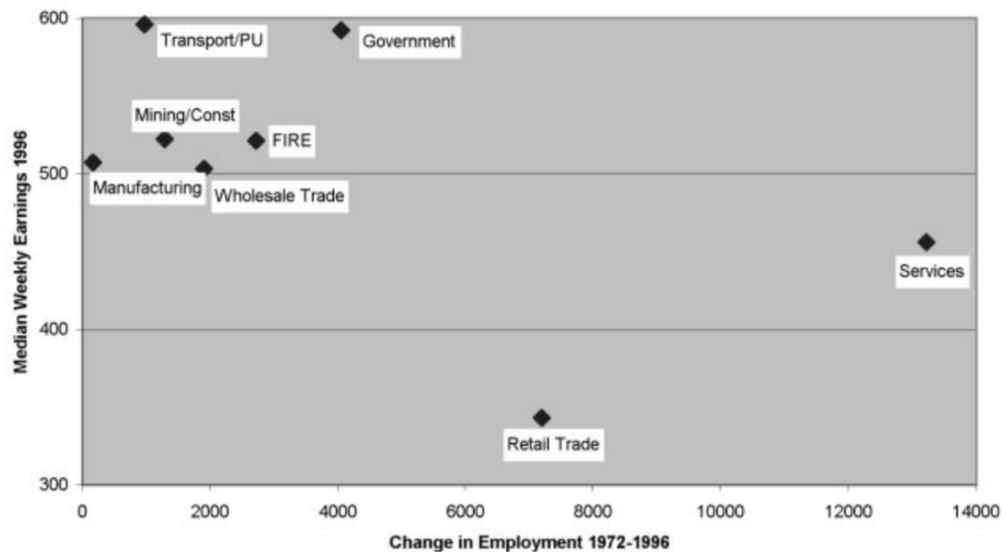
forms: continuing decline in manufacturing employment leading to the emergence of a ‘service economy,’ and the rise in market-mediated employment relations – outsourcing, subcontracting, and temporary, contingent, and part-time work contracts.”¹¹⁹ Workers accustomed to the benefits, job security, and labor relations of factory work transitioned into industries offering nothing of the sort. Figure 20 shows the employment shares between the service and goods producing sector from 1950 to 1997 from 1998 BLS data. During the span of this period, the share of employment in the manufacturing industry declined by 15% while the share of the service sector increased 29%. Morris and Western cite work from Bluestone and argue the shift from manufacturing to service is a significant cause for wage stagnation for low-skilled workers.¹²⁰ Figure 21 reveals the inverse correlation between increases in employment by industry and the industry’s average weekly earnings. The two lowest wage industries – retail and services – experienced the largest increases in employment while the highest paying industries experienced the smallest changes in employment.¹²¹

¹¹⁹ Morris and Western, “Inequality in Earnings at the Close of the Twentieth Century,” 636.

¹²⁰ *Ibid.*, 639.

¹²¹ *Ibid.*, 637-38.

Figure 21. Median weekly earnings by industry relative to growth in employment in that industry, 1972-1996



(Source: Morris and Western, 637)

Bluestone and Harrison's 1982 work, *The Deindustrialization of America: Plant Closings, Abandonment and the Dismantling of Basic Industry*, claimed capital mobility played the largest role in causing deindustrialization. Bluestone and Harrison argued deindustrialization occurred because firms reprioritized short-term profits and cash management over domestic production and investment. Due to the effects of the profit squeeze of the late 1960s, pressures to increase profits shifted incentives of business managers away from development to quarterly profits. The formation of a purely financial lens made firms distance themselves from honoring previous labor social contracts. For example, the economists claim it became popular for firms to close operations for the sake of producing a larger profit margin by quarter's end even if the operations were productive and efficient.¹²²

¹²² Bennet Harrison and Barry Bluestone, *The Deindustrialization of America: Plant Closings, Abandonment and the Dismantling of Basic Industry* (New York: Basic Books, 1982).

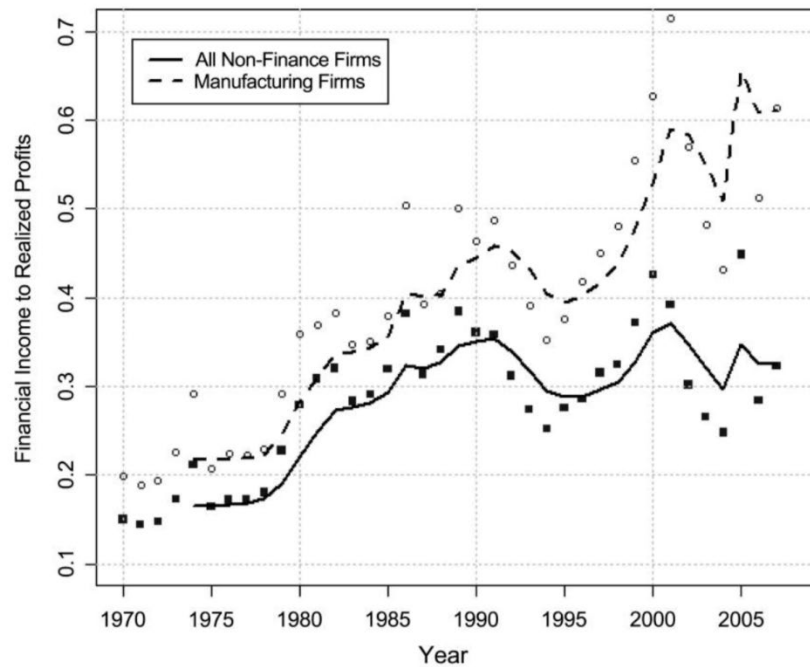
Neil Fligstein (1990) in *The Transformation of Corporate Control* provided an institutional analysis of how America's largest corporations have shaped the functioning of the economy since the early twentieth century. Fligstein's main argument is business managers over the twentieth century consciously implemented "conceptions of control" meant to manipulate economic dogma in the workforce. Instead of firms responding to trends in markets, the economic strategies of firms drove the market. By the late 1970s, prioritizing production and investment became an obsolete guideline for evaluating a firm's public financial standing: "The finance conception of control continues to dominate the world of large firms today. The short-run performance of the largest firms measures their efficacy...the single most important goal of modern corporate life is keeping the stock price above the book value of the firm."¹²³ Fligstein believes business managers are flawed in their promotion and practice of this ideology: "The central argument I propose here is that managers rarely know what is economically efficient."¹²⁴ Efficiency was no longer about productivity growth, research and development, and implementing best-practice technologies. Instead, "The world of top managers is now more concerned with the firm's position in the stock market and with its accounting records. The finance conception evaluates the consequence of any course of action in purely financial terms."¹²⁵ In other words, business managers in the 1970s prioritized the tertiary economy (finance) over the secondary economy (physical goods and the workers that make them). Fligstein is referring to the *financialization* of the U.S. economy.

¹²³ Neil Fligstein, *The Transformation of Corporate Control* (Cambridge: Harvard University Press, 1990), 260.

¹²⁴ *Ibid.*, 302.

¹²⁵ *Ibid.*, 312-13.

Figure 22. Financial income over realized profits, 1970-2007



(Source: Ken-Hou Lin and Donald Tomaskovic-Devey, 1287)

Ken-Hou Lin and Donald Tomaskovic-Devey (2013) assessed the link between the financialization of the U.S. economy and the rise in income inequality. Their research shows nonfinance firms since the 1980s have increased their reliance on revenue through financial channels like capital gains. Greater reliance on revenue through finance, the authors argue, created a rift between labor and capital which diminished negotiating leverage for average workers relative to managers and elites:

“the increasing reliance on income through financial channels restructured the social relations and the income dynamics in the nonfinance sector. Substituting production and sales investment with financial investment decoupled the

generation surplus from production, strengthening owners' and elite workers' negotiating power against other workers."¹²⁶

A greater reliance on revenue from financial streams reduced the labor share of income among less-skilled industry workers. The authors refute the legitimacy of the marginal productivity thesis for wage determination because of financialization's disproportionate funneling of income and power to managers and elites. The growing dependence on revenue through financial channels "accentuates the social divides between capital and labor and between management and general workers," the authors claim.¹²⁷ Figure 22 shows how financial income – defined as interest, dividends, and capital gains – steadily became a larger portion of revenue for U.S. corporations since 1970. In this context, firms no longer relied as heavily on production and sales for revenue created by their workforce. Consequently, the relationship management and labor deteriorated from its prior state.

The decline of union strength and collective bargaining power followed the rise of financialization. In 1970, unions represented roughly 27% of all wage and salary earners in the United States. Twenty-three years later in 1993, the unionization rate decreased nearly in half to 15%. The effect of union representation decline "fell most sharply among men, in the private sector, and in manufacturing industries."¹²⁸ Martina Morris and Bruce Western (1999) noted the existence of a corollary relationship between the decline in union percentage of the labor share and the increase in income inequality.

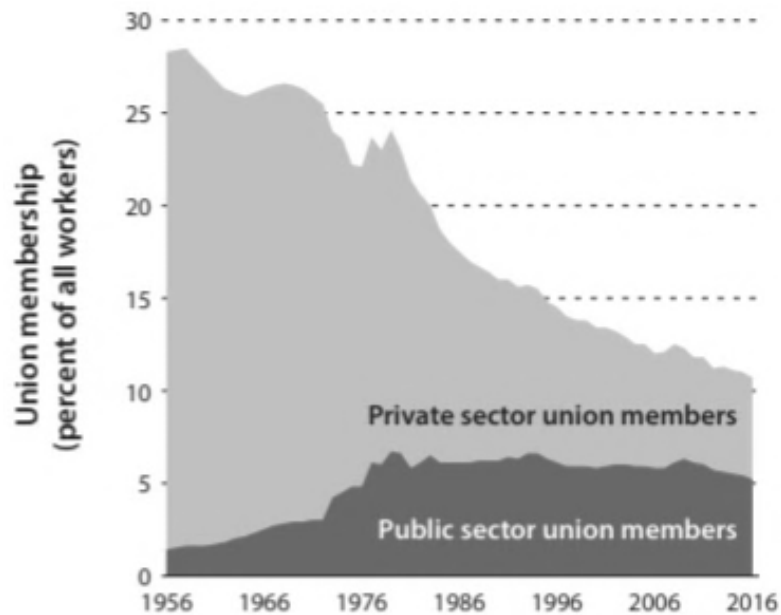
¹²⁶ Ken-Hou Lin and Donald Tomaskovic-Devey, "Financialization and U.S. Income Inequality, 1970-2008" *American Journal of Sociology* 118, no. 5 (March 2013), 1313.

¹²⁷ *Ibid.*, 1316.

¹²⁸ Morris and Western, "Inequality in Earnings at the Close of the Twentieth Century," 644.

Figure 23 shows how private sector union density in the U.S. decreased by approximately 70% from 1970 to 2011, decreasing from 24% of the workforce to 7%.¹²⁹

Figure 23. Public and Private Sector Union Membership, 1956-2016



(Source: Brookings, “Thirteen Facts about Wage Growth,” 6)

Richard Freeman (1991) researched the estimated effect of changing union density of the American workforce on earnings differentials among male workers. “I estimate the contribution of falling unionism to the increased white collar/blue collar and college/high school wage differentials and the rise in the overall variance in earnings.”¹³⁰ His empirical analysis concluded the fall in union density contributed to increases in earnings inequality in the 1980s, where “40 to 50 percent of the rise in white-collar premium and 15 to 40 percent of the rise in the college premium” are attributable to the

¹²⁹ David Autor, “Skills, education, and the rise of earnings inequality among the ‘other 99 percent,’” 849.

¹³⁰ Richard Freeman, “How much has de-unionization contributed to the rise in male earnings inequality?” *National Bureau of Economic Research*, Working Paper no. 3826 (1991), 2.

decline in union share of the labor force.¹³¹ Morris and Western's (1999) review of the findings concluded the decline in union density accounted for roughly 20% of the overall rise in wage inequality for males and as much as 50% for blue collar workers.¹³² Analysis of 43 US industries between 1964 and 2012 by Kristal and Cohen (2016) concluded the decline of unions and the fall in the real value of the minimum wage account for 50% of rising income inequality while the effects of computerization account for another 25%. Unions declined in part because the job makeup shifted away from unionized industries like manufacturing to the service industry which offered less opportunities for collective bargaining.¹³³

The three studies conclude the decline in union influence is attributable to roughly half of the rising income inequality among male workers. Globalization of the production process increased international competition and placed stress on U.S. manufacturing firms in the 1970s, leading to the erosion of union membership and the capability for unions to negotiate favorable contracts. Analyzing the relationship between deindustrialization and trade union decline, Christopher Kollmeyer (2018) raised a critical point about the ideological shift that took place in the 1980s towards labor. The demise of Keynesianism caused by shifting attention away from managing unemployment to inflation "partially reflects the exigencies of globalization...which care greatly about sound money but much less about joblessness."¹³⁴ Global competition

¹³¹ Richard Freeman, "How much has de-unionization contributed to the rise in male earnings inequality?" 2.

¹³² Morris and Western, "Inequality in Earnings at the Close of the Twentieth Century," 645.

¹³³ Tali Kristal and Yinon Cohen, "The causes of rising wage inequality: the race between institutions and technology," *Socio-Economic Review* 15, no. 1 (2016), 187.

¹³⁴ Christopher Kollmeyer, "Trade union decline, deindustrialization, and rising income inequality in the United States, 1947 to 2015," *Research in Social Stratification and Mobility* 57, (2018), 9.

overturned previously held understandings about economics, giving rise to an anti-government, anti-labor ideology opposed to any government action to address economic externalities.

Disillusionment from the economic chaos of the 1970s challenged traditional understandings of macroeconomic relationships. The demise of Keynesianism in the 1970s is attributable to changes in management culture and policy responses a short-term economic recession. Its impact in the long-run, on the other hand, led to the dismantling of the traditional relationship between labor and management. Bennett Harrison and Barry Bluestone (1988), in *The Great U-Turn: Corporate Restructuring and the Polarizing of America*, detail the 180-degree turn in the relationship between business and the workforce, financialization, and a shift in the role of the federal government in supporting the short-term endeavors of private business and away from the interests of working families. The market shocks of the 1970s, OPEC oil price increases, wage and inflationary pressures significantly “squeezed” the profit rates of American firms in the 1970s. Before the influence of international competition, additional profits could be made through raising prices. The practice of “mark-up pricing” functioned well as American consumers bought American goods. Once foreign goods came into the equation, however, the mark-up strategy became obsolete: “Unable to raise prices at will, having lost control over the cost of resources and capital, and unskilled at designing or producing quality goods, American corporations were left with a limited number of ways to regain their list profits.”¹³⁵ Corporate managers were presented with three options, the authors

¹³⁵ Bennett Harrison and Barry Bluestone, *The Great U-Turn: Corporate Restructuring and the Polarizing of America* (New York: Basic Books, 1988), 25.

claim: leave the producing end of business and find another venture, “zap” labor to control costs, or attempt to influence the government to reduce their taxes. American corporations did all three.¹³⁶ More specifically, businesses gravitated toward adopting what Robert Reich termed “paper entrepreneurialism” that transformed fundamental business values away from stakeholder superiority to shareholder primacy.¹³⁷

Modern management’s most important criterion for business success became short-term shareholder value maximization. Robert Hayes and William Abernathy’s (1980) influential article in the *Harvard Business Review*, “Managing Our Way to Economic Decline,” argued corporate managers in America abandoned investments in innovative products and best-practice technology to secure long-term market share. Instead of competing in the marketplace through technological competition and superior products, American firms increased their reliance on revenue through financial ventures like mergers, acquisitions, and a greater reliance on the stock market. The scholars warn, “These new principles...encourage a preference for (1) analytic detachment rather than the insight that from ‘hands on’ experience and (2) short-term cost reduction rather than long-term development of technological competitiveness. It is this new managerial gospel, we feel, that has played a major role in undermining the vigor of American industry.”¹³⁸ Instead of competing for productive superiority like Japan and Germany, American corporations made the conscious decision to shift towards gaining revenue through financial markets and less from the labor market. Over time, consequently, labor

¹³⁶ Bennett Harrison and Barry Bluestone, *The Great U-Turn: Corporate Restructuring and the Polarizing of America*, 5.

¹³⁷ Robert Reich, *The Next American Frontier* (New York: Times Books, 1983).

¹³⁸ Robert Hayes and William Abernathy, “Managing Our Way to Economic Decline,” *Harvard Business Review* 58, no. 4 (July-August 1980), 139.

turned into a cost containment problem incentivizing managers to “zap” labor costs (wages, benefits, full-time employment) to appease shareholders.¹³⁹ What followed can be summarized as the globalization of production, union busting, freezing wages, and the increase in part-time employment which hollowed traditional labor standards in the United States.

The ideological void left by the economic instability and a lack of adequate policy responses by national policymakers in the 1970s gave rise to a rejuvenated form of liberalism. Unlike the classical nineteenth century interpretation of liberalism, the new ideological paradigm was not focused so much on freedoms for individuals – although it was self-described as such – as it was about freedoms for corporations and private entities. Daniel Rodgers in *Age of Fracture* (2011) uncovered how semantics changed the economic ideology of the American public: “In an age when words took on magical properties, no word flew higher or assumed a greater aura of enchantment than ‘market’...It stood for a way of thinking about society with a myriad of self-generated actions for its engine and optimization as its natural and spontaneous outcome.”¹⁴⁰ The 1980s vision of the “market” reflected a renewed version of Adam Smith’s notion of the invisible hand. “Whereas governments, it was said, moved by coercion and deliberative politics stumbled through concession and compromise, the market was held out as the realm of freedom, choice, and reason.”¹⁴¹ People were looking for solutions to the economic problems of the 1970s while policy leaders floundered the situation, leading to the upending of economic dogma in the country.

¹³⁹ Harrison and Bluestone, *The Great U-Turn*, 51.

¹⁴⁰ Daniel Rodgers, *Age of Fracture* (Cambridge: Harvard University Press, 2011), 41.

¹⁴¹ *Ibid.*, 42.

Confidence and faith in the market as a metaphorical ideal was not the product of economic growth and prosperity but of instability and chaos. “The puzzle of the era’s enchantment of the market idea is that it was born not out of success but out of such striking market failure...The economic crisis of the 1970s was, in short, not merely a crisis in management. It was also, and at least as painfully, a crisis in ideas and intellectual authority.”¹⁴² Conservative academics, lawmakers, and pundits in the 1980s seized the opportunity and adopted the effective semantics used by Milton Friedman in *Capital and Freedom* (1962). Friedman’s vision of the marketplace as a metaphorical concept associated the terms “coercion” and “compulsory” with any government action while attributing “freedom” and “enterprise” and “choice” with the powers of the market. The proper role of the government according to Friedman was to provide citizens with personal security along with certainty in the marketplace. “The role of government just considered is to do something that the market cannot do for itself, namely, to determine, arbitrate, and enforce the rules of the game.”¹⁴³ Friedman believed the proliferation of monopolies to be the prominent issue in which government action was warranted, for monopolies limited choice and prohibited competition. His view of limited government that prioritized the protection of property rights and the maintenance of business competition has often been misconstrued over the decades in later neoliberal publications.¹⁴⁴ For example, Friedman conceded the need for government (“compulsory”) action in order to address issues in the distribution of income: “there is a clear justification for social action of a very different kind than taxation to affect the

¹⁴² Daniel Rodgers, *Age of Fracture*, 44-49.

¹⁴³ Milton Friedman, *Capitalism and Freedom*, (Chicago: University of Chicago Press, 1962), 27-28.

¹⁴⁴ *Ibid.*, 34-36.

distribution of income. Much of the actual inequalities derives from imperfections in the market... There is every reason to adjust to the rules of the game so as to eliminate these sources of inequality.”¹⁴⁵ Under Friedman’s ideology, the government possessed minimal avenues to address market imperfections that did not violate his ideological principle of the role of government in a free society.

Other scholars in line with Friedman’s thinking adopted and furthered his principles about the role of government. Authors such as Mancur Olson, William Fellner, Tibor Scitovsky, and Herbert Giersch argued the institutional means of government intervention were the main causes for stifling growth in the 1970s.¹⁴⁶ According to these scholars, the proper prescription for greater labor market participation, savings, and consumption was broad tax cuts, deregulation of business and capital flows, and the elimination of social and anti-poverty programs. Under this agenda, neoliberal economists such as Arthur Laffer, Paul Craig Roberts, and David Stockman became labeled as “supply-siders” focused on monetarism: “Monetarism offered a strikingly simple rule for hard times: let the money supply be prudently managed and markets would provide the rest.”¹⁴⁷ Institutional factors such as unions, welfare programs, and food stamps for the poor became viewed as the source of economic problems and not the solution. The rise of neoliberalism in this context laid the intellectual groundwork that justified the destruction of social democratic institutions within the United States. Based on five decades of income statistics, the implementation of the neoliberal agenda catered

¹⁴⁵ Milton Friedman, *Capitalism and Freedom*, 176.

¹⁴⁶ Mancur Olson, *The Rise and Decline of Nations: Economic Growth, Stagflation and Social Rigidities* (New Haven: Yale University Press, 1982); William Fellner, “The Declining Growth of American Productivity: An Introductory Note,” in *Contemporary Economic Problems, 1979* (Washington, D.C., 1979).

¹⁴⁷ Daniel Rodgers, *Age of Fracture*, 54.

tax legislation disproportionately to the top decile and top percentile of income earners – the so called “job creators” – with the belief funds would *eventually* trickle down in the form of wages and further economic activity after top income earners reinvest their additional untaxed income. The institutional changes greatly benefited managers and corporate executives but created tremendous instability for average working Americans: “While such changes in work organization may provide ‘flexibility’ for management, they tend to bring with them increased instability and insecurity for employees.”¹⁴⁸ The rediscovery of the market greatly benefited those in business management and high finance under the notion that forms of aggregate collectivism squandered the growth mechanisms of the market.

With the most contemporary explanation, economist Thomas Picketty attributed the rise of income inequality to the special treatment of those above the top percentile of the income distribution through favorable tax policies – who he classifies as “supermanagers.” Picketty in *Capital in the Twenty-First Century* (2010) claimed the rise of the supermanger is mainly an Anglo-Saxon phenomenon in the United States, Canada, Great Britain, and Australia. Figure 24, 25, and 26 show the income share of the top decile in Anglo-Saxon countries relative to continental Europe and Japan, revealing a striking difference between the two geographic groups. Based on these statistics, Picketty highlighted how the United States stands out from the rest as the greatest outlier in terms of the supermanager phenomenon. “If the rise of the supermanager were a purely technological phenomenon, it would be difficult to understand why such large differences

¹⁴⁸ Harrison and Bluestone, *The Great U-Turn*, 13.

exist between otherwise quite similar countries.”¹⁴⁹ In this context, the factors causing the top decile and percentile to receive disproportionately greater income gains in America has more to do than technology and globalization but also business culture and institutional factors.

Figure 24: Share of top percentile of Anglo-Saxon countries, 1910-2010

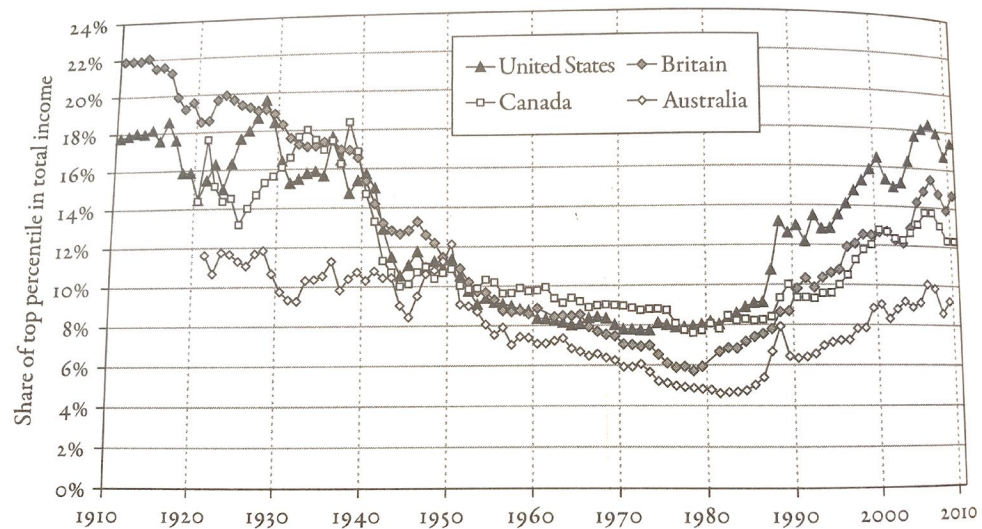
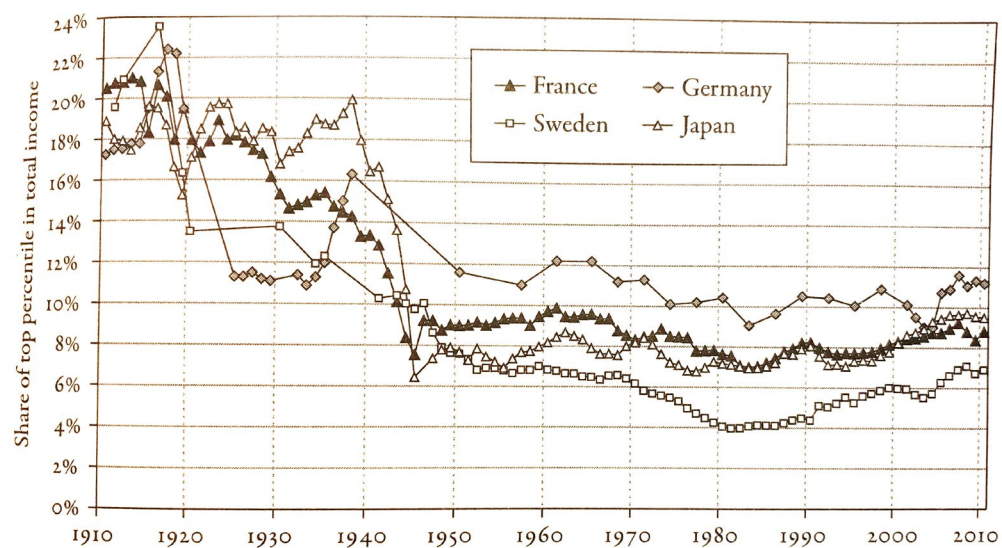
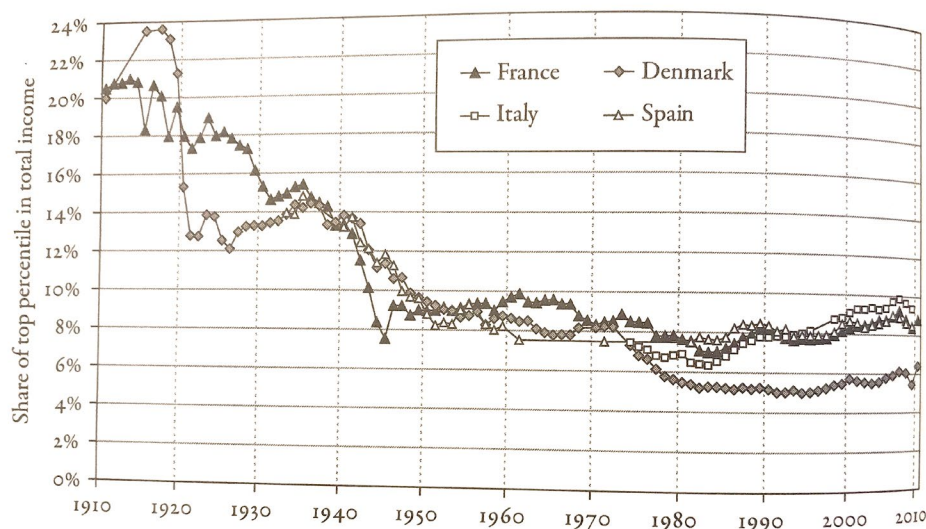


Figure 25: Share of top percentile in Continental Europe and Japan, 1910-2010



¹⁴⁹ Thomas Picketty, *Capital in the Twenty-First Century*, 316.

Figure 26: Income share of top percentile Northern and Southern Europe, 1910-2010



(Source: Picketty, 316-318)

Assessing income distribution in the United States over the past five decades, Picketty reaffirmed the inability of the marginal productivity theory to explain the disproportionate share of income accruing at the top level of the income distribution: “this quite large divergence in the way the income distribution has evolved in the various wealthy countries demands an explanation, which the theory of marginal productivity and the race between technology and education does not seem capable of providing.”¹⁵⁰ The structural shifts of the 1970s led to the development of an economic system with a trend of increasing inequality with no projections of it slowing down. Lack of social mobility and increased income inequality have economic and social repercussions, yet the field of economics has generally disregarded the opportunity costs of an alternative labor structure that alters the distribution of income more equitably to workers while stimulating economic growth in the process.

¹⁵⁰ Thomas Picketty, *Capital in the Twenty-First Century*, 321.

Conclusion

A New Economic Paradigm

“What, then, of the contemporary belief that we can either have benevolent social service states or efficient, growth-generating free markets but not both?”¹⁵¹

Three major economic forces – technological change, deindustrialization, and globalization – dramatically altered the job structure in the U.S. economy over the past half-century. The foremost concern raised by the evidence is the economic and social implications of declining real earnings for low-skilled workers, less opportunities for socioeconomic mobility, and decreasing agency for workers in the economy. As David Autor (2014) states, “These declines in both earnings and employment bode ill for the welfare of non-college-educated U.S. adults and are likely to have broader detrimental social consequences...greater criminality, increased social dependency, and (more mundanely) reduced tax receipts.”¹⁵² Researchers have tracked rising wage and income inequality in the United States for decades. Politicians have had ample time to address the issue, yet the trend of increasing income inequality has continued. The contemporary paradigm within the field of economics – with its foundational principles rooted in neoliberalism – lacks a fundamental assessment of the moral implications of its theories, assumptions, and prescriptions regarding the best route to economic efficiency and pro-growth public policy.

There are five main conclusions about the origins of wage and income inequality in the United States. First, it is an unequivocal fact that income inequality – the earnings

¹⁵¹ Tony Judt, *Ill Fares the Land* (New York: Penguin Press, 2010), 203.

¹⁵² David Autor, “Skills, education, and the rise of earnings inequality among the ‘other 99 percent,’” 850.

gap between the rich and the poor – has increased since 1973. Second, American workers today have less economic agency to bargain and receive proportional compensation relative to workers during the golden age. Deregulatory efforts such as the Garn-St Germain Depository Institutions Act of 1982 caused wealth to accumulate to those who held financial assets and permitted incentives for market concentration through mergers and acquisitions. Lack of anti-trust enforcement and financial deregulation created an ideological foundation for the acceptance and promotion of monopolistic and monopsonistic tendencies under the guise of a “free” market that repressed competition, resulting in the third conclusion: shareholder primacy. Financialization shifted attention away from productivity growth and the secondary economy (physical goods and workers) towards the tertiary economy (assets and capital flows) in order to replace the lost revenue from increased international competition. The paradigm created a society “in which firms have been merged and acquired, downsized, deindustrialized, multinationalized, automated, streamlined, and restructured.”¹⁵³ The purpose of a corporation was no longer to provide a service in the most efficient and effective way possible in hopes of profit. The purpose of a corporation is to provide returns for shareholders.

In order to maintain profit margins and returns for shareholders, labor became a cost containment problem. Wage increases – formerly viewed as an economic positive because of money velocity theory – are instead actions that would kill jobs, put companies out of business, and cause inflation. “For the last thirty years, when asking ourselves whether we support a policy, a proposal or an initiative, we have restricted

¹⁵³ Harrison and Bluestone, *The Great U-Turn*, 22.

ourselves to issues of profit and loss – economic questions in the narrowest sense. But this is not an instinctive human condition: it is an acquired taste.”¹⁵⁴ Shareholder primacy decreases the importance of worker priorities to corporate managers such as wage increases, healthcare, leave, and other benefits. American business’s lens towards “zapping” labor, laden with skewed simplifying assumptions, has remained the contemporary economic dogma of the past sixty years. There needs to be more democracy in the workplace and more support for workers’ ability to organize and utilize collective leverage to obtain adequate compensation.

Fourth, educational attainment has become a critical factor for income determination. There is fierce debate about whether higher education provides workers with measurable skills or, as some research suggests, college degrees act more as a signaling mechanism for firms to filter potential applicants.¹⁵⁵ Regardless, evidence reveals sizeable returns to further educational attainment. Since technological innovation is no longer an avenue for productivity growth and subsequent wage growth, the most viable and feasible avenue to increase wages for lower-skilled individuals is additional investments in public education and job training programs. Wharton economist Peter Cappelli (2012) in *Why Good People Can’t Get Jobs: The Skills Gap and What Companies Can Do About it* addressed the complex situation with job mismatch. The problem with the labor market and hiring, according to Cappelli, is a disconnect in the hiring process in which firms demand a range of expectations that Cappelli believes to be

¹⁵⁴ Tony Judt, *Ill Fares the Land*, 34.

¹⁵⁵ Harley Frazis, “Human Capital, signaling, and the pattern of returns to education,” *Oxford Economic Papers* 54, no. 2 (April 2002), 298-300.

far-fetched for the positions advertised. In other instances, firms are simply not offering competitive wages for open positions.¹⁵⁶ There is a need for further investigation into the general culture of human resource departments and how best to match workers where their skills can be utilized in jobs which provide a livable and sustainable income. “If we are going to produce a more educated work force, then we had better be sure that jobs are being created (or upgraded) so as to fully utilize and reward the skill and ability of that work force... We need both re-planned education *and* better-planned job creation.”¹⁵⁷ Our nation’s industrial policy needs to better match our public education policy, which itself is in need of desperate reform. Investing in human capital through additional educational attainment or job training programs is an avenue that will statistically raise the wages of those workers; the key is ensuring the skills obtained are in demand in the labor market and targeted toward higher paying professions.

Lastly, the field of economics since the 1980s has revered economic theory and its folk-like wisdom the same way physical scientists interpret the laws of gravity. The key distinction in this comparison is the underlying premise that humans have no *agency* in the process. The universe – or synonymously, the market – acts in particular ways irrespective of human influence. The language in which neoliberal scholars since the 1970s framed the discussion about “the market” overturned the traditional Keynesian paradigm. Governmental policy through macroeconomic “tweaks” lost appeal. Scholars source the origin of the neoliberal paradigm to the rise of monetarism in the late 1970s as the policy response to rising inflation. The short-term policy approach of controlling

¹⁵⁶ Peter Cappelli, *Why Good People Can't Get Jobs: The Skills Gap and What Companies Can Do About it* (Philadelphia: Wharton Digital Press, 2012).

¹⁵⁷ Harrison and Bluestone, *The Great U-Turn*, 18.

inflation at the cost of wage growth and employment in the long run transitioned economic priorities of policymakers and scholars in a successful attempt “to break down the case for macroeconomic fine-tuning, and ultimately to transfer business-cycle management from Congress to the Council of Economic Advisors to Volcker’s heirs at the Federal Reserve.”¹⁵⁸ Employment and wages fell to the wayside in place of controlling inflation and maintaining quarterly profit margins. After the switch in the late 1970s under Carter and furthered by Reagan, there was no going back to the “old” way of micromanagement of the macroeconomy. Policy leaders during crux of the crisis failed to provide a substantive and concerted response to the fragmentation of American economic hegemony in world affairs. The economic and psychological trauma of the 1970s triggered a paradigm shift in how the American public viewed the role of corporations, the agency of workers, and government involvement in the economy.

Semantics is the critical problem allowing for the continuation of earnings inequality. The current diction our culture attributes to the fields of politics and economics limits the scope of debate about the type of policy alternatives at our disposal to improve society; the limitation is rooted in the early promoters of the newly interpreted, unfettered “market.” In his last publication *Ill Fares the Land* (2010), historian Tony Judt addressed the language attributed to markets. the long-term moral implications of expanding income inequality, and the abandonment of social democracy:

“Much of what appears ‘natural’ today dates from the 1980s: the obsession with wealth creation, the cult of privatization and the private sector, the growing disparities of rich and poor. And above all, the rhetoric which accompanies these:

¹⁵⁸ Tony Judt, *Ill Fares the Land*, 55.

uncritical admiration for unfettered markets, disdain for the public sector, and delusion of endless growth.”¹⁵⁹

Contemporary scholars, pundits, and politicians metaphorically painted the “invisible hand” as a transcendent entity that humans should not influence. This is a misconstrued interpretation of conclusions economists originally extracted from Adam Smith’s *Wealth of Nations* during the original liberalism period of the late nineteenth century.¹⁶⁰ As a result of implicit biases in economic models and theoretical assumptions, many contemporary scholars claim the forces of globalization and deindustrialization are naturally occurring and unstoppable processes. Rising income inequality from globalization, therefore, *is what it is*. Economists Suresh Naidu, Dani Rodrik, and Gabriel Zucman (2019) highlight the problem with the field of economics in the way theory is misconstrued to be interpreted as objective fact. According to the three economists, “The truth is that empirical methods are always laden with assumptions, both of the formal economic-theoretic sort and more ‘folk wisdom’-like traditions and methods,” where researchers and the public must be conscientious of “a reflexive defense of mainstream orthodoxy” by the industry’s most influential and powerful leaders.¹⁶¹ Tony Judt follows this sentiment and refutes the current paradigm by arguing humans have agency in the economic process, and national leaders over decades have failed to amend the fallout from chaos of the 1970s. Growing inequality in the long run, according to Judt, destabilizes societal institutions and is economically inefficient. “We have entered an age

¹⁵⁹ Tony Judt, *Ill Fares the Land*, 2.

¹⁶⁰ *Ibid.*, 38.

¹⁶¹ Suresh Naidu, Dani Rodrik, and Gabriel Zucman, “Economics After Neoliberalism,” *Boston Review*, February 28, 2019.

of insecurity – economic insecurity, physical insecurity, political insecurity... Insecurity breeds fear. And fear – fear of change, fear of decline, fear of strangers and an unfamiliar world – is corroding the trust and interdependence on which civil societies rest.”¹⁶² Judt alludes to the complex social ramifications of globalization and rising inequality which economists have failed to address.

Wages, salaries, and incomes go beyond mere labor statistics; they determine the quality of life of working people. Future economic policy production must include an analysis a policy’s effect on the community, public trust, and the common good: “The only way to avoid such mistakes in the future is to re-think the criteria we employ to assess costs of all kinds: social, environmental, human, aesthetic, and cultural as well as economic.”¹⁶³ Economics is a science that uses models with simplifying assumptions because it is impossible to comprehend the invariable interconnections of the actual economy – only to view its logical progression in a metaphorical vacuum. Policymakers of the early twenty-first century should look to the approach American leaders of the early twentieth century. Instead of relying so much upon policy estimates using biased methodology, Presidents Teddy Roosevelt and William Howard Taft took on oil and railroad monopolies in the name of *competition* – the critical component of Milton Friedman’s ideology that conservative thinkers have abandoned today. Along with market interests in mind, Roosevelt and Taft identified a clear conflict with the free play of private interests that went against the public will *and intervened*. Revisiting the trust-busting era and origination of the Square Deal should be a focus for future researchers.

¹⁶² Tony Judt, *Ill Fares the Land*, 8-9.

¹⁶³ *Ibid.*, 212.

Taft, when pressured by special interests not to enforce anti-trust laws, became aggravated by the manner in which the business executives pushed for further wealth at all costs:

“...he did not place the businessman at ‘the highest pinnacle of honor and trust.’ Nor did he regard property rights as absolute, deserving precedence at every turn over human rights. From his father he learned that the man who devoted himself to his community...deserved greater praise than the man who pursued wealth for its own sake. Wealth was honorable only to the extent that it contributed to the well-being of the community.”¹⁶⁴

The history of research and discovery is the history of paradigm shifts in the way society viewed itself and the world in which it existed – from science, to culture, to economics, and so forth. Is it so radical, then, after four decades of increasing inequality, to ask for workers to receive a fairer shake in the distribution of a firm’s earnings, and that businesses function for the benefit of the community at large?

Conflicts arise when there is an imbalance in power between two groups, and American workers have habitually been the party with the power dynamics stacked against them. Intellectual leaders in economics, alongside wealthy business executives, capitalized on an ideological void during a period of economic, social, and political upheaval in the 1970s to press for a corporate, market-oriented interpretation of effective and efficient economics that deprioritized labor in the success of business. The notion that labor is a cost-containment problem, higher wages are anti-business measures, and

¹⁶⁴ Doris Kearns Goodwin, *The Bully Pulpit: Theodore Roosevelt, William Howard Taft, and the Golden Age of Journalism* (New York: Simon & Shuster, 2013), 32.

the role of a corporation is only to provide returns to its shareholders is not sacrosanct and is an ideal that has proven detrimental to the level of equality in our society. If the American economy wants to succeed in the long-term, its workers need to receive a larger proportion of the wealth generated by those participating in the economy.

Economics can work for everyone if people *believe* it can. There is a need for a new paradigm – a paradigm of economics that works for the benefit of all.

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