

A Contribution to the Critique of Labor Share Analyses

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Dedication

For me and people like me

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Abstract

According to this analysis, the frequently reported narrative about the success of neoliberalism, in terms of redistributing the pie in favor of capital vis-à-vis labor is not supported by data for the first thirty-eight years of neoliberalism. In this dissertation I disaggregate the variation in labor's share of GDP according to movements in depreciation and the labor shares of various organizational forms namely, corporations, government, nonprofit institutions, proprietorships and private households. Of all of these organizational forms, only the net domestic income of the corporate sector is divisible between profit and compensation. Nevertheless, depreciation, private households, and proprietorships (when the labor income of proprietors is estimated according to the national average of wage and salary workers) have had a significant impact on the trajectory of labor's share of GDP. The inclusion of proprietors' estimated labor income (estimated according to the average compensation of wage and salary workers), private households, and depreciation fully explain the decline in labor's share of GDP during the neoliberal run up to the 2008 Great Recession. When proprietor labor income is not estimated, the decline in labor's share of GDP is fully attributable to private households and depreciation. Labor's share of corporations' net output was trendless over the same period. Finally, this study moves from the aggregate to the sectoral level to investigate the factors that are responsible for the decline in the labor share in manufacturing. While manufacturing has undoubtedly experienced substantial declines in union density in recent decades, the evidence suggests that this decline did not contribute to the decline in labor's share in the manufacturing sector. Compensation per manufacturing worker rose and by a greater magnitude than compensation per worker in the private sector as a whole. Labor's falling share in manufacturing, then, was due to a substantial increase in output relative to employment. This dissertation suggests that the fall in the labor share in manufacturing had more to do with technical change that led to sectoral shifts in labor demand.

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Introduction

This dissertation seeks to highlight certain economic processes and trends, as they relate to the structure of distribution in capitalist societies. Questions related to the distribution between capital and labor were defining features of classical political economy. This distribution is analytically distinct from (but not wholly unrelated to) wealth or income distribution; it has equally if not more important implications for the possibilities of social justice within or beyond capitalism. Recently, Piketty (2014) – who “prefers” to characterize his work within the tradition of political economy has asked us to return to the questions that the early political economists first posed. Within classical political economy, the distribution between capitalists and workers has long served as the material basis for deriving a meaningful conception of “social class.” Arguably, the primary objective of classical economists was to search for and identify economic laws that determine the distribution between capitalists (*bourgeoisie*) and wage workers (*proletariat*), the two major antagonistic classes that define social relations of production under capitalism.

While modern scholars of political economy have continued to pursue questions related to the distribution between capitalists and workers, they have largely done so outside the epistemological tradition of classical political economy. Modern heterodox economists, engaging in inequality related investigations, are once again drawing attention to the significance of the division between labor and capital. Piketty (2014) has underscored the “capital-labor split” as an important determinant of inequality within the personal distribution of income. Others too are drawing attention to the distribution between capital and labor alongside the frequent reports of rising inequality under neoliberalism. However, much of contemporary political economy tends to explain the

structural tendencies associated with the present stage of capitalism in terms of the intentional objectives and actions of certain individuals, classes or groups, e.g., capitalists, shareholders, neoliberal capitalists and so on.

Among the plethora of Leftist accounts of the rise in inequality is a popular narrative about the rise of a capitalist class who - by seizing control of the state apparatus and implementing neoliberal reform - have reconfigured the overall relationship between the state and the economy in a manner that has increased their share of the economic pie vis-à-vis workers. The Reagan administration's intervention into PATCO's labor dispute is often seen as an historical turning point wherein the state wielded its power to undermine the bargaining position of workers. In addition, new labor legislation aimed at undermining worker unionization and collective bargaining strategies (Jacobs and Dixon 2006) contributed to the marked decline in union density in the US, resulting in the situation that today only 1 in 13 workers belong to a union as compared to 1 in 4 during the 1970s (Western and Rosenfeld 2011).

The common theme that runs through Leftist discourse on neoliberalism, is the notion that capitalists organized themselves and used their power to dispose of the political and economic regulations that comprised the New Deal and the "labor-capital accord" of the welfare state. This dissertation does not take issue with the notion that an economic and political elite organized to disband the regulatory structures that were implemented during the postwar period and which were largely beneficial to labor. Nor does it take issue with the notion that this mobilization was pursued on behalf of the material class interest of the political and economic elite. It does, however, take issue with the frequently reported narrative concerning neoliberalism's success. This success, such narratives imply, is

defined by capitalists who undermine workers positional power and thereby acquire more of the economic pie. Yet, as this dissertation will show, the net labor share of the corporate sector remained virtually trendless throughout the first thirty-eight years of neoliberalism. This key empirical finding means that the profit share was also trendless.

Piketty (2014) has recently sought to underscore a law that explains the long-term trajectory of the profit (net labor) share. Piketty's "fundamental law," is a pure accounting identity and is expressed as $\alpha = r * \beta$, where α is the profit share, r is the rate of return on capital, and β is the ratio of accumulated capital to national income. According to this decomposition the percentage change in the profit share is approximately equal to the product of the percentage changes in the rate of profit and the ratio of accumulated capital to net output. In chapter 3, I show that r and β tend to move in approximately equal and opposite directions, with the former falling a bit more than the latter rose; resulting, therefore, in a slightly falling profit share between 1946 and 2015. This finding is in contrast to what Piketty predicts. It is exactly, however, the scenario that Marx's theory of the law of the tendency of the rate of profit to fall implies.

The findings presented in this dissertation are consistent with the historical pattern that Keynes (1939) observed for both Great Britain and the US over many decades, namely a trendless net labor share, and over multiple decades. At the time, Keynes regarded this finding as "a bit of a miracle." The constancy of the net labor share was observed so consistently throughout the Twentieth Century that it was soon regarded as an economic fact (Kaldor 1957). In effect, despite four decades of neoliberal deregulation as well as neoliberal disciplining of labor in myriad ways, this dissertation argues that the "miracle"

of relatively constant shares of capital and labor has continued up until the eve of the Great Financial Crisis of 2008.

As I discuss in chapter 1, Marx's theory essentially states that as the magnitude of capital grows relative to the magnitude of employed workers, the rate of profit will tend to decline. One way of expressing this theory in terms of prices is to consider the effect of increasing labor productivity on prices. Products that are produced with less labor are less expensive to produce. Therefore, as productivity increases, the prices at which commodities sell tend to decline, given a sufficiently competitive market. That is to say, the realized value of the output will tend to decline in proportion to the rate at which the capital stock grows.

If we decompose the rate of profit according to the same variables that Piketty utilizes in his identity we get: $r = \alpha * 1/\beta$. The percentage change in the rate of profit is approximately equal to the sum of the percentage change in the profit share and the reciprocal of the ratio of capital to net output. Given a constant profit share, the rate of profit will fall (or rise) in proportion to the fall (or rise) in the reciprocal of ratio of capital to net output. This relationship is precisely what I demonstrate to have happened in chapter 3, where I explore Piketty's decomposition using corporate sector data. The profit share remained virtually trendless as the rate of profit declined in proportion to the rise in the ratio of capital to net output. Hence, the fall in the rate of profit was attributable to the tendency for the value of the output to decline as capital increasingly accumulated. This indeed is consistent with Marx's theory of the law of the tendency of the rate of profit to fall. One implication of this finding concerns the degree to which the long-standing constancy of the net labor share can be explained by Marx's theory of the tendential fall in

the rate of profit. While a rise in the magnitude of capital stock relative to the value of output that it produces is consistent with Marx's theory, I would not suggest that it confirms it. There are other reasons as to why a rise in this ratio can occur. A general decline in prices, or deflation, can also be attributed to an economic downturn or recession. However, this analysis demonstrates that the gradual rise in the ratio of capital to net output, and the gradual fall in the rate of profit have been fairly consistent phenomenon since the recovery of the Great Depression.

Another factor to consider with respect to the relevancy of Marx's theory, relates to Kliman's 2012 decomposition of the fall in the rate of profit. Kliman's decomposition of the fall in the rate of profit reveals, just as this analysis does, that the profit share had virtually no effect on the rate of profit. Instead, Kliman (2012:136 demonstrates that the rate of profit declined because "employment increased less rapidly than advanced capital." When we consider the results of this analysis, in conjunction with Kliman's analysis, Marx's theory appears to fit the facts well. As capital accumulation rose relative to the value of the output it produced, it also simultaneously rose in relation to the growth of employment.

In any case, the frequently reported success of neoliberalism in terms of redistributing the pie in favor of capital vis-à-vis labor is not supported by data for the first thirty-eight years of neoliberalism. In chapters 5 and 6, I decompose the fall in the frequently reported labor share of GDP to reveal that its decline is attributable to depreciation and legal forms of production whose output is not clearly or meaningfully divisible between profit and compensation. With respect to the latter, the so-called private household sector - whose output is based on the imputed rent of owner occupied homes

and whose income is based on the wages and salaries of domestic servants – declined markedly and therefore played a significant role in the decline of labor’s share of GDP. The fall in the labor share of proprietorships was the other factor that was responsible for the fall in labor’s share of GDP. With respect to proprietorships, there is no clear consensus as to the percentage in which proprietor’s income is split between labor and capital income. A general rule of thumb is to calculate proprietors’ labor income based on the average compensation of wage and salary workers. In chapter 6, I decompose the fall in labor’s share of GDP to reveal that after the effects of depreciation and private households are accounted for, the remaining decline in labor’s share is attributable to proprietorships.

The analysis in this dissertation also moves from the aggregate to the sectoral level to investigate the impact of declining unionization on the labor share in manufacturing. While manufacturing has experienced the most substantial declines in union density in recent decades, the evidence suggests that the decline in union density did not contribute to the decline in labor’s share in this sector (or overall). To the contrary, in chapter 7, I demonstrate that compensation per manufacturing worker rose, and it rose by a greater magnitude than compensation per worker in the private sector as a whole. With manufacturing wages higher than the private industry average, I demonstrate that labor’s falling share in manufacturing was due to a substantial increase in output relative to employment. As a result, my argument is that the fall in the labor share in manufacturing is attributable to technical change. In sum, when we consider the data for both the corporate sector net labor share (which was trendless) and the net labor share in manufacturing (which declined markedly), neither can stand as proof that neoliberalism reduced labor’s share. It seems that both these outcomes are better understood as the products of

capitalism's economic forces as they relate to the rate of profit and capital accumulation. Here, I would like to underscore the support of this dissertation for the continued relevance of the tendency of the rate of profit to fall as the explanation for why the net labor share (and therefore the profit share) has remained virtually trendless following the recovery of the Great Depression.

Chapter 1

Political Economy and the Search for a Law that Governs Distribution

This dissertation engages with a central theme of classical political economy: the distribution of income (output) between capital and labor. “Factorial distribution,” “factor shares,” “capital’s share” and “labor’s share,” have been the traditionally favored terms used to characterize distributional analyses of economic output between the categories of capital and labor. Most recently (Piketty 2014) refers to the “capital-labor split.”¹

Until recently economics had largely lost interest in questions related to the distribution between capital and labor (Atkinson 2009, Piketty 2014). Among the relatively small number of inequality-related studies produced over the last quarter century, the overwhelming majority have focused on personal distribution. Over the last decade, however, factor shares have experienced a strong resurgence as the interest in the distribution between capital and labor, or alternatively between capitalists and workers, has been rekindled (Armenter 2015, Gomme and Rupert 2004, Kristal 2013, 2010, Magdoff and Foster 2013, Mohun 2014, Mishel et al. 2012, Kliman 2013a, 2013b, Piketty 2014).

The question of the distribution of income between the categories of capital and labor, or capitalists and workers, was first taken up by classical political economy.² Classical political economy had shown great concern for questions related to the production of wealth and its distribution between the owners of capital and workers (Clark 1991, Milonakis and Fine 2009). Having emerged as the world’s first all-inclusive, social

¹ These terms are used interchangeably throughout this study.

² The term “classical political economy” was first introduced by Marx (1970) to highlight the economic tradition that began with William Petty and concluded with David Ricardo. Although he sometimes refers to the same tradition as “Ricardo’s school”

science in the nineteenth century, classical political economy was largely concerned with understanding the structural outcomes of capitalist society– especially those relating to the creation and distribution of wealth, social conflict and resolution (Milonakis and Fine 2009, Clark 1991). The owners of capital, land, and labor -or capitalists, landlords and workers, respectively - constituted society's three dominant social classes. Each class was conceived of as having distinct economic interests that directed them in their respective pursuit of a larger share of the economic pie.³

A primary objective of the classical economists was to discern the “laws” that regulated the uneven distribution of income among these classes. It was Ricardo (1911:1), after all, that had unequivocally stated:

The produce of the earth – all that is derived from its surface by the united applications of labour, machinery, and capital, is derived among the three classes of the community, namely the proprietor of the land, the owner of the stock or capital necessary for its cultivation, and the labourers by whose industry is cultivated.... To determine the laws which regulate this distribution is the principal problem in Political Economy.

Similarly, Mill (1974: 24-5) – the chief representative of the tradition after Ricardo - proclaimed that the “laws” whose investigation receives the greatest attention in the pages of the “professed treaties” of political economy are those that “regulate the production,

³ As a method of inquiry, political economy is characterized by holistic analytical approach that incorporates the social, political, and economic within one and the same analysis. Capitalist society is its object of inquiry and the social classes – which correspond to individuals' relationship (either as owners of land, labor or capital) to the mode of production - form the basic units of its analysis. In contrast to the essentialism of the ahistorical “rational individual” that would come to dominate economic theory after the “marginal revolution,” political economy (especially after Marx) gives primacy to the socio-historical context in which rational action takes place (Milonakis and Fine 2009, Capitalist society is conceived of as a social system that operates according to historically specific laws that govern its outcomes and future development, and which are not reducible to the thinking and desire of individuals (Milonakis and Fine 2009, Aspromourgos 2013, Clark 1991).

distribution, and consumption of wealth.” Generally speaking, the production and distribution of wealth were conceived as internally related parts of a mutually constituting relationship. It was the merit of classical political economy to try and discover the “law” that governed this internal relationship. The struggle to advance this endeavor proceeded with the development of the labor theory of value, beginning initially with Adam Smith but was developed considerably in the hands of Ricardo and finally Marx.

With the labor theory of value, the classical economists attempted to establish an *objective* measure of value based on the duration of workers’ labor time. When products are produced as commodities – i.e., when products are produced for the purpose of being exchanged - their cost of production becomes a significant determinant of their price. Commodities that embody less labor than other commodities are produced more cheaply, and this is reflected in their relative prices in a competitive market. Yet “value,” often referred to by the classics as “natural price,” is distinguished from the actual price at which commodities are sold on the market. This is because market prices, fluctuate with variations in supply and demand. However, supply and demand do not themselves determine value, i.e. the natural price, around which market prices tend to gravitate. “The natural price or the price corresponding to the *value* of the commodity is supposed to exist just when demand meets supply” (Marx 1969:96). Value then is the essence of “price,” and surplus-value is the essence of the portion of price that is realized as profit.

In Marx’s theory, commodity values are determined by the socially necessary labor time that is required to produce them. “Socially necessary” labor time, here, refers not to the particular, isolated, instances of labor’s duration, but rather the labor time on average, “under the normal conditions of production, and with the average skill and intensity

prevalent at the time.” The market, Marx pointed out, subjects individual, “concrete,” instances of labor to the economy-wide average, or what is “socially necessary.”⁴ The expenditure of labor that is beyond what is socially necessary produces no value. The expenditure of labor time that is over and above what is socially necessary produces no value. Inefficient producers, therefore, cannot raise their prices relative to the market prices simply because more labor has been expended in the production of their commodities. The labor time that is socially necessary to produce a given commodity, then, determines the level around which its market price fluctuates.

In Marx’s theory commodity values are comprised of two parts. One part corresponds to the value *transferred* to the commodity from used up means of production—from the productive consumption of raw materials and plant and equipment. With respect to plant and equipment, or capital assets that lasts longer than one production period, this transfer of value happens in piecemeal fashion as these capital assets depreciate either through wear and tear or technological obsolescence. The important thing to keep in mind is that this part of a commodity’s value constitutes only a transfer of existing value from the inputs used in production. No additional value is created from the employment of machines and consumption of raw materials, and nothing apart from the magnitude of their own value is passed on the final product. What goes in comes out. Marx therefore refers to these inputs as “fixed capital.”

The other component corresponds to the *new, additional*, value that is added by workers’ labor time. According to Marx’s theory, workers add *new value* in proportion to the duration, intensity and complexity of their labor. This component amounts to more than

⁴ “All the different kinds of private labour, which are carried on independently of each other... are continually being reduced to the quantitative proportions in which society requires them.”

a mere transfer. Rather, the duration of workers' productive labor is responsible for generating surplus-value, or the source of profit in Marx's theory. In order to understand Marx's argument that labor is the exclusive source of surplus-value, it is necessary to distinguish between the value of labor power and the actual value that labor produces during the course of production.

Labor power, or the ability of a worker to perform labor for a specified period of time, is what the capitalist purchases by paying wages. For Marx, the value of labor power, or wages, is determined in the same way as any other commodity, by the socially necessary labor time that is required to produce it. The value of labor power, then, is determined by the amount of labor time that is required to produce a sum of value that on average will maintain the worker with undiminished capacity to perform labor. That is to say, when supply for labor equals demand for labor, wages fluctuate around a magnitude that permits workers to purchase enough basic life necessities to subsist and maintain their capacity to perform labor.⁵

Capitalists recoup the cost of the labor power they purchase, by having workers produce a sum of value that is equal to their wages. The labor time that workers spend producing a sum of value that is equal to their wages, Marx called "necessary labor." However, after wages have been recovered, workers spend a portion of the workday performing "surplus labor" wherein they produce a sum of value, "surplus-value," which is over and above that which they receive as wages and, thus, for which they receive no equivalent.⁶ For Marx, then, the secret origins of profit lie not in exchange or in the

⁵ Included in the value of labor power, according to Marx, is a sum that will permit workers to raise a family and thereby replenish the economy's stock of available workers.

⁶ "During the second period of the labour-process, that in which his labour is no longer necessary labour, the workman, it is true, labours, expends labour-power; but his labour, being no longer necessary labour, he

employment of capital, but rather with the consumption of labor power, the one commodity that has the unique quality of producing more value than it itself contains. Owing to surplus producing capacity of workers' labor, Marx denoted investment that is directed toward hiring workers as "variable capital," due to workers ability to augment the existing capital value invested by performing surplus labor.

According to Marx's (1981) theory, all economic value from the production of output, in the form of profit, interest, rent and wages, is created from the labor time of workers, as commodity producers. The total magnitude of value, which capitalists divide among themselves as profit, interest, rent, according to Marx (1981), is ultimately determined by the duration of labor time that workers spend producing value over and above that which is requisite to pay their wages.⁷

Total economic value, then, is determined by workers labor time and profit is determined by the portion of that labor time in which workers perform surplus labor. The surplus-value portion of the total value of the output, which is created by the surplus labor of workers, is then distributed as income between capitalists (industrial and financial) and landlords in the form of profit, interest and ground rent, respectively.⁸

creates no value for himself. He creates which, for the capitalist, has all the charms of a creation out of nothing. This portion of the working day, I name surplus labour-time, and to the labour expended during that time, I give the name of surplus-labour" (Marx 1909: 240-241).

⁷ With respect to the source of profit ("surplus-value"), Marx argued that it cannot originate in market exchange with arbitrage, buying low and selling high. While some individuals and firms can profit in this way; at the aggregate, however, this practice merely results in a redistribution of *existing* value. The profits of these individuals and firms come at the expense of other individuals' and firms' losses. In such instances, no additional value is created. This is in stark contrast to the prevailing reality of capitalism in which the *total* magnitude of value grows.

⁸ Surplus-value is to profit as value is to price. At the industry level, commodity prices do not to reflect actual labor time expended in their production due to the influence of variations in supply and demand that result from free capital mobility and competition. Variations, between industries in the rate of surplus-value attracts (retracts) capital flows in search of the highest possible return. As capital flees industries that extract less surplus-value from workers in favor of industries that extract more surplus-value from workers, market prices and profits diverge from actual values and surplus-values. As output (supply) increases in industries that

Marx's labor theory of value points toward a damning and controversial conclusion: a tendency for the rate of profit to fall. The law of the tendential fall in the rate of profit, Marx (1993) regarded, "in every respect" as "the most important law of modern political economy, and the most essential for understanding the most difficult relations." Due to capitalism's tendency to increase the productivity of labor through the accumulation of labor-saving capital (capital accumulation) the socially necessary labor time required to produce commodities tend to fall and - in accordance with his theory that value is determined by labor time - so do the commodity values around which actual market prices gravitate. While the resulting increase in the productivity of labor lowers the cost of production, this process displaces the goose that lays the golden egg – workers' expenditure of labor time. As more of each additional dollar of investment is allocated to purchase machines relative to labor power, the surplus producing potential of capital investment declines.⁹

extract more surplus-value, prices and therefore profits fall below the actual values and surplus-values produced. Conversely, as output (supply) decreases in industries that extract less surplus-value, prices and profits rise above the actual sums of value and surplus-value produced. This process tends to eliminate profit differentials between industries as surplus-value is constantly being redistributed between the ranks of the capitalist class through fluctuations in market prices that result from changes in supply and demand. At the aggregate level, total price, according to Marx, is equal to and determined by total value, and total profit is equal to and determined by total surplus-value

⁹ The same process can be described, perhaps, in more intuitive language. The accumulation of labor-saving capital increases the productivity of labor. As more total output is produced with the same (or even less) number of workers (depending on the degree in which labor productivity increases) the per-unit cost of production falls. Given a sufficiently competitive economy, capitalists must lower the selling price of their commodities to reflect new and less expensive production costs or risk losing market share to those who do. Over time, as capital accumulates, the price of output tends to fall relative to the price of inputs, the amount of money that was initially invested. Marx's theory of the tendential fall in the rate of profit is often implicated as a theory of economic crisis and of the trade cycle (Granados 2013, Shaikh 1978, Kliman et al. 2013) and most recently as an important cause of the 2008 Great Recession (Carchedi 2012, Kliman 2012, Roberts 2016). Marx's theory of the tendential fall in the rate of profit is discussed in the following chapters, as it has been implicated as an important factor in Kliman's (2012) explanation of the 2008 Great Recession. Kliman's (2012, 2013, 2014) work factors considerably throughout this study, as his analysis counters the popular narrative that neoliberalism achieved a redistribution of income, from labor to capital. Moreover, as I discuss in greater detail below, his empirical analysis demonstrates a trendless labor share during the run up to the Great Recession. Moreover, Kliman is not alone in his acknowledgment of the contemporary relevancy of Marx's theory of the tendential fall in the rate of profit. Recently both Carchedi (2012) and Roberts (2016)

Marx, had arrived at a theory that emphasized the role of exploitation to explain the *origin* of the streams of income that accrue to capitalist society's different social classes. Marx, for his part, believed that the labor theory of value marked a great "scientific discovery," with respect to revealing the hidden exploitive relationship that lies behind "value," and therefore all economic forms of bourgeois society. One "economic form" in particular that is implicated as a force governing distribution between labor and capital is the rate of accumulation. The process of accumulation and the rate of profit are related in important ways and the implications of their relationship are wide ranging. We have just discussed how, according to Marx, accumulation tends to bring about a decline in profitability. However, it is the rate of profit that provides the impetus for capital investment in the first place (Marx 1969).¹⁰ The rate of profit is therefore implicated as a driving force in Marx's "general law of capital accumulation."

The Rate of Profit, Accumulation of Capital and the Labor Share

Within Marx's overall theory of *Capital*, it is his understanding of accumulation as it relates to his tendential fall in the rate of profit that comes closest to specifying the mechanisms that govern the general distribution between capital and labor.

Marx's theory of the tendential fall in the rate of profit is implicated heavily in the change in the profit (labor) share. The profit (labor) share is by definition the product of the rate of profit and the ratio of accumulated capital to national income.

have made similar arguments in regards to the roots of the 2008 Great Recession, namely that they lie in falling profitability and that Marx's theory fits the empirical facts well.

¹⁰ Given the mutually interacting and feedback effects between capital accumulation and the rate of profit, there is a question as to which variable governs the relationship. The results of Granados (2013:1) econometric analysis confirmed that, "[s]tatistical evidence rather supports the hypothesis of causality in the direction of profits determining investment and, in this way, leading the economy towards boom or bust."

$$\frac{P}{Y} = \left(\frac{P}{C} \right) \left(\frac{C}{Y} \right)^{11}$$

This means that change in the profit (labor) share is approximately equal to the change in the rate of profit multiplied by the change in the ratio of accumulated capital to national income. Marx's theory implies that the rate of profit and the ratio of accumulated capital to national income will tend to move in opposite directions. As a greater percentage of each dollar of investment is allocated to the purchase of additional capital equipment, while a smaller percentage of each dollar invested is directed toward employing additional workers, the amount of new value added per dollar of investment falls.¹² The upshot of this

¹¹ Where,
 P = Profit
 Y = National Income
 C = Capital

$$\frac{P}{Y} = \text{Profit Share}$$

$$\frac{P}{C} = \text{Profit Rate}$$

$$\frac{C}{Y} = \text{Ratio of Capital to National Income}$$

¹² This can be illustrated with another accounting identity that decomposes the rate of profit as the product of the profit share and the reciprocal of the ratio of capital to national income.

$$\frac{P}{C} = \left(\frac{Y}{C} \right) \left(\frac{P}{Y} \right)$$

Where,
 P = Profit
 C = Capital
 Y = National Income

$$\frac{P}{C} = \text{Profit Rate}$$

$$\frac{Y}{C} = \text{Reciprocal of the Ratio of Capital to National Income}$$

$$\frac{P}{Y} = \text{Profit Share}$$

This accounting identity demonstrates, that the rate of profit will fall in proportion to the fall in the *reciprocal* of the ratio of national income to capital, *ceteris paribus*, i.e., given a constant rate of exploitation. This

mathematical relationship is that the profit (labor) share will remain constant if the fall in the rate of profit is matched by a proportional rise in the ratio of accumulated capital to national income.

Marx's theoretical insights are implicated heavily in Piketty's (2014:10) analysis of *Capital in the Twenty-First Century*, who argues that the former's theory of accumulation remains "relevant in several respects," and "contain a key insight that is as valid for the study of the twenty-first as it was for the nineteenth."

Piketty (2014) has underscored the same decomposition of the profit share that we expressed in the accounting identity above as "the first fundamental law of capitalism" Using different symbology he expresses the relationship as, $\alpha = r * \beta$.¹³ As I discuss later, Piketty, believes that the structural tendencies that are implicated in this relationship differs from those that are specified by Marx's theory of the tendential fall in the rate of profit. Marx, he argues, failed to grasp the full significance of capital's potential to increase the productivity of labor. However, as I will discuss later, Piketty has quite peculiar different definition of capital that is not directly comparable to the concept used by Marx or neoclassical economists (Solow 2014, Galbraith 2014). For Piketty theorizes capital as a factor of production but he defines it as wealth in general, as the sum value of all financial assets.

Nevertheless, Piketty's work constitutes a return to methodological holism that

demonstrates, then, that every *increase* in the ratio of capital to national income (see previous accounting identity) will result in a decline in the rate of profit, *ceteris paribus*.

¹³ Where,

α = Capital (profit) Share of National Income

r = Rate of Return

β = Ratio of Capital to National Income.

characterized classical political economy. Despite his theoretical differences with Marx, as they relate to the latter's law of the tendential fall in the rate of profit, his units of analysis are capital and labor, and the object of his inquiry is the discernment of systemic "laws" that govern the distribution of income between these social aggregates. Like Marx – who once criticized Ricardo for "seeking refuge in organic chemistry" to explain the tendential fall in the rate of profit - Piketty does not search outside of the capitalist economic system for the causes of its outcomes. Piketty does not explain capital's concentration of income by way market imperfections, corruption, or other external factors. Rather, according to Piketty (2014), the more unencumbered the market is, the more efficient the laws that govern distribution in favor of capital will operate. The forces of income "divergence" in Piketty's model are inherent to capitalism as an economic system.

The Rise of Neoclassical Economics and Factor shares

Despite Marx's best efforts to reclaim Ricardo's tradition, the shift toward marginal, "neoclassical" economics was already underway. By the time Marx drafted his *Contribution to the Critique of Political Economy*, political economy was suffering a deep decline from which it would never fully recover. As Clark (1991: 146) writes, the "modification, or in some cases the abandonment, of the labor theory of value" gained momentum as early as the 1830s. The Political Economy Club hosted numerous debates concerning the efficacy of value theory during this time. Clark, continues,

The upshot of the debates was a nearly universal rejection of the labour theory of value in favor of some kind of 'adding up' theory, according to which the revenues of land, labour and capital could be determined independently of one another, somewhat in the manner of Adam Smith..., by the interaction of supply and demand.

The neoclassical transition was paved largely by William Stanley Jevons, Carl Menger, and Léon Walras. While important differences exist between the early marginalists, they were consistent in their belief that economics had to break with the value theories that had underpinned the classical tradition. Whereas the classical economists endeavored to develop an *objective* measure of *value*, based on necessary labor time, the marginalists, in contrast, developed a theory of *price*, “marginal utility,” based on individuals’ subjective evaluation (preference) of one commodity relative to another, in the context of existing productive possibilities. Far from just a mere theory of price, however, the marginal framework (individual preference in the context of existing productive possibilities) became the preferred method in which virtually all economic behavior is explained, including but not limited to production, income distribution, exchange ratios, outputs, employments, consumption and savings, accumulation, and the money supply.

It is often argued that the dissolution of classical political economy marked a decisive shift from economic questions relating to the distribution of wealth between social classes, or between capital and labor (Milonakis and Fine 2009, Clark 1991). It is true that the neoclassical school, based on the theory of marginal utility, ruled out exploitation as an explanation of income distribution, as each factor of production is paid according to its marginal product.¹⁴ Moreover, the overall dominance of marginalist economics – whose

¹⁴ The emphasis on individual preference marked a decisive shift in methodology. The science of the economy now centered on a microanalysis of individuals’ economic decision making. The aggregate economy was explained in terms of its individual parts, i.e., isolated and pleasure seeking individuals, striving to maximize their pleasure and minimize their pain. According to Jevons, the psychology of individuals as economic agents, apply universally as expressions of human nature, and therefore seemed to preclude an examination of the historical, social, and political context in which individual action takes place. In his 1876 lecture on the “The Future of Political Economy” Jevons proclaimed that “[t]he first principles of political economy are so widely true and applicable that they may be considered universally true as regards human nature...” Jevons continues, “I should not despair of tracing the actions of the postulates of the political economy among some of the more intelligent classes of animals” (quoted in Schabas 1995:198).

unit of analysis is the rational individual who seeks pleasure and avoids pain – would eventually displace definitions of social class based on factor ownership in favor of a conception of class that corresponded to the disaggregation of all individuals into various income percentiles.

Ironically, however, empirical investigations of factor incomes flourished during the neoclassical period, many decades after the demise of classical political economy. Throughout the 19th century, capitalist economies across Europe experienced reoccurring bouts of inflation, depression, and stagnant growth. In an effort to better understand these realities, some economists continued to maintain a macroeconomic orientation, while various official bodies seemed especially enamored by the question of the relationship between economic downturns and the distribution between profit and wages.

Alfred Marshall, (1926: 284-288) for instance, was summoned on two different occasions – by the Gold and Silver Commission in 1887 and the Indian Currency Committee in 1899 - to report on, among other things, the effects of economic depression on real wages and profitability. In both instances, and in contradistinction to the prevailing consensus at the time, Marshall (1926: 284-288) concluded that (relative to profit) real wages, in the short run, tend to rise under deflationary conditions, and tend to fall during periods of economic recovery.

However, it wasn't until Cobb and Douglas' (1928) surprising discovery of statistical evidence - which appeared to demonstrate, over the long run, a historical constancy in the capital and labor distribution of output in developed nations - that factor shares began to command the serious attention of the macroeconomists. This evidence

seemed to suggest that as economies develop, the income of labor and capital grow at approximately the same rate.

To describe this reality, Douglas and Cobb developed a production function that had the unique property of producing constant factor shares, irrespective of changes in the amounts of capital, labor, and technology employed, assuming that each factor earned its marginal product. The most standard formulation of the Cobb-Douglas production function is expressed as $Y = AK^\alpha L^{1-\alpha}$ where “ Y ” is total output, “ A ” is total factor productivity, “ K ” is capital, “ L ” is Labor, and the coefficient “ α ” is a constant between zero and one that is a measure of capital’s share of output. The Cobb-Douglas reflects an elasticity of substitution between capital and labor that is exactly equal to one. The coefficient α determines both the capital and labor shares of income.

In the context of our previous discussion concerning the determinant relationship between the profit (labor) share and the rate of profit and the ratio of capital to national income, the significance of the Cobb-Douglas – due its specification of an elasticity of substitution exactly equal to one - resides in its assumption that the marginal productivity of capital falls exactly in the same proportion as capital accumulates. This indicates that the rate of profit (the return on capital) and the ratio of capital to national income move in proportionally opposite directions, resulting in a constant profit (labor) share. The application of the Cobb-Douglas production function produced estimates of labor and capital shares that were subsequently proven to be accurate by results that were later obtained by much more robust data (Douglas 1976). Yet, as I will discuss later, Piketty (2014) has recently questioned the plausibility of an elasticity of substitution equal to one over the very long term. Based on historical data from the eighteenth-century to the present,

the elasticity of substitution appears to gravitate somewhere between 1.3 and 1.6, which in effect has produced a slight increase in the profit share in rich countries, over the long run.

Economists' fascination with factor shares was bolstered further following Keynes (1939:48) report of a fifty-five year constancy in Great Britain's Labor Share. Keynes cited very similar statistics for the US economy between 1919 and 1935. That the share of output allocated to labor continued to hold constant in both countries, over many decades, and "irrespective apparently of the level of output as a whole and of the phase of trade cycle," he regarded as "a bit of a miracle." Keynes (1939) discovery came in the context of his defense of a position that he had put forth in *The General Theory of Employment, Interest, and Money*. There Keynes (1936) argued:

But in the case of changes in the general level of wages, it will be found, I think, that the change in real wages associated with a change in money wages, so far from being usually in the same direction, is almost always in the opposite direction..... This is because, in the short period, falling money wages and rising real wages are each, for independent reasons, likely to accompany decreasing employment; labour being readier to accept wage-cuts when employment is falling off, yet real wages inevitably rising in the same circumstances on account of the increasing marginal return to a given capital equipment when output is diminished

Keynes pointed out that Marshall had provided little in the way of a theoretical explanation as to why (at least initially) real wages tend to rise (fall) during economic depression (recovery), Keynes (1939) wanted to believe that this phenomenon could be explained in terms of decreasing marginal cost associated with a decline in output. Assuming competitive conditions, Keynes held that price is determined by marginal cost. Moreover, marginal cost, at least in the short period, is equivalent to marginal wage cost. During periods of economic downturn - as output, and employment decline - the prices of commodities tend to fall faster than falling nominal wages.

What Keynes could not explain, however, was why the relationship between rising (falling) real wages and depression (recovery) seemed to hold only between 1880 and 1886, the periods that Marshall had examined. In the decades following Marshall's investigation (1886 - 1914) real wages tended to fluctuate positively with output. As Keynes reconsidered the merit of his initial assumption regarding the equivalency between marginal cost and price, he acknowledged that his argument largely hinged on whether production tends to take place on a scale at which marginal costs increase with increases in output.¹⁵

Exploring the matter further, Keynes (1939:48) discovered a statistical phenomenon that, "confirm[ed] the probability of constant or diminishing... profit per unit of output when output increases;" namely, a fifty-five year constancy in Great Britain's labor share. Keynes cited very similar statistics for the US economy between 1919 and 1935. That the share of output allocated to labor continued to hold constant in both countries, over many decades, and "irrespective apparently of the level of output as a whole and of the phase of trade cycle," he regarded as "a bit of a miracle."

The upshot of Keynes' observation, as it relates to our previous discussions about the profit (labor) share, suggests that the elasticity of substitution between capital and labor closely approximates one. That the marginal productivity of capital appears to fall in

¹⁵ "Indeed, it is rare for anyone but an economist to suppose that price is predominantly governed by marginal cost. Most business men are surprised by the suggestion that it is a close calculation of short-period marginal cost or of marginal revenue which should dominate their price policies. They maintain that such a policy would rapidly land in bankruptcy anyone who practiced it. And if it is true that they are producing more often than not on a scale at which marginal cost is falling with an increase in output, they would clearly be right; for it would be only on rare occasions that they would be collecting anything whatever towards their overhead" (Keynes 1939:46).

proportion to its growth; or stated another way, the rate of profit (return on capital) tends to decrease in proportion to the rate at which the capital stock increases.

Throughout the mid-20th century, constant factor shares were frequently reported at the International Economic Association conference on income distribution (Glynn 2009). Moreover, the reported constancy of labor shares figured prominently in economic textbooks, and published research (Kaldor 1961, Marchal and Ducros 1968). By the 1970s, however, analysis of factor shares began to wane considerably.

Atkinson (2009) has emphasized two primary reasons for why interest in the factorial distribution of income declined. First, there was a general acceptance among economists that factor shares remained constant. Second, a growing interest in the personal distribution of income emerged, in the context of an increasing prevalence and recognition of mixed income groups that no longer seemed to fit the classical conception of social class, which was based on ownership of factors of production.

In recent decades, however, factor shares have again become popularized, as has an analytical focus on social class, and class struggle. Celebrated leftist economist Thomas Piketty (2014) for instance warns of a looming growth in the capital share of national income that will likely produce “arbitrary and unsustainable” inequalities that are “incompatible with the meritocratic values and principles of social justice that are fundamental to modern democratic societies.” A number of recent inequality-related studies have reported a marked decline in the US labor share during the run up to the Great Recession (Armenter 2015, Kristal 2013, 2010, Magdoff and Foster 2013, Mohun 2014). These studies coincide with reports that hourly compensation failed to keep pace with increases in productivity (output per labor hour) in recent decades (Mishel et al. 2012). The

decades in which labor's share is reported to have fallen - and which workers' pay has reportedly failed to keep pace with productivity - is commonly referred to as "neoliberalism." Neoliberalism is generally characterized as a political and economic model in which higher profitability is achieved through policies that economically disempower labor. In the next chapter, I will discuss the theoretical implications of a decline in labor's share. This discussion will then transition to survey the conclusions of recent labor share investigations.

Chapter 2

Theoretical Implications of a Fall in Labor's Share

The societal implications of a declining labor share, as a driving force of inequality, are potentially wide ranging. In the present section, I summarize some implications that analysts have drawn with respect to a decline in labor's share – including a potential increase in inequality with the personal distribution of income, which in turn has been linked to poor human health and challenges to democratic governance. Finally, a fall in labor's share has also been implicated in the poor economic performance of capitalist economies. Before embarking on this part of the discussion, let's briefly turn our attention to why the factorial distribution of income matters when most inequality-related investigations tend to focus on the personal distribution of income.

There are those that explicitly emphasize the primacy of personal and household income distribution as compared to the distribution between labor and capital (Solow 2015). One criticism of the latter concerns the extent to which occupation, income, and property ownership are no longer viewed as corresponding to the classical conception of social class (Atkinson 2009, Kristal 2013). For instance, Lydall (1968:2) remarks:

Adam Smith, Ricardo, and Malthus took it for granted that landlords were rich, labourers were poor, and capitalists were somewhere in the middle....Much of the discussion of the problem of distribution is still carried on in these terms, despite the fact that it is well known that many landowners are poor, many employees earn more than some capitalists, many property-owners work and many workers own property.

It is true that the series of characteristics that traditionally distinguish “workers” and “capitalists,” as ideal types, don't always move together in lockstep. It is certainly possible for an individual to share features associated with workers and capitalists, a

condition that Wright (1985) has termed “contradictory class location.” But can the classical conception of social class be dispensed with so easily? I offer two justifications for not dispensing with the classical schema, including:

1. The immense concentration of capital ownership among the rich and the benefits that are afforded as owners of capital.
2. The function of the capital-labor distribution, as a fundamental determinant of the personal distribution of income.

As Piketty (2014:40) has pointed out, “[i]nequality of [capital] wealth – and of the consequent income from capital – is in fact always much greater than inequality of income from labor.” It is true that a sizeable portion, some 47%, of the US citizenry own stock. This phenomenon is largely the result of the shift from employer-funded pensions to self-funded 401K and IRA retirement plans which became standardized in the 1980s. This phenomenon, however, does not crucially complicate the classical distinction between workers and capitalists, because *size matters!* Despite the fact that nearly half of the population owns stock, the bottom 80% of US households owns a mere 8% of all shares. Again, *these exist primarily in the form of self-funded retirement plans, which function as retirement income to be consumed – not sufficient to function as capital to be accumulated.* Nearly 40% of all outstanding shares are owned by the top 1% of US households, and the lion’s share of capital is reinvested to grow additional wealth. For instance, only an estimated 8 percent of capital income, in the form of dividends and interest, was distributed to US households in 2007 (Kristal 2013, 2010).

Distinguishing between members of society whose income is primarily derived from the ownership of capital (i.e., wealth that is expansionary in nature) vs. those who primarily derive their income by selling their ability to perform work, yet who also own

just enough wealth to generate income for consumption after retirement should be a priority of class analysis. Returns on investments that are absorbed through consumption (instead of accumulated) do not function as capital and ownership of such investments do not make one capitalist. The segment of the population whom the classical economists referred to as “labourers” and whom Marx referred to as the “proletariat,” remains discernible by virtue of their dependency on wage work, i.e., the forced sell of their labor power.¹⁶ Obviously, this dependency in which workers find themselves is not broken in instances in which their income is invested in 401Ks.

Nevertheless, the debate concerning the degree to which owners of capital and labor exhibit their traditional associated characteristics misses a more fundamental point concerning the analytical utility of labor-capital schema. Lydall (1968) questions the efficacy of factor share investigations because capital and labor appear to him to be poor *descriptive* categories for delineating between the characteristics of individuals. But Lydall’s conception of capital and labor, here, contrasts with the general focus of the classical political economists, and especially Marx (1903), who viewed the relationship between capital and labor as both a fundamental cause and condition of capitalism’s patterned outcomes or “laws of motion” of capitalist development.

In more contemporary language, Milonakis and Fine (2009:13), have characterized the classic political economists as a tradition of intellectual thinkers that were,

...interested in questions of long term economic development, and focused their attention on the evolution of the economic system as a whole, at the level of economic aggregates. Such methodological holism or methodological collectivism gives primacy to the social whole or totality, as opposed to individuals, without necessarily precluding

¹⁶ For Marx, the proletariat is alienated from its labor, i.e., forced to relinquish control of its labor, by virtue of its non-ownership, or limited ownership of means of production.

analysis pitched at the level of the individual. What it implies, however, is that institutions, classes, national economy and society at large have an autonomous existence and as such, mold and influence the behavior of individuals.

The utility of these constructs in the hands of the classical economists and Marx reside in their *analytical* as opposed to *descriptive* nature.¹⁷ Their primary focus was on the identification and analysis of the systemic laws of capital that govern the distribution of income between different classes - economic categories that are personified as groups of individuals, but which have an autonomous existence that are irreducible to the will and desire of the individuals in which they are manifest. Piketty (2014), who characterizes his

¹⁷ As discussed in the first chapter, for Marx, capital, or privately owned productive forces create the social conditions of alienated labor, conditions in which workers are *forced* to sell their labor power due to their non-ownership or limited ownership of capital. According to Marx's (1903) labor theory of value, alienated labor is the hidden source of surplus-value, the hidden engine that drives the accumulation of capital and economic growth. The labor power of alienated labor, according to Marx (1903), has the unique quality of being the one commodity in the market that systematically produces a greater value than its own value. In contrast, capital merely transfers its value in piecemeal fashion to the final product as it depreciates. What goes in comes out; no surplus or extra value is produced by the employment of capital, according to Marx. Understanding the difference between labor and labor power is crucial for understanding the creation of surplus value. Technically, alienated workers (workers who are forced to part with their labor) do not sell their labor directly. Rather, they sell their labor *power*, or *ability to perform a particular type of work*, under specified conditions, for a specified duration of time. The price (the wage) of labor power is determined not by the value that actual labor produces, but rather (on average) by a sum of value that will allow for its reproduction, i.e. by an amount that reproduces the conditions in which workers are forced to sell their labor power, but which is also sufficient to ensure that the quality of the labor is not compromised by starvation, lack of clothing, shelter, or other basic life necessities. During one part of the workday, workers expend their (necessary) labor to produce a sum of value that is equal to their wage. Another part of the workday is dedicated to the production of surplus-value, wherein workers expend their (surplus) labor in the service of producing a sum of value that is over and above their wage, the price of their labor power. Commodity production through the employment of alienated labor subjects the whole economy to what Marx refers to as the *law of value*. The law of value requires that producers spend no more labor time producing their commodities than is absolutely necessary, under given social conditions. Labor time that exceeds the socially necessary average does not produce value according to Marx. As technological innovation advances, capital assumes, more of a labor saving form. As products become cheaper to produce, their market prices tend to fall, relative to the costs of the capital that was invested, thereby producing a tendency for the rate of profit to fall and economic crises. After capital value is sufficiently destroyed through deflation, profitable investment opportunities emerge once again and new investment drives economic recovery, to begin the cycle anew. Marx believed that capitalists were powerless to thwart this process. The logic of capital that is governed by the law of value is not reducible to the wishes or intentions of the individuals who embody this economic category. They are not "responsible for relations whose creature [they] socially remain, however much [they] may subjectively raise [themselves] above them."

work as a contemporary expression of political economy, largely keeps with the classic tradition as he attempts to demonstrate the wide-ranging societal ramifications of what he refers to as the “fundamental laws” of capitalism. We explore Piketty’s work in greater detail below.

Nevertheless, problematizing the concepts of labor and capital based on their apparent shortcomings as descriptive categories of people is reminiscent of what Paolucci (2011) refers to as the failure to distinguish *historical and contingent* developments from *structural and necessary* relations. The former are emergent (often short-lived or quickly evolving) developments of a given social order that do not constitute a break in the operative function of the fundamental- “structural and necessary” - conditions that continue to define the inner workings and evolutionary character of that social order. The point is illustrated in Paolucci’s critique of Wright’s (1985) complaint against Marx whose categories (based on ownership of capital and labor) of social class largely fail in terms of being mutually exclusive and exhaustive. It is worth quoting Paolucci in full.

Here, Wright is concerned with slotting individual people who possess characteristics into a framework. For Marx, class analysis, classes – or, more accurately, class relations- are often treated as irreducible units of analysis, not simply categories for plotting individuals. Analyzing class relations with observation carved at the individual level is ill suited for explaining historic-structural-causal properties on their own terms and thus mystifies and obscures capitalism’s most important social relationships... Does Wright’s concept of “class locations” tell us anything about “class relations” at the level of how classes relate to one another as classes? Class locations are contingent on historical and structural changes as well as the emergence of additional classes within the main classes (capitalists and workers), the latter of which are necessary relations. Wright makes little distinctions between necessity and contingency in his model

In the hands of the classical political economists, the labor–capital schema are *analytical* categories that represent the social conditions, and systemic processes, of bourgeois society. These social conditions, including their evolutionary character, are not reducible to the will of individuals who internalize them, but rather operate according to their own relational logic. Consider Marx’s (1903) disclaimer in the preface to *Capital*:

But here individuals are dealt with only in so far as they are the personifications of economic categories, embodiments of particular class-relations and class-interests. My standpoint, from which the evolution of the economic formation of society is viewed as a process of natural history, can less than any other make the individual responsible for relations whose creature he socially remains, however much he may subjectively raise himself above them.

The utility of the concepts of labor and capital in this context are analytical in nature, as they are used to reveal the inner working of capitalism. Piketty (2014) - who recently asked his fellow economists to follow him in reviving the tradition laid out by Malthus, Ricardo, and Marx – adopts a similar theoretical and methodological orientation in his analysis of *Capital in the 21st Century*.

As mentioned above, capital income is accumulated (reinvested) to grow additional wealth. Recall that only 8 percent of capital income was distributed to US households in 2007 (Kristal 2013, 2010). According to Piketty (2014), the tendency for capital to accumulate should alarm even those that emphasize the primacy of the *personal distribution* over the factorial distribution of income. Piketty (2014) predicts that the tendency for capital to accumulate, coupled with the tendency for the return on capital to exceed the growth rate, will lead to dramatic increase in the profit share of national income. Given that compensation and profits (in the form of dividends, interest, and rent) are the primary sources of personal income, a variation in the distribution between labor and

capital, as shares of national income is likely to affect how overall income is stratified within populations, i.e., within the personal distribution of income (Solow 2014, Piketty 2014, Atkinson 2009).¹⁸ Piketty fears that the coming rise in the profit share will produce levels of inequality that potentially “incompatible with the *meritocratic values and principles of social justice fundamental to modern democratic societies*.” Moreover, evidence suggests that many social problems associated with human health and well-being stem from high levels of inequality within the personal distribution of income. To the extent that the capital labor distribution is a determinant of the personal distribution, the former is potentially linked (indirectly) to the social problems that have been (directly) associated with the latter.

Imagine, for instance, that labor’s share declines, leaving a greater share allocated as profit. If in turn corporations distribute a constant percentage of their profits as dividends the *personal income* of those with significant stock holdings will rise relative to individuals whose incomes are mainly comprised of compensation. The latter would include those residing in the middle of the income distribution for instance, whose income (median income) is arguably the best rubric for estimating “*quality of life*” (Birdsall and Meyer 2014).¹⁹

¹⁸ Personal income, as defined by National Income Product and Accounts (NIPA) includes income from wage and non-wage compensation of employees, proprietors' income, rental income of persons, personal interest and dividend income, as well as government transfer payments (social security and benefits) and business transfer payments (insurance settlements).

¹⁹ Despite what has been said thus far about the link between the factorial and personal distributions, a change in one *does not necessarily* signal a change in the other. Using factor shares to illuminate trends within the personal and household distribution of income, might be a “valuable starting point,” but it is impossible to draw any direct links (Atkinson (2009: 8). One reason for this is because there is no simple correspondence between the amount of profit that corporations earn and the percentage of that profit that they distribute in the form of dividends and interest (personal income) to individuals or households. For instance, if corporations accumulate a smaller share of their profit and distribute a larger share in the form dividends or interest, total profit is not effected, yet the incomes of shareholders and lenders will rise. The resulting increase in the personal income of these two groups do not come at the expense workers’ wages but rather at the expense of corporations’ capital. Adding to the complexity of movements within the personal distribution

Inequality and the Factorial Distribution of Income

The indirect link between a rising (falling) capital (labor) share and increasing inequality within the personal distribution, implicates the former in a wide array of social problems. Populations that endure higher rates of inequality tend to experience poorer health outcomes. Lochner et al. (2001) found that high income-inequality contributes to increased mortality, particularly among near-poor whites. Likewise, Kahn et al. (2000) found that income inequality is linked to poor mental and physical health among women. In a landmark study that assembled data from hundreds of previous studies, over the course of thirty years, the authors conclude that societies with greater inequality are much more likely to experience poor health, violent crime, drug abuse, teenage births, mental illness, and obesity (Wilkinson and Pickett 2009).

High rates of inequality also have important implications for democratic governance. In Western capitalist societies, democracy is allegedly protected and maintained by a pluralist state that is responsive to the wide array of interests of the body politic. The ability of different interest groups to utilize their resources to influence public policy - lobbying lawmakers and campaign finance, for example - is key to the effective functioning of democracy. An obvious pitfall associated with this conception of

is the effect of inequality that exists *between* workers and *between* capitalists. It has been the case in recent decades that the incomes of higher paid workers have increased relative to lower paid workers. However, this phenomenon does not signal a transfer of wealth from workers to corporations, from wages to profit. Rather, total compensation is being distributed disproportionately between workers. With respect to the multidimensionality of income distribution, even Piketty (2014: 40) points out that the 'factorial' distribution in which labor and capital are treated as 'factors of production'... and the 'individual' distribution, which takes account of inequalities of income from labor and capital at the individual level - is in practice fundamentally important. It is impossible to achieve a satisfactory understanding of the distributional problem without analyzing both. Piketty's laws of capitalism therefore are primarily directed toward theorizing the systemic movements in the *factorial distribution*. The degree to which movements in the factorial distribution affect the personal distribution cannot be assumed a priori. Kliman and Williams (2014), for instance reported a marked rise in the distribution of dividends between 1977 and 2007, a period in which the rate of profit declined.

democracy, both in theory and practice, concerns the disproportionate influence of the rich and the potential for that influence to grow in step with their income.

A study that investigated the impact of elite groups on U.S. foreign policy concluded that business leaders and experts have the greatest ability to sway foreign policy but that the public as a whole has little or no influence (Jacobs and Page 2005). Similarly, in a study that examined the influence of high-income constituencies on a list of US public policy issues (including civil rights, the minimum wage, government spending, abortion), the author concluded that senators are consistently and substantially more responsive to the opinions of high-income constituents (Bartels 2009).

While these studies demonstrate that more affluent individuals exercise greater control over democracy as compared to non-affluent individuals, they do not specify the exact mechanisms by which this greater control is achieved. This question was taken up by Gilens (2005:793) who not only concluded that “government policy is uniquely responsive to the preferences of “affluent Americans” but that also, “the most obvious source of influence over policy that distinguishes high-income Americans is money and the willingness to donate to parties, candidates, and interest organizations.” Because Gilens’ study underscores the role of money specifically, it better isolates the potential effects of increased income inequality. If money is the mechanism by which the affluent control government, it is reasonable to assume that more control (less democracy) is achieved with a disproportionate rise in the income of the rich.

Under-consumptionism, Financialization and The Great Recession

Finally, a growing gap between workers' incomes and corporate profits are often implicated as a factor leading to poor economic performance. Many on the left subscribe to an "under-consumptionist" orientation which posits insufficient consumer demand as the general cause of economic downturns. Under-consumption is a popular concept that dates back to the early history of economic thought (Bleaney 1976). The concept is generally understood as a "crisis theory." Under-consumption theories are generally recognized as having two important elements: 1) In the absence of offsetting regulatory factors, capitalist economies naturally tend toward a state of depression, or crisis; 2) Capitalism's crisis prone nature is the result of a persistent tendency of insufficient consumer demand (Kliman 2011, Bleaney 1976). Flagging consumer demand, for instance, has been frequently reported as an important factor that contributed to the 2008 Great Recession.

The Monthly Review (MR) tradition, beginning with Baran and Sweezy (1966) argue that under the current juncture of monopoly capitalism, profit tends to rise as a share of net output. The corresponding decline in the income of the working class as a share of net output results in a decline in personal consumption demand as a share of net output. This decline in consumer demand, in turn, produces a negative feedback on investment demand, resulting in the decline of aggregate demand as a share of net output. The result is an economy that is plagued by excessive productive capacity and slow growth.

Later, the MR tradition, through the likes of Sweezy and Magdoff (1988), and more recently Foster and Magdoff (2008) theorized that the absence of investment outlets, in mature, monopolized capitalist economies, gives way to a system of increasing financial

speculation, a stage of capitalism that they refer to as “Monopoly Finance Capitalism.” In this stage, the economic system continues to suffer from stagnation, yet it stays afloat through the periodic creation of financial bubbles that ultimately burst, leading to reoccurring financial crises. Foster and Magdoff (2008) identify the roots of the 2008 Great Recession precisely under these terms.

There are other variations of under-consumptionism that implicate a decline in labor’s share but through different mechanisms. Whereas the MR tradition emphasizes the structural inertia of the monopoly stage of capitalism in determining the structure of income distribution, many on the left adopt an explanation that points largely to the success of the capitalist class in reconfiguring the structure of distribution for their own benefit. For example, many of the presenters at the August 2012 Union for Radical Political Economics (URPE) Conference forwarded very similar lines of reasoning with respect to the “causes” of 2008 Great Recession. David Kotz, for his part, argued,

All of the institutions of neoliberal capitalism contributed to ... a rising gap between profits and wages.... This encouraged accumulation but simultaneously produced a problem of realization [emphasis added] — who could buy the growing output of an expanding economy? In neoliberal capitalism this problem was resolved by growing consumer spending financed by household borrowing.... Such borrowing was made possible by the asset bubbles of increasing size produced by neoliberal capitalism and by a financial sector willing and eager to lend to households, in increasingly "creative" (and profitable) ways, with the growing asset bubble wealth serving as security for the loans... Once the real estate bubble burst, as all bubbles eventually must, the high level of household debt was rendered unsustainable. This led to a crash of both the real and the financial sectors, made more severe by the collapse of the high-risk derivatives created by financial institutions. If the crisis is to be resolved within capitalism, a new institutional structure must be created that will again promote long-run profit-making and stable accumulation. Both historical precedent and theoretical considerations suggest.... However, any new SSA [social structure of accumulation] emerges from complex struggles among various classes and groups, influenced by the character of the crisis during which the new SSA is

constructed.... First, if popular movements remain relatively weak, we may see the emergence of a "corporatist" SSA-- that is, a capitalist-dominated statist form. This would continue a neoliberal labor market but resolve the demand problem through rising state spending for military-national security purposes along with rebuilding of infrastructure (transportation, power). Such a corporatist SSA would be both repressive and militarily aggressive. Second, if popular movements grow in strength, a social-democratic SSA based on compromise between capital and labor might arise. This would allow wages to rise in step with labor productivity, while state spending for social purposes also rise.... If popular movements become strong enough, and radical enough, to force capital to compromise with labor, that suggests the socialist movement would also revive.

Likewise, Thomas Palley's rendition, of what he terms the "destruction of shared prosperity" argument communicates much of the same idea.

After 1980 the virtuous circle Keynesian model was replaced by a neoliberal growth model that severed the link between wages and productivity growth [emphasis added] and created a new economic dynamic. Before 1980, wages were the engine of U.S. demand growth. After 1980, debt and asset price inflation became the engine. The new model was rooted in neoliberal economics and can be described as a neoliberal policy box that pressures workers from all sides. Corporate globalization put workers in international competition via global production networks supported by free trade agreements and capital mobility. The "small" government agenda attacked the legitimacy of government and pushed deregulation regardless of dangers. The labor market flexibility agenda attacked unions and labor market supports and protections such as the minimum wage. Finally, the abandonment of full employment created employment insecurity and weakened worker bargaining power.... The new model created a growing 'demand gap' by gradually undermining the income and demand generation process. The role of finance was to fill that gap. Within the U.S., deregulation, financial innovation, and speculation enabled finance to fill the gap by lending to consumers and spurring asset inflation.

Finally, according to Richard Wolff

Capitalists no longer needed to raise real wages. Since the 1970s, they paid workers the same while computers raised labor productivity: what workers produced for capitalists to sell kept increasing. Surplus value (and profits) soared (stock market boom, rising financial sector, etc.)

while the wage share of national product/income fell. By making these changes, US capitalism confronted a classic contradiction. It paid insufficient wages to enable workers to purchase growing output [emphasis added]. The solution, led by the fast-growing financial sector, was two-fold. First, it cycled rising corporate profits and individual executives' wealth partly into major new consumer lending (mortgages, car loans, credit cards, and later student loans). That sustained growing mass consumption despite stagnant wages and so postponed an otherwise certain economic downturn. Second, financiers promoted profitable new investments for corporations and the rich (securities based on consumer debts and credit default swaps that insured such securities). Financial corporations displaced non-financial corporations as dominant in the US economy. Financial transactions based on consumer debts were in turn built on stagnant wages (the ultimate means to service that debt). By 2007 these capitalist decisions yielded a cyclical downturn coupled to long-run decline in workers' purchasing power.²⁰

Under-consumption theories of the Great Recession are legion among the Left. Notwithstanding conceptual variations, a broad consensus among the Left has incessantly argued that the Great Recession was caused by a decline in workers' incomes relative to profit. Wage repression allegedly boosted profitability while making consumers ever more dependent on debt to maintain their consumption levels (again see 2012 URPE Conference). Growing debt dependence in conjunction with high profits purportedly provided the impetus for the growth of financial markets and speculative investment behavior centered on buying and selling securitized debt. Speculative behavior led to increasing unbalanced growth between the "real" and the financial economy, expressed in overvalued - and hence unredeemable - financial securities. The effect was the bursting of the sub-prime, securitized debt bubble, which quickly reverberated throughout the US economy and ultimately, the global economy.

²⁰The conference website is <http://www.urpe.org/conf/sum/summerhome.html>

A transcription of the presentations, including the selected quotations from Kotz, Palley and Wolff, can be found at <http://thenextrecession.files.wordpress.com/2012/07/crisissummaries.pdf>.

A key feature of under-consumptionist reasoning is the notion that investment demand is ultimately a function of consumer demand. If the profit share of net output rises, the resulting fall in labor's share of income - and hence, labor's consumption - will negate further capitalist investment, they reason. The implication is that investment demand cannot, in the long run, compensate for a decline in consumer demand, hence stagnation and crisis. It is worth noting that both neoclassical economists and classical Marxists (those committed to advancing and developing further Marx's original theory of political economy) tend to reject the theoretical reasoning of under-consumption (Bleaney 1976). Marxist economist, Andrew Kliman (2011) for instance has rejected the under-consumption thesis on theoretical grounds, arguing that it ignores the role that capitalists play as both consumers and investors. If worker compensation declines as a share of net output, profits rise as a share of net output. The decline in workers' incomes is offset by a rise in profit. Total income is unchanged by a redistribution between workers and capitalists.

As beneficiaries of higher incomes, it is reasonable to assume that capitalists will generate additional consumption demand and investment demand in plant, equipment, and labor power.²¹ If capitalists, however, suffer declines in their incomes - i.e., falling returns

²¹ While it is implausible that capitalists will purchase all of the consumer goods that workers cannot afford; the expansion in capital investment, driven by higher profits, should result in additional employment at rising wages, which will contribute to the absorption of the commodity glut. As Harvey (2010:110) explains, "[t]he most important answer to the effective demand conundrum... [,] which follows logically from Marx's analysis - is that the solution lies in capitalist consumption. This is of two sorts: a portion of the surplus-value [profit] is consumed as revenues (e.g., basic goods, plus luxury goods and services), but the other portion is reinvested in either wage goods for the extra labourers to be employed or in fresh means of production [plant and equipment] ... [If we] [a]ssume that capitalists use their surpluses only in the further expansion of production. The extra demand for expansion today then mops up the surpluses of means of production and of wage goods produced yesterday. Surplus production internalizes its own increasing monetary demand!" Nevertheless, numbers of self-proclaimed Marxists (the Monthly Review tradition for instance) have adopted under-consumptionism. Its general popularity in Leftist circles might reside in its service as an anti-capitalist and anti-austerity ideology for political movements and militant trade unions (Bleaney 1976)

on their investments - they are likely to decrease their investment demand. Falling rates of investment will be followed by falling rates of employment and consumer demand. Hence, while a decline in consumer demand is always an important and persistent feature of economic crisis, Kliman and some others in the Marxian tradition view under-consumptionism as a symptom of an underlying fall in profitability (Carchedi 2012, Chesnais 2016, Roberts 2016). From this perspective, economic crises are rooted in falling profitability, not excessive exploitation of workers.

Kliman's (2011) analysis, however, goes beyond theoretical critique to address the empirical question of whether or not the Great Recession was rooted in a crisis of under-consumption. Kliman addresses this question in two different ways: first, by examining the thesis that workers were unable to maintain effective demand for consumer goods due to neoliberal wage repression; and second, by examining the ratio of investment to consumer demand (recall that for under-consumptionists, investment demand cannot, in the long run, compensate for a decline in consumer demand).

With respect to the first investigation, Kliman (2011) finds no reduction in the ability of workers to consume output under neoliberalism. The mistake made by under-consumptionists, he argues, is to look only at wages and salaries, rather than the total compensation that workers receive. The latter includes health and retirement benefits, and employers' contribution to social security. These forms of income have increased markedly in recent decades, and in effect have compensated for the decline in the wages and salaries share of output. With respect to the question of whether investment demand can compensate for consumer demand in the long run, Kliman demonstrates that even if

workers' ability to consume are hampered over a prolonged period, there is still reason to assume that investment demand can offset a fall in consumer spending. Indeed, he argues that is precisely what occurred in the US between 1933 and 2008, where Investment demand increased roughly five times as much as consumption demand.

Kliman discovers the roots of the Great Recession in stagnant profitability. Contrary to those who give accounts of a resurgence in profitability after the implementation of neoliberal reform, Kliman argues that the rate of profit failed to recover in a sustained fashion following the highs that were achieved during the Post-War period. This has led to decades of economic stagnation to which the US Treasury has responded with periodic stints of monetary stimulus. To keep the economy from experiencing a long and persistent economic crisis on par with that of the Great Depression, Kliman argues that US monetary policy has been to "paper over" the economic malaise with more and more debt. The "easy money" policies that are characteristic of debt buildups ultimately lead to speculation and financial bubbles in the absence of outlets for profitable productive investment. Such was the case of the securitized debt bubble that triggered the Great Recession. In the absence of a long and persistent economic crisis - that would sufficiently destroy capital values, see existing debts written off, and therein cheapen the overall cost of production - no sustained rebound in profitability is likely to occur. Kliman argues that the government's fear of a militant, anti-capitalist population (that would likely result from a prolonged economy crisis) has meant the continuation of government intervention and easy money policies that will preclude a sustained economic turnaround. One of the most illuminating features of Kliman's analysis, as it relates to this study, concerns his

investigation of workers' share of income. Kliman's findings contradict much of what has been written about profit, workers' pay, and neoliberalism.

Kliman's (2011) concludes that the underlying causes of the Great Recession are not neoliberal in nature per se but rather, endogenous to capitalism, and consistent with Marx's theory of the falling rate of profit. According to Marx's value theory, it is only workers that can create surplus-value (the systemic source of profit) in capitalist production. Machines - labor saving technology - merely transfer their value to the product under competitive conditions. What goes in comes out. Capitalists cannot arbitrarily mark up prices beyond their production costs, under competitive conditions. Marx therefore refers to such investment as "constant capital" The extra value – surplus-value – then, is derived through workers unpaid labor – or surplus-labor – where workers produce a value that is over and above the cost of their wage – the value of labor power. Capital investment that goes to hire workers is therefore denoted by Marx as "variable capital," due to its potential to create additional value. Competition, however, compels capitalists to lower their costs of production by implementing labor saving technology. The resulting increase in the productivity of labor lowers commodities costs of production. Yet this process displaces the goose that lays the golden egg. As more and more of each dollar of capital that is reinvested goes to purchase machines relative to additional labor, the surplus producing potential of investment declines.

The problem that has traditionally encumbered empirical verification of Marx's theory concerns the fact that the rate of profit is usually measured in nominal terms, as the product of the ratio of profit to employee compensation and the ratio of constant to variable capital. However the resulting product of this decomposition is affected by inflation –

increases in the money price of commodities. This makes it impossible to discern the proportion in which the actual, relative amounts of value invested to acquire means of production and to employ workers vary. In this context, “it is possible that relatively more value went to acquire means of production, which *tends* to raise the value composition, but that this effect was offset by accelerating inflation” (Kliman (2011)).

To circumvent this problem, Kliman developed an alternative decomposition of the profit rate into:

... movements caused by changes in the rate at which commodities’ money prices rise in relation to the commodities’ actual values; movements caused by changes in the ratio of profit to employee compensation, and movements caused by ‘everything else’... Almost the entire long-term fall in the rate of profit was... caused by changes in ‘everything else’. But once (1) and (2) have been set aside, it follows mathematically that ‘everything else’ is just the ratio of employment to the amount of capital invested in fixed assets, as measured in terms of labour time. Almost all of the long-term fall in the rate of profit is attributable to the decline in this ratio. In other words, it is attributable to the fact that employment consistently grew less rapidly than capital accumulated. This is precisely how Marx’s law explains the long-term tendency of the rate of profit to fall.”

A comprehensive analysis of Kliman’s formulation of the fall in the rate of profit and how it compares with Marx’s theory of value is beyond the scope of this analysis. However, both Marx and Kliman point to a contradiction in the logic of capital accumulation. Their analysis underscores an apparent limit that the former imposes on the latter. As I discuss below, this argument has a contemporary relevance as it relates to Piketty’s (2014) recent formulation of the “fundamental laws” of capital. Piketty hypothesizes that capital’s share of national income in economically advanced countries will increase dramatically over the next century, largely because the self- limiting relation

that Marx posits between capital accumulation and the rate of profit can be kept at bay given sufficient advances in productivity. We will discuss Piketty's formulation in greater detail below.²²

In conclusion of this chapter, much has been written about the social costs associated with rising inequality and a falling labor share in particular. I reviewed some of these accounts to underscore the significance of the labor share question and why it should warrant the continued attention of social scientists. To review, excessive income concentration has been implicated in poorer health outcomes among certain sectors of the population, as a threat to democratic governance, as the reason behind a wide array of social problems - including violent crime, drug abuse, teenage births, mental illness, obesity. While these studies measure income concentration within the personal distribution, increasing concentration of capital income within the factorial distribution is implicated as a potentially significant driver of concentration within the personal distribution; and therefore, the social conditions which accompany the latter. Finally, the factorial distribution itself has been implicated as an important cause of the 2008 Great Recession, notwithstanding important evidence that points to other causes.

²² For other recent examples in which Marx's value theory is utilized to explain the fall in rate of profit that led to the Great Recession see: Carchedi (2012) and Roberts (2016.)

Chapter 3

Recent Labor Share Investigations

The consensus, with regard to the constancy of labor's share that was reached in the early and mid-20th century has dissipated. In recent years, a number of inequality-related studies have reported a marked decline in the US labor share during the decades leading up to the Great Recession (Armenter 2015, Kristal 2013, 2010, Magdoff and Foster 2013, Mohun 2014). These studies coincide with Mishel et al's (2012) report that hourly compensation failed to keep pace with increases in productivity (output per labor hour) in recent decades.

Reports of a declining US labor share have not gone uncontested, however. Andrew Kliman's (2011, 2013a, 2014b) analysis continues to pose serious challenges to studies that report an increase in profitability and a fall in labor's share in the US. According to Kliman's findings, the share of national income that US workers have received - during the decades leading up to the great recession - has remained virtually trendless. Kliman argues that neoliberalism was unsuccessful in achieving a sustained recovery in the rate of profit for US corporations. Winship (2014) also presents findings that challenge the general account of the Left. Winship argues that hourly compensation and productivity increased at the virtually the same rate over the last 65 years. Winship (2014:1) exclaims, "... the charts used to demonstrate the supposed breakdown of this relationship obscure the reality that productivity and hourly compensation continue to track each other."

In this section I will survey the recent empirical investigations of labor's share and discuss some of the implications of these reported findings. The first part of this section

briefly explores the general theme of neoliberalism as the historical juncture in which labor's share is reported to have fallen.

Neoliberalism

The decades in which labor's share is reported to have fallen - and which workers' pay has reportedly failed to keep pace with productivity - is commonly referred to as "neoliberalism." The concept is employed frequently in the social sciences, particularly within the traditions of sociology, political economy, geography, and political science. While some writers have developed distinct formulations of the concept, there is considerable degree of overlap and agreement among the scholars who employ the term. Neoliberalism is generally characterized as a political and economic model in which higher profitability is achieved through policies that economically disempowered labor.

Perhaps the most influential use of "neoliberalism" as a theoretical concept comes from human geographer David Harvey. Harvey (2007:22) contends "...neoliberalism is above all a project to restore class dominance to sectors that saw their fortunes threatened by the ascent of social democratic endeavors in the aftermath of the Second World War...it has succeeded in channeling wealth from subordinate classes to dominant ones." More specifically, Harvey (2010:12) contends that "since the 1970s... workers incomes have stagnated in the midst of an immense accumulation of wealth by capitalist class interest. For the first time in US history, working people have failed to share in any of the income gains from rising productivity. We have experienced thirty years of wage repression."

Harvey and others often periodize the beginning of neoliberalism in 1980 - with the elections of President Ronald Reagan and British Prime Minister Margaret Thatcher - after which a wide array of public, private, and political institutions were dismantled and reconfigured in a manner that allegedly empowered capital vis-à-vis labor. For instance, Kotz and McDonough (2010: 104) insist, “In the neoliberal era, employers are relatively free to determine wages and working conditions... wages rose much more slowly, if at all, in the neoliberal era than they had in the period of regulated capitalism. The institution of employer-determined wages and working conditions is of course favorable for profit making.” According to Tabb (2010:145), neoliberalism is firstly “characterized by a weakening of labor relative to capital, with a corresponding gap between productivity and wages...” Similarly, for McNally (2011:48), the “neoliberal era” is... “the concentrated offensive against the organized power of the working class... No longer constrained by union power, capital pushed down real wages, shed labor, broke shop floor organization of workers.”

The Reagan administration’s intervention into PATCO’s labor dispute with the airline industry is often seen as historical turning point, signaling to organized labor that government was ready and willing to thwart attempts by unions to enhance workers’ bargaining position through the threat of strikes (Harvey 2005, Tope and Jacobs 2009). Beginning in the early 1980s organized labor would suffer severe setbacks in the wake of new labor legislation aimed at undermining worker unionization and collective bargaining strategies (Jacobs and Dixon 2006). The business community, for its part, proved willing to use both legal and illegal means to bring militant, rank and file workers to heel (Bronfenbrenner 2009). These efforts have likely contributed to the marked decline in

union density that the US private sector has experienced in recent decades, where today only 1 in 13 workers belong to a union as compared to 1 in 4 during the 1970s (Western and Rosenfeld 2011).

Other neoliberal mechanisms by which labor was reportedly disempowered vis-a-vis capital include capitalists' decision to hire temporary workers over full time employees, capitalists' decision to offshore production, and the successful efforts by capitalists to force privatization of public institutions (Kotz and McDonough 2010). The common theme that runs through Leftist discourse on neoliberalism, is the notion that capitalists organized to break down economic and political institutional configurations of the postwar period that were largely beneficial to labor. In their place, new institutional arrangements were erected that empowered capital relative to labor. Above all, neoliberalism is a story about how the collective agency of capitalists determined the structure of distribution in their favor.

For instance, political economists writing within social structure of accumulation theory (SSA) go so far as to argue that, under neoliberalism, the capitalist class unilaterally determines wages. The erosion of the capital-labor accord has been underscored as having perhaps, the greatest impact on the distribution between capital and labor in the US and it is this erosion that implicates the purported effectiveness of the collective agency of the capitalist class to determine the structure of distribution between capital and labor. Rosenberg (2010:196) writes,

Employer strategy and government policy were closely aligned and focused on eliminating labor market "rigidities" thereby fostering labor market "flexibility." Government deregulatory policies weakened the minimal social protection policies already in place and weakened labor in previously regulated industries. Union power was reduced through governmental policy and aggressive antiunion management behavior, resulting in a sharp trade union decline. While employers compromised to a degree with labor

during the postwar SSA [social structure of accumulation], now under the neoliberal SSA, they achieved a high degree of dominance over labor as a result during the 1980s labor standards declined, the wage structure was lowered... Deunionization continued apace thereby enabling greater employer freedom in setting pay and personnel policies.

Similarly, Kotz and McDonough (2010:104) argue that “[i]n the neoliberal era, employers are relatively free to determine wages and working conditions, constrained only by employer concerns with obtaining qualified workers. The institution of employer-determined wages and working conditions is of course favorable to profit-making.” The tacit assumption that is implied in the above quotations is that the relative political strength between capitalists and workers, which largely hinges on union density - is ultimately responsible for the structure of distribution. Later, in the analysis of this dissertation we will return to discuss the plausibility of Leftist, anti-neoliberal discourse, particularly in terms of the plausibility of the argument that class agency can determine the structure of distribution under capitalism.

However, not all accounts of our current political-economic juncture emphasize the determinacy of the political will of capitalists. Kliman (2011), for instance, rejects the under-consumption thesis, along with the notion that a general redistribution between capital and labor occurred under neoliberalism. Carchedi (2012) and Roberts (2016) make similar arguments. These authors have instead sought to explain economic outcomes by way of structural determinants (first identified by Marx) which they regard as inherent to capitalism as an economic system. The MR school, while distancing itself from Marx’s value theory, nevertheless emphasizes the monopoly stage of capitalism as the current structural determinant of distribution, economic stagnation and crisis. Finally, as I will discuss later, Piketty (2013) adopts an approach that also emphasizes the determinacy of

capital accumulation on the structure of distribution in capitalist societies. It is to the empirical studies that we now turn.

Recent Labor Share Investigations

A recent study by Roc Armenter, vice president of the Federal Reserve Bank of Philadelphia, concludes that the US labor share exhibited a slight downward trend between 1950 and 1980. However, since 2001, labor's share "has fallen precipitously" (Armenter 2015:4). Armenter presents three different labor shares. The first figure is based on the Bureau of Labor Statistics (BLS) "headline" labor share, which appears to show a near 7 percent decline in labor's share between 2001 and 2014, a fall from roughly 63 percent to roughly 56 percent of GDP. Following Elsby et al. (2013), Armenter admits that much of the fall in the BLS measure after 2001 is the result of a change in BLS methodology of assigning most (four-fifths) of proprietor's income to labor. After 2001, however, the BLS began assigning less than half of proprietor's income to labor (Armenter 2015:3).

To account for the effect of the change in the BLS' methodology, Armenter develops an alternative to the BLS headline measure in which he assigns a constant 85 percent of proprietor income to labor, which was the historical average before 2000. The results of this new calculation yield a much smaller, but still significant, approximate 4 percentage point decline in labor's share during the same time period, from roughly 63 percent of GDP in 2001 to around 59 percent by 2014.

Labor income share, headline versus alternative measure including all proprietor's income.

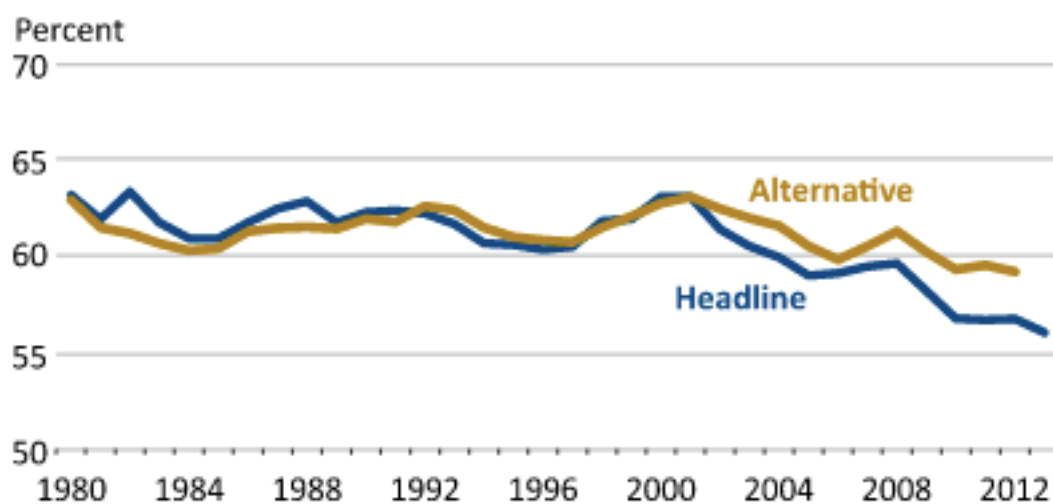


Figure 3.1 US Headline Labor Share Versus Alternative Measure
Source: Armenter 2015

Finally, Armenter (2015:3) attempts to “circumvent the ambiguity regarding proprietor’s income” altogether by factoring the labor share of the nonfinancial corporate business sector, which excludes proprietorships. Here, Armenter reports an approximate 9 percent decline between 2001 and 2014, a drop from roughly 66 percent to 57 percent of gross output.

Labor income share, headline versus labor income share from nonfinancial corporate sector.

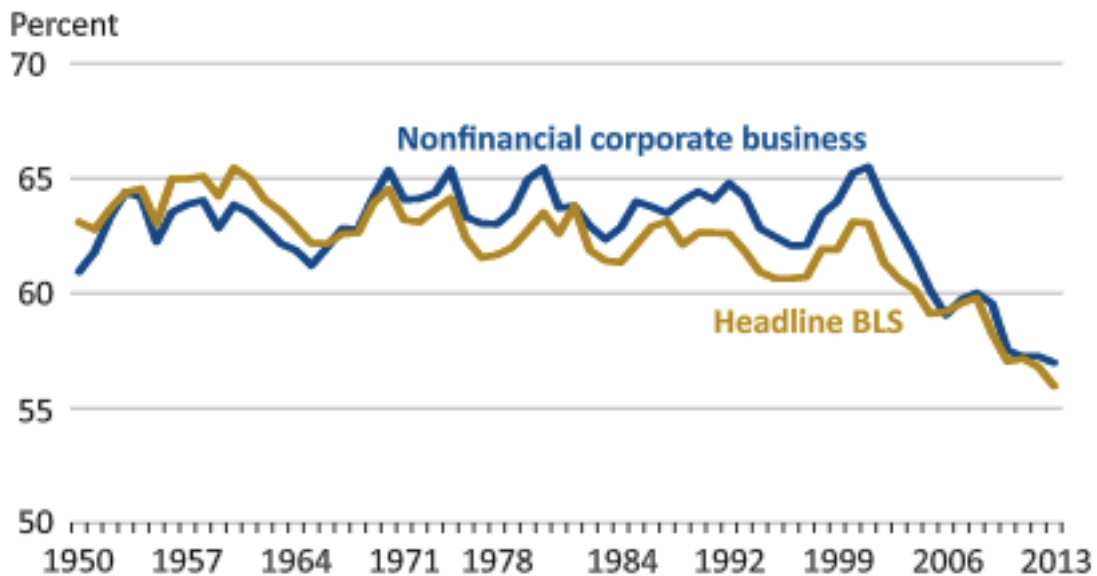


Figure 3.2 US Headline Labor Share Versus Nonfinancial Corporate Sector Labor Share
Source: Armenter 2015

While Armenter (2015:4) demonstrates that the exact magnitude of the fall is debatable; nevertheless, “[d]espite several measurement issues and alternative definitions associated with the labor share...,” “... there is no doubt that the downward trend in the labor share since 2001 is unprecedented in the data and... shows no signs of abating.” Labor’s declining share within the manufacturing sector, according to Armenter (2015:5), is the primary reason that the overall labor share declined.

We readily find out which part of the economy is behind the decline of the labor share once we look at the change in the labor share within manufacturing, which dropped almost 10 percentage points. Virtually all the major manufacturing subsectors saw their labor shares fall; for nondurable goods manufacturing it dropped from 62 percent to 40 percent... Indeed, had the labor share of income in manufacturing stayed constant, the overall labor share would have barely budged.

Armenter (2015:7) references the “labor-productivity gap” reported by Feck et al. (2011) - which according to him demonstrates a consistency in productivity growth - (2015:7) to cautiously conclude that “stagnation of wages, rather than accelerated labor productivity, is behind the drop in the labor share from 2000 onward.” Hence, he contends that the popular “capital deepening hypothesis” - where workers are increasingly replaced with machines - as an explanation of labor’s declining share, lacks empirical support.

Labor productivity and wages in the manufacturing sector.

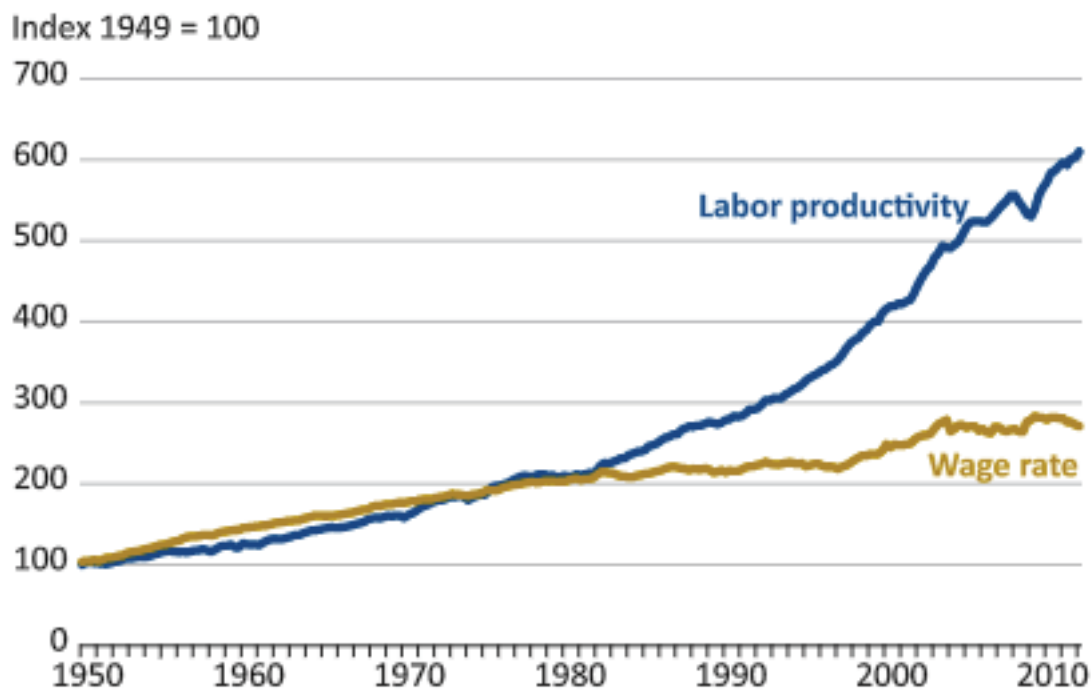


Figure 3.3 US Productivity-Compensation Gap
Source: Armenter 2015

Armenter’s study appears to be an extension of Gomme and Rupert’s (also of Federal Reserve Bank of Cleveland) 2004 analysis, published roughly a decade earlier, as it adopts much of the same language and proceeds in much of the same fashion. Yet, the

trajectory of the labor share trends that each of their studies report differ. Gomme and Rupert's (2004) report will be discussed later.

The thesis of wage stagnation is a reoccurring theme invoked by many authors who write about neoliberalism. Moreover, wage stagnation in the US is frequently linked to the decline in unionization that has occurred during the neoliberal period (Henley 1987, Kalleberg et al. 1984, Macpherson 1990, Rubin 1986; Wallace et al. 1999). Recently, Kristal (2010, 2013) has emphasized the impact that unions play in maintaining the relative bargaining position of workers vis-à-vis employers. In a study that examined the effect of the political and economic bargaining power of workers in 16 industrialized democracies, Kristal (2010) reported a 5 percent decline in the US labor share of GDP between 1961 and 2005. Kristal's (2010) regression analysis purportedly reveals that labor's declining share in the US, and other industrialized nations

... is largely explained by indicators for working-class organizational power in the economic (i.e., unionization and strike activity) and political (i.e., government civilian spending) spheres, working-class structural power in the global sphere (i.e., southern imports and foreign direct investments), and indirectly by an indicator for working-class integration in the intra-class sphere (i.e., bargaining centralization).

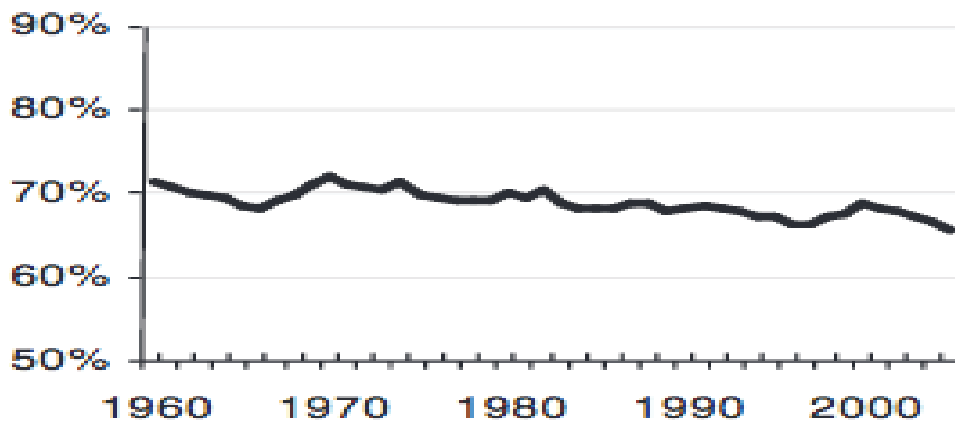


Figure 3.4 The US Labor Share
Source: Kristal 2010

In a more recent study that analyzed the effects of a number of factors that potentially effect the power relation between workers and employers - including unionization, importation, unemployment, and computerization - Kristal (2013) reported a nearly 6 percent decline in labor’s share across the U.S. private sector since 1970. In manufacturing, transportation, and construction, she reports 14, 10, and 5-percentage point decline, respectively.

Kristal argues that these declines are “primarily a function of classes’ [workers’ and capitalists’] positional power, and [their ability to] utilize their relative strength to bargain over a larger slice of national income pie.” The results of Kristal’s (2013:376) regression analysis reveals that declining unionization, rising unemployment, and the importation of goods converged to “curb the bargaining power of many workers over the past decades and led to a significant decline in labor’s share.” Of all the variables tested, declining unionization had the strongest independent effect.

Another recent study, produced by Monthly Review’s Magdoff and Foster (2013), concludes that “a long-term decline in the relative power of the working class, with capital increasingly gaining the upper hand... [has resulted in a] ... decline in the share of the

economy going to labor.” They report more than a three percent decline in private sector employees’ share between 1980 and 2005 in the US, a decline from roughly 45.5 percent of GDP to about 42 percent of GDP. Magdoff and Foster argue that because compensation data in the US National Income and Product Accounts (NIPA) do not reflect the income of the “working class,” but instead includes “compensation going to CEOs and other upper-level management, which ought to be counted as income to capital rather than labor,” and because wages and salaries (as oppose to total compensation, which includes employer provided health insurance and contributions to social security) are “especially important for workers at the lower-income levels, since this is the basis of their everyday consumption.” Magdoff and Foster revise their estimate utilizing data from the US Bureau of Labor Statistics’ Current Employment Statistics (CES), which include the wages of “production and nonsupervisory” workers. Their revised results demonstrate an approximate seven percent decline in workers’ share between 1979 and 2005, a decline from roughly 28 percent of GDP to about 21 percent of GDP.

Similar results were produced by Mohun (2014), who also utilizes CES data for production and nonsupervisory workers, who reported an approximate nine percent decline in what he refers to as the “productive working class” share of value added, a decline from roughly 34 percent of value added to about 25 percent of value added. Mohun, for his part, explains the fall in workers’ share in terms of the “neoliberal assault,” which included: “the assault on organized labor, the implementation of a major deregulatory agenda, the deliberate reversal of weak social democracy that had been put in place by the New Deal and the World War II years, and the embrace of globalization and financialization.”

The question of whether labor's share of output has declined is another way of asking whether hourly compensation has kept pace with productivity. Hourly compensation is simply aggregate compensation divided by the total number of hours worked and productivity is aggregate output divided by the total number of hours worked. The ratio of hourly compensation to productivity, then, is equal to the ratio of compensation to output, i.e., the compensation, or labor share, of output (income).

Hence, a decline in labor's share also implies an increasing divergence between hourly compensation (compensation per labor-hour) and productivity (output per labor-hour), or what Mishel and Shierholz (2011) of the Economic Policy Institute (EPI) refer to as the “productivity-pay gap.” Mishel and Shierholz report only an 18 percent increase in hourly compensation as compared to a 62.5 percent increase in productivity between 1989 and 2010. In another highly cited study from the EPI, Mishel et al. (2012), after adjusting for inflation, reported an 80 percent growth in productivity between 1973 and 2011, as compared to a mere 11 percent growth in the compensation of the typical (median) American worker.

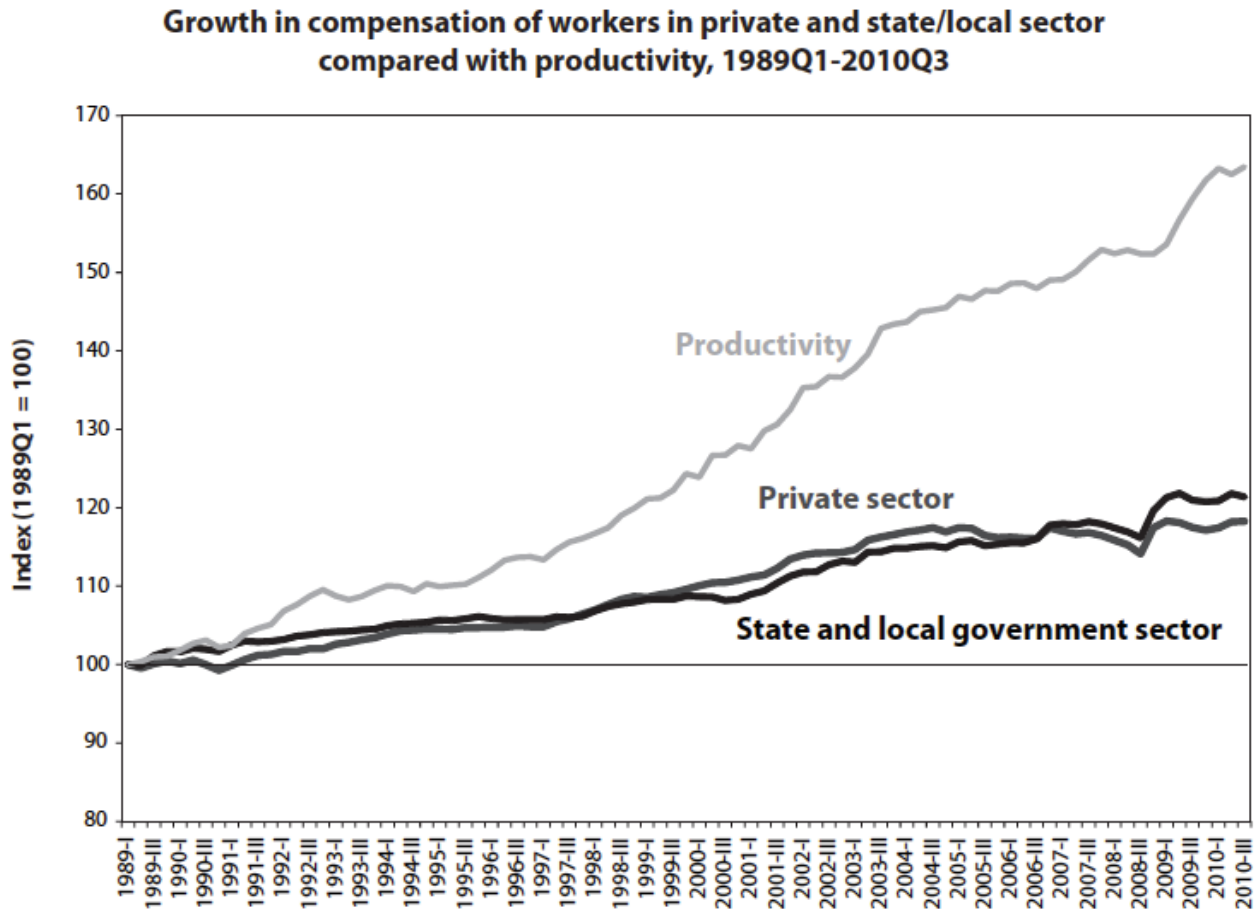


Figure 3.4 US Productivity-Compensation Gap
Source: Mishel and Shierholz (2011)

The authors interpret the divergence of pay and productivity as a real “divergence between the economy’s increased ability to provide living standards and its failure to do so (Mishel et al. 2012: 178).” Fleck et al. (2011) produce very similar results as Mishel and Shierholz and Mishel et al. However, one striking methodological feature (not always readily apparent) of studies that report a “pay-productivity” gap concerns the way in which these studies adjust for inflation. This method involves the utilization of different price indices to deflate hourly compensation and productivity by different rates. The consumer price index is frequently utilized to deflate hourly compensation whereas productivity is often deflated by the implicit price index of manufacturing output. Because the rate of

inflation of consumer goods as compared to capital goods significantly differ, the differential in the two price indices are significant. This leads to a breakdown in the mathematical identity between labor's share and the ratio of hourly compensation to productivity, as labor's share is typically calculated without adjusting for inflation. As I will discuss below, the use of two different price indices has been controversial. We will return to this issue later in the analysis.

Piketty and Capitalism's "Fundamental Law of Divergence"

Thomas Piketty (2014), who wishes to return to the questions first posed by such classical thinkers as Malthus, Ricardo, and Marx, and who prefers to characterize his analysis as political economy, considers the labor-capital, or "factorial," distribution of national income to be of paramount importance as a driver of inequality within the personal distribution of income. Following the classical political economists, Piketty (2014) emphasizes capital as a source of wealth and income that has the unique property of self-expansion. Capital tends to produce a profit that can either be distributed as personal income, or accumulated as additional capital. Moreover, given that capital can serve as a major source of personal income as distinct from its role as a growing stock of wealth, coupled with the fact that its ownership tends to be highly concentrated, the larger the share of national income to capital, the more unequal the personal distribution of income is likely to be. While Piketty (2014) notes that the unequal distribution of labor income in many Western societies has recently contributed to income inequality within the personal distribution, he is more alarmed about the potential impact of the prospective growth of capital income on the personal distribution.

According to Piketty (2014), the “fundamental force of divergence,” i.e., the mechanism by which a greater gap in the income of the super-rich relative to everyone else is established, is $r > g$, where r is the rate of return on capital and g is the rate of aggregate income growth. $r > g$, refers to a scenario in which the rate of return on capital is outpacing the growth of national income. Furthermore, multiplying r by the savings rate s illustrates why the riches of those who live primarily off of capital income increase relative to those whose income is derived from labor. If $r > g$, those whose income is derived from capital will be able to save more than those whose income is derived from labor and, in effect, will see their wealth, capital income, and annual savings grow by the product of r and s .

While $r > g$ is Piketty’s way of illustrating how capital effects the personal distribution, he has a different formulation for specifying the effect of capital on the income distribution between classes, i.e., between capitalists and workers as a whole. It is in this context that Piketty’s work is most relevant to the present study.

Because Piketty’s emphasis is on capital above anything else, he specifies the distribution between capital and labor in terms of “the share of capital in national income,” not in the more conventional terms of “labor’s share.” Also, to be clear, Piketty’s usage of the term “capital” is unique and it does not share a 1 to 1 identity with Marx’s concept of capital, or with what factor share investigations commonly refer to the “capital income.” Factor shares assess the distribution of output (income) from current production. However, Piketty refers to all wealth as capital, which is quite peculiar and so in a strict sense, Piketty is not performing a traditional factoral distribution (Solow 2014).

Piketty specifies the capital share as the product of the rate of return on capital and the ratio of accumulated capital to national income. Piketty illustrates this full accounting

identity as follows: $\alpha = r * \beta$, where α is capital's share, r is the rate of return on capital, and β is the ratio of accumulated capital to national income.²³ This is in essence the same accounting identity that I used at the end of chapter 1 to illustrate the relevancy of the rate of profit and of Marx's law of the tendential fall in the rate of profit as they relate to the profit (labor) share. However, Piketty, believes that the structural tendencies that are implicated in this relationship differ from those that are specified by Marx's theory of the tendential fall in the rate of profit.

According to this formulation the profit share α is equal to the product of the rate of return r and the ratio capital to national income β . This means that the percentage change in α is equal to the sum of the percentage changes in r and β . For instance, if r falls while β is left unchanged, then α will fall in percentage terms by the same amount as r . One interesting dynamic between r and β , is that they tend to move in opposite directions. Moreover, if r and β move in equal but opposite directions, i.e., if the decline in r is proportional to the rise in β , or vice versa, then α will remain fixed.

Both Marx and Piketty have a way of explaining the tendency for r and β to diverge. For Marx, this phenomenon is rooted in the labor theory of value where only the labor time of workers adds additional value to the output, and where capital merely transfers its existing value to the final product. As competition in the market compels capitalists to increase the productivity of labor, a greater percentage of each dollar of investment is allocated to the purchase of additional labor saving capital equipment (capital

²³ Note that $r > g$ is not derived from $\alpha = r * \beta$. Piketty appears to accept the latter simply as a historical tendency. Hence, if a relationship exists at all between them, it has not been specified by Piketty. This has important implications for what assumptions we can derive, or carry with us, as we move between these different specifications which are aimed at different levels of analysis.

accumulation). This means a smaller percentage of each dollar invested is directed toward employing additional workers, and so the amount of new value added per dollar of investment falls. If the rate of exploitation remains unchanged, or if the proportion in which the output is divided up between capitalists and workers remains unchanged, then the rate of profit will fall by magnitude that is proportional to the decline in the value of the output (value added).

The tendency for the rate of profit to fall as more capital accumulates can be illustrated with another accounting identity that decomposes the rate of profit as the product of the profit share and the *reciprocal* of the ratio of capital to national income:

$$\frac{P}{C} = \left(\frac{Y}{C}\right)\left(\frac{P}{Y}\right).^{24}$$

This identity demonstrates, that the rate of profit will fall in proportion to the fall in the *reciprocal* of β , *ceteris paribus*. This implies logically, then, that every *increase* β will result in a proportional decline in the rate of profit, *ceteris paribus*.

For Piketty, the tendency for r and β to diverge is given by the law of the diminishing marginal return, as capital accumulates the marginal productivity of capital decreases. However, in what proportion will r and β diverge? This will be given by the elasticity of substitution between capital and labor, which measures how easy it is to

²⁴ Where,
 P = Profit
 C = Capital
 Y = National Income

$$\frac{P}{C} = \text{Profit Rate}$$

$$\frac{Y}{C} = \text{Reciprocal of the Ratio of Capital to National Income}$$

$$\frac{P}{Y} = \text{Profit Share}$$

substitute capital for labor.²⁵ Recall that the Cobb-Douglas assumes the elasticity of substitution to be equal to one. This has the effect of producing a constant share in the labor (capital) share.

However, Piketty (2014) questions the plausibility of an elasticity of substitution equal to one over the very long term. Based on historical data from the eighteenth-century to the present, Piketty argues that the elasticity of substitution on average has been greater than one. On account of the myriad of uses of capital in modern society (over the long run), the marginal productivity of capital has historically been sufficient to keep the rate of profit on capital from falling by an equal percentage as the ratio of capital to national income has risen. This has resulted in a slight increase in the profit share for rich countries over the long term, and Piketty is expecting the trend to continue in the future, so long as the marginal productivity of capital is sufficient to maintain an elasticity of substitution that is comparable to the historical trend, somewhere between 1.3 and 1.6.

²⁵ “Elasticity of substitution” measures how easily it is to substitute one factor of production for another, either capital for labor, or labor for capital.

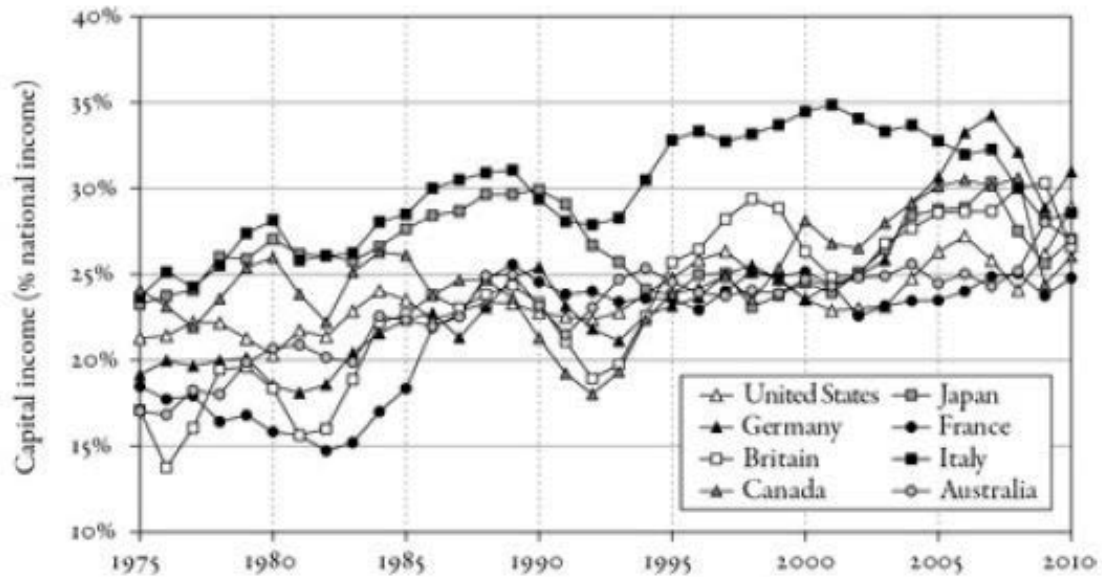


Figure 3.5 Piketty's Comparison of Capital Income in Western Countries, 1975-2010
Source: Piketty (2013)

According to Piketty, Marx's formulation of the falling rate of profit that accompanies the accumulation of capital implies a growth rate near zero. Yet as we have just discussed, it is precisely the increase in the productivity of labor, which accompanies capital accumulation that brings about the fall in the rate of profit in Marx's theory. Piketty believes that Marx, like all of classical political economy, failed to acknowledge the increases in productivity which accompanies capital accumulation.

Piketty's analysis has recently come under fire for misspecifying the actual underlying factors that are responsible for his reported fall in the capital share of national income. Rognlie (2015) argues that the increase in Piketty's reported capital share is not attributable to a redistribution between capital and labor or between profit and worker's compensation. Piketty's reported rise in the profit share as demonstrated in Figure 3.5, Rognlie argues, is attributable to the effect of the private household sector, whose capital share of national income has increased markedly in recent decades and which in turn, has

increased the total weighted average capital share.

The capital (labor) share of private households is incredibly unique in terms of how its compensation and its output relate to one another. In short, they aren't related at all. The output of private households is based on the imputed rent of owner-occupied houses, while its compensation is derived from the wages and salaries paid to housekeepers and other domestic servants. The output of the private household sector is constructed this way as an accounting procedure that is necessary to keep GDP from fluctuating when housing units shifts between owners and tenants. The BEA treats home owner occupants as if they were renting to themselves, and the rent that owner occupants pay is estimated according to the rent that tenants pay for similar sized homes in similar residential areas (Mayerhauser and Reinsdorf 2007). Later we will return to discuss the impact of private households on the labor share.

In any event, a definition of the capital or labor share that includes private households cannot describe the share of income that workers receive for the output that *they* produce. This is an important point to consider. Winship (2014), who in a different context reminds us that economic theory does not predict when the productivity of a particular sector rises the compensation of other workers in other sectors will increase. In the case of private households, the output of the sector does not reflect what the employees of the sector produce. They are brought together simply as a matter of convenience. To assess whether workers' share is keeping pace with the output that they produce, we must compare the workers with the same output.

Another issue that requires further clarification is Piketty's ambiguous use of the concept "capital." Piketty measures capital in terms of all financial wealth, but as we just

discussed, he theorizes it as capital in the traditional sense. As Solow (2014) notes,

There is a small ambiguity here. Piketty uses “wealth” and “capital” as interchangeable terms. We know how to calculate the wealth of a person or an institution: you add up the value of all its assets and subtract the total of debts. (The values are market prices or, in their absence, some approximation.) The result is net worth or wealth...But “capital” has another, not quite equivalent, meaning: it is a “factor of production,” an essential input into the production process, in the form of factories, machinery, computers, office buildings, or houses (that produce “housing services”). Trivially, there are assets that have value and are part of wealth but do not produce anything: works of art, hordes of precious metals, and so forth. (Paintings hanging in a living room could be said to produce “aesthetic services,” but those are not generally counted in national income.) More significantly, stock market values, the financial counterpart of corporate productive capital, can fluctuate violently, more violently than national income. In a recession, the wealth-income ratio may fall noticeably, although the stock of productive capital, and even its expected future earning power, may have changed very little or not at all.

Galbraith (2014) makes essentially the same point. When he says Piketty’s book “...is neither about capital in the sense used by Marx nor about the physical capital that serves as a factor of production in the neoclassical model of economic growth.” However, what is implausible, I believe, is the apparent presumption that the rate of profit might continue to outpace the growth rate of national income indefinitely. The possibility of a fall in profits was a possibility that Solow (2015) acknowledges in his review of Piketty.

Suppose we accept Piketty’s educated guess that the capital-income ratio will increase over the next century before stabilizing at a very high value... Does it follow that the capital share of income will get bigger? Not necessarily: remember that we have to multiply the capital-income ratio by the rate of return, and the same law of diminishing return suggests that the rate of return on capital will fall. As production becomes more and more capital intensive, it gets harder and harder to find profitable uses for additional capital, or easy ways to substitute capital for labor. Whether the capital share falls or rises depends on whether the rate of

return has to fall proportionally more or less than the capital income ratio rises.

If we limit out our analysis to an examination of the output (income) that comes from current production and further if we limit our scope to focus only on the corporate sector, it is then possible to explore the relationships that Piketty specifies, but in terms of *actual* capital, profit, and compensation from production. Figure 3.6 below decomposes the capital share α as the product of the rate of profit r and the ratio of capital to net income β . The behavior of α , r , and β over the course of most of the last century does not conform to Piketty's specifications. While these data are far different from the historical data that Piketty relies upon, they are far more applicable to the theoretical orientation that he invokes. It appears that, in general, the fall in the rate of profit was more than enough to offset the rise in the ratio of capital to net income over the better part of the last century and when abstracting from the effects of the Great Depression. This is further clarified by Figure 3.6 and 3.7 which demonstrate that the profit share fell by rough 2 percentage points between 1946 and 2015.

This would imply that the elasticity of substitution is slightly less than 1.

Notice how r and β trend in opposite directions. For instance, consider how after 1980 β trends upward while α begins its descent. Everything appears to move in a consistent manner except after year 2000 where both α and β trend slightly upward, in effect carrying α along with them. This is the period that is most influential in terms of shifting the labor share in a negative direction. It is not a period that this analysis will explore very much as I bracketed the years after the Great Recession in order to discern the

general patterns of neoliberalism proper, outside the influence of the crisis. In passing I think that it is worth mentioning that the trough in 2008 was roughly 3 percent higher than the previous trough. This is the period of time in which the government began its massive economic stimulus plan that included the authorization of 700 billion dollars in expenditures which the FED used to purchase troubled assets. The program was a success in that it allowed the economy to return to growth in a relatively short period of time and it also largely avoided massive deflation and destruction of capital value. The return to growth and profitability without having to endure the massive destruction of capital value, artificially pumped up the two major determinants of the capital share, the rate of profit and the capital stock. It would seem that much of the increase (decrease) in the capital (labor) share during this period is at least partially attributable to economic stimulus. However, definitive findings on the nature of the rise in the profit share after 2008 would require a comprehensive analysis of which is beyond the scope of this dissertation. Nevertheless, the effect of economic crisis and recovery on the profit (labor) share is not an endogenous neoliberal phenomenon. Moreover, an analysis of the distributional impact of neoliberalism in general should control for the effects of the Great Recession and the recovery that followed. Therefore an analysis of the latter is beyond the scope of this dissertation.

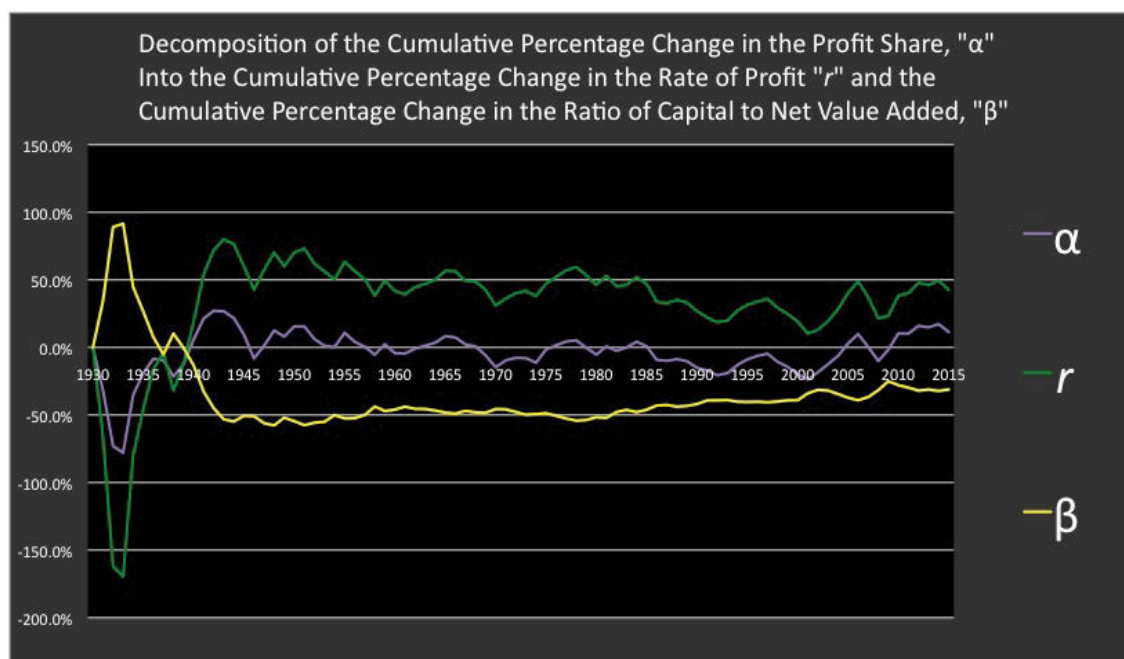


Figure 3.6 Decomposition of the Profit Share of Net Output
Source: BEA²⁶

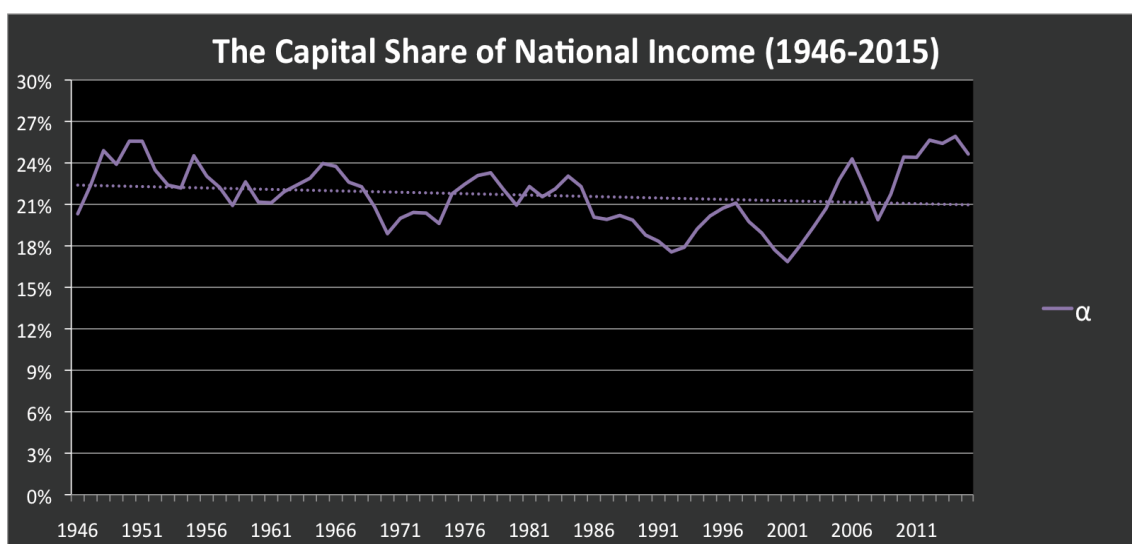


Figure 3.7 Profit Share of Net Output
Source: BEA

²⁶ α = (gross value added – historical cost depreciation – compensation of employees – taxes on production and imports less subsidies of the present year) / (gross value added – historical cost depreciation of the present year). r = (gross value added – historical cost depreciation – compensation of employees – taxes on production and imports less subsidies of the present year) / (net stock of fixed assets as of the end of the preceding year, valued at historical cost). β = (net stock of fixed assets as of the end of the preceding year, valued at historical cost) / (gross value added – historical cost depreciation of the present year). All of the data for these variables come from <https://www.bea.gov/>. Specifically, NIPA table 1.14 lines 1, 3, 4, and 7; FAA table 6.3 line 2.

A Trendless or Slightly Rising Labor Share?

Reports of a fall in labor's share have not gone uncontested. In contrast to the recently reported findings discussed above, there are those who report a trendless labor share, or in some instance a slightly rising labor share during the first three-and-a-half decades of neoliberalism. Kliman (2011, 2013a, 2013b), for instance, argues that labor's share has remained virtually trendless in recent decades. Kliman (2013a) demonstrates that labor's share of both corporate and business sector output (which includes corporations, partnerships, proprietorships, and tax exempt cooperatives) remained virtually trendless throughout the decades leading up to the Great Recession. Figure 3.7 charts Kliman's reported labor shares of the both the corporate and private total private industry sectors.

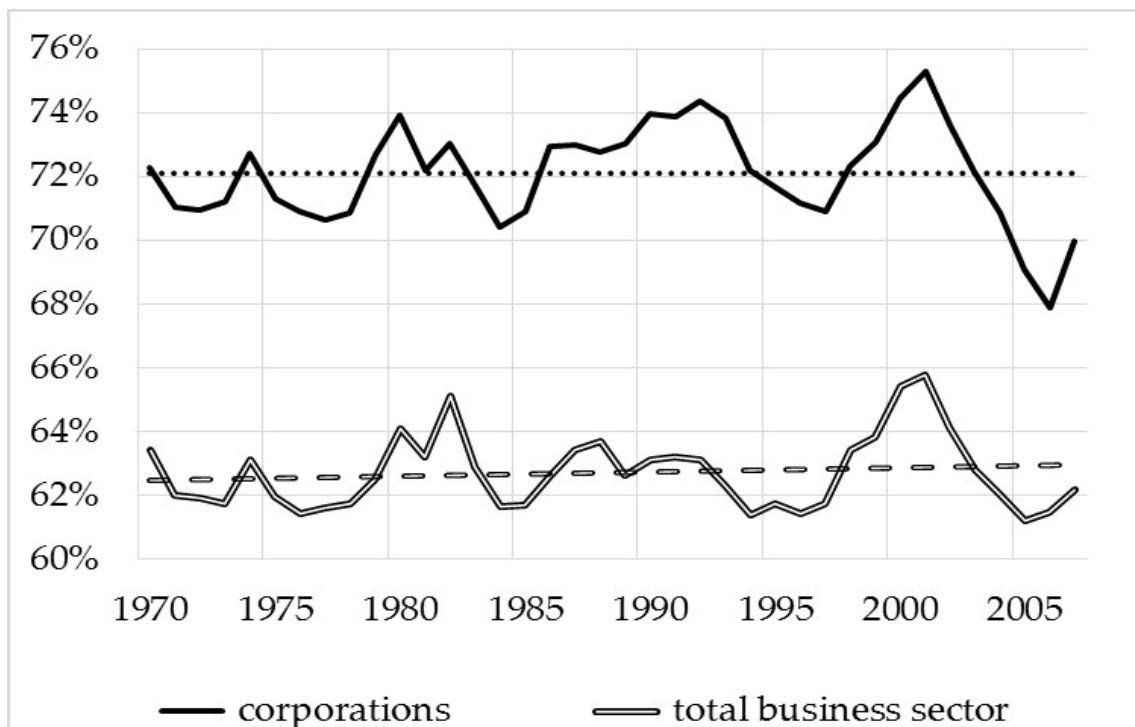


Figure 3.7 Compensation Shares of Net Value added
Source: Kliman 2013a

This implies that hourly compensation has kept pace with productivity and therefore he rejects the existence of a wage-productivity gap. Kliman (2013a) reports that hourly compensation kept pace with labor productivity (output per hour) during the decades leading up to The Great Recession. Kliman (2013a) therefore concludes that the popular myth of Neoliberalism, namely that “capital's class war against labor has been a *smashing success*, is largely unsubstantiated by the data.”

Clearly, there are important differences between Kliman's methodology and those who report a falling labor share, or a wage-productivity gap. For instance, Kliman measures of the wage-productivity gap using the same inflation adjustment for hourly compensation and productivity. This is in contrast to studies that utilize different price indices to deflate output and compensation (Fleck, Glaser, and Sprague 2011, Mishel et al. 2012, Mishel and Shierholz 2011).

Kliman measures labor's share in multiple sectors of the economy, but always as a share of net (not gross) output. Moreover, when examining sectors of the economy that include proprietorships, Kliman (2013a, 2013b) does not estimate the labor-capital split of the self-employed, which carries with it the implicit assumption that the labor–capital divide of proprietorships is on average the same as the rest of the economy.

Because Kliman is primarily concerned with the division between labor income and profit over the neoliberal period, much of his analysis is directed at the corporate sector, which has the advantage of excluding proprietorships, government, nonprofit institutions, and cooperative business partnerships. Moreover, his methodology is tailored to insure that his reported labor share also simultaneously expresses the profit share, as the latter is the reciprocal of the former. This is an important consideration, and methodological steps

should be taken to ensure the identity of the profit share as the reciprocal of the labor share, particularly when falling labor shares are reported to imply a rising profit share. Whether the profit share can be legitimately interpreted as the complement of the labor share ($1 - \text{the labor share}$) will depend on how the latter is defined. Gomme and Rupert (2004) for instance warn against making this assumption straight away, because there are shares of the income (output) pie that are allocated to neither capital nor labor. When sectors of the economy under investigation contain such shares, and if such shares experience a relative rise, the labor share will fall, but this is not because the profit share has risen. Marxists who utilize the labor share as a barometer of the neoliberal class war, or who report the labor share as signifying the division between labor income and profit, should arguably take measures to remove these shares or avoid analyzing sectors of the economy that contain such shares. Throughout this dissertation, I will return to discuss questions concerning the justifications for excluding (including) particular shares of (output) income in factor analysis that seek to discern the division between compensation and profit. We will likewise discuss further the procedure and justifications concerning the use of two different price indices to adjust for output and compensation.

Adopting essentially the same measurement techniques as Kliman, Winship (2014) reports that hourly compensation and productivity increased at the virtually the same rate over the last 65 years.

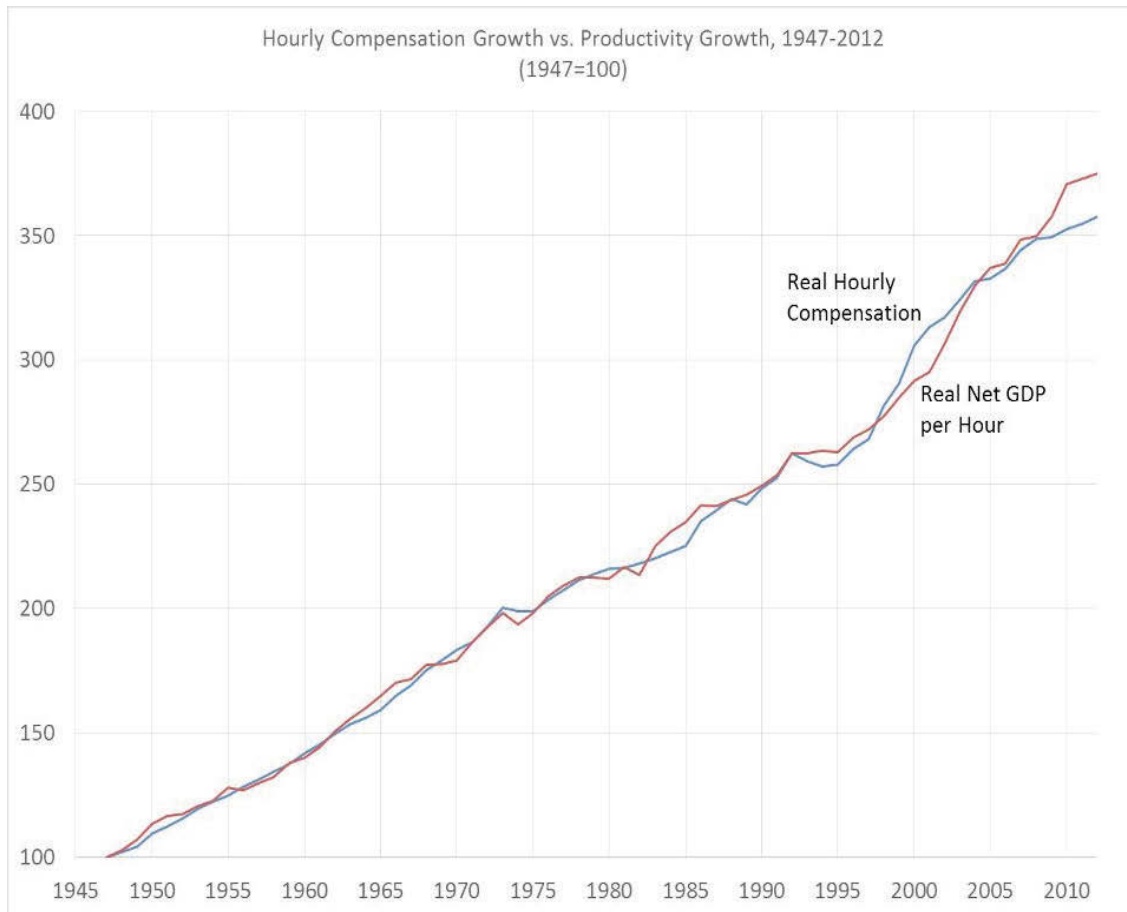


Figure 3.8 Hourly Compensation vs. Productivity
Source: Winship 2014

This implies that the labor share - the ratio of total compensation to output - was basically trendless over the same period.²⁷ The labor share that Winship calculates is the compensation share of *net* output of the non-farm business sector. He also excludes the output (income) of proprietorships and government. Proprietorships pose a measurement challenge because the national accounts do not distinguish between the labor and capital income of the self-employed.

²⁷ Hourly compensation and productivity are based on the same data as the ratio of total compensation to output, with the only difference being that the numerator and the denominator are divided by the same number of hours.

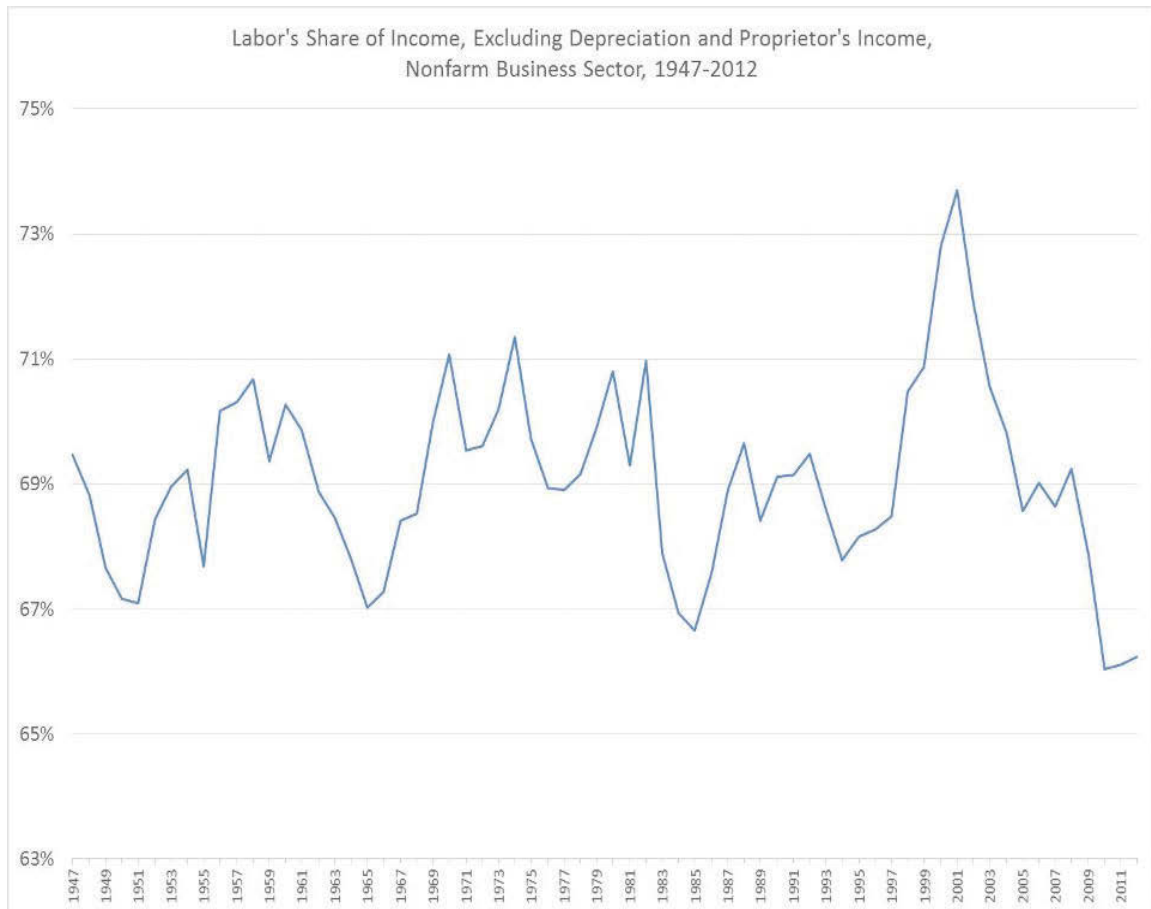


Figure 3.9 US Labor share Excluding Depreciation and Proprietorships
Source: Winship 2014

The labor-capital split of proprietorships is routinely estimated, but in various ways and with varying results (Armenter 2015, Gollin 2002, Kristal 2013, Krueger 1999). Factor share investigations that are interested in the division between profit and compensation, as sources of class income, should arguably avoid the measurement challenge posed by proprietorships - given that there is no straightforward identification of the self-employed with membership of the working or capitalist classes - by examining sectors of the economy that exclude them. According to Winship, “the keys to getting the analysis right” include:

- comparing mean hourly compensation (not median wages and salaries net benefits) to productivity.

- comparing labor compensation and output from the same economic sectors.
- excluding the private household sector, government, proprietorships, and indirect taxes.
- expressing labor compensation as a share of net output, so that depreciation is excluded
- using the same method of inflation adjustment for labor Income and output.

Gomme and Rupert's (2004) report begins by reporting the BLS labor share, which again exhibits an overall downward trend starting in the early 1980s through 2003, with the most significant decline (roughly seven-percent) occurring between 2001 and 2003. The periodization of this decline is consistent with the neoliberal, class war narrative, which you may recall, reportedly begins with the presidential election of Ronald Reagan in 1980. However, Gomme and Rupert warn against interpreting the BLS reported measure as signaling a rise in the profit share. They point out that the BLS reported measure contains shares of income, indirect taxes for instance, that are allocated to neither labor nor capital. When any such forms of income increase as a share of output, the profit share cannot be interpreted as the compliment of the labor share. Like Armenter, Gomme and Rupert also discuss the methodological challenges surrounding proprietor income. They point out that the new BLS methodology for assigning proprietor income to labor consists of estimating proprietor's wages according to the average wage in their industry.²⁸ Additionally, Gomme and Rupert underscore a number of other measurement challenges which include:

- The Bureau of Economic Analysis' (BEA) - which oversees the National Income and Product Accounts (NIPA) - assignment of all government output to labor, despite the government's employment of capital.

²⁸ As I will discuss later, the method of estimating proprietor's labor income according to the average wage in their industry is also utilized by Kristal (2013). Later I will demonstrate that this method has a striking effect on the overall labor share trend.

- The decision of whether or not to include the housing sector in calculations given that the BEA imputes the contribution to output (rental income), but not the labor component (housekeeping labor performed by domestic servants) from owner occupied housing.
- The decision of whether or not to include indirect taxes less subsidies given that, economy-wide measures of output, based on GDP, includes sales tax which is not earned by either factor of production, but rather confiscated by government.
- The decision of whether to measure output in gross or net (less depreciation) terms.²⁹

Gomme and Rupert circumvent many of the challenges that they highlight by focusing on the nonfinancial corporate business sector, where output is measured in net terms, and where the private household sector, along with proprietorships, are excluded. With these adjustments, Gomme and Rupert report an upward (downward) trend of roughly 6 percent in the labor (capital) share between 1967 through 2004. They also show that while net taxes (indirect taxes less subsidies) constitutes a significant share of output - output that is allocated to neither labor nor capital but to government - this share has remained on par with its historical average; and hence, the rise in the labor share essentially accounts for all of the decline in the capital share. While the overall trend in the labor share between the late 1960s through 2004 is upward sloping, they do emphasize an abrupt decline after 2001. They point out, at the time of their report, that the decline observed between 2001 and 2004 returns the US labor share “back to its historic mean.” However, as we will discuss later, the labor share continued its decline, many years following the outbreak of the Great Recession. We analyze some interesting developments as they relate to this particular period. Nevertheless, the aim of the present analysis is concerned with

²⁹ Each of these measurement challenges will be expounded upon later in the analysis. Whichever course of action that is decided on with respect to these questions will have a significant impact on the reported labor’s share.

assessing the trajectory of the US labor share during the (neoliberal) decades leading up to the Great Recession.

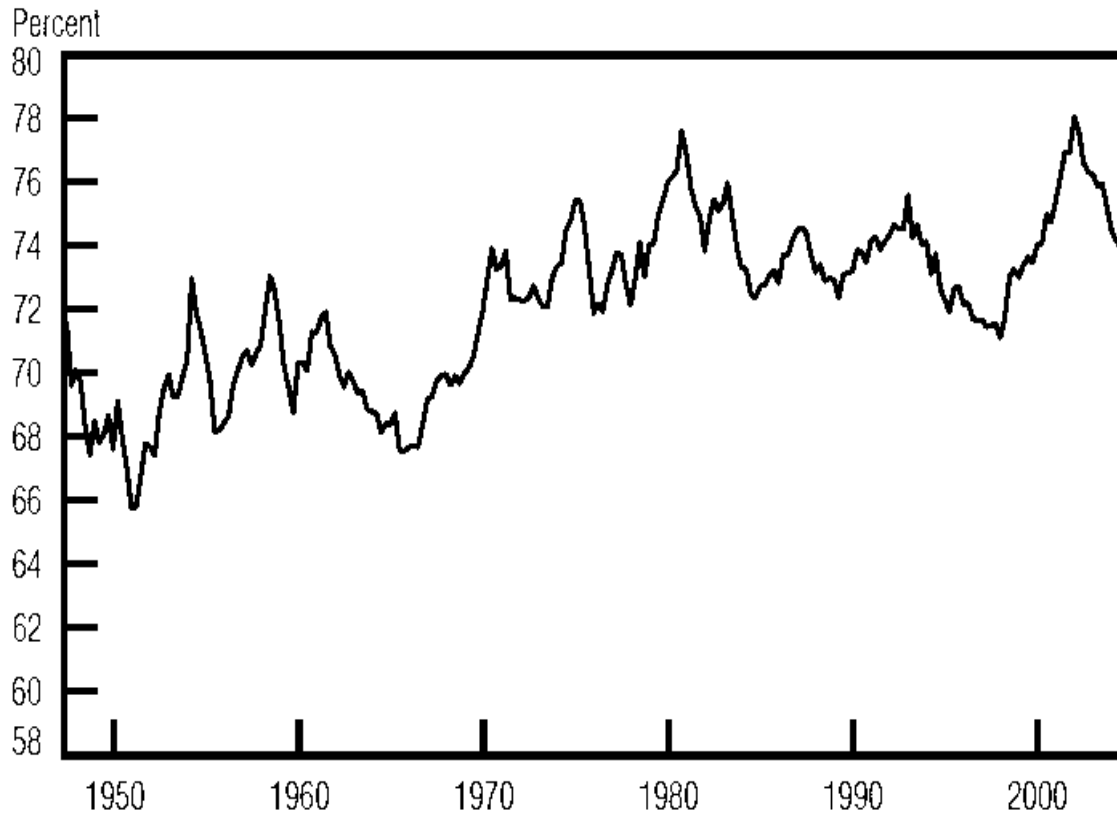


Figure 3.9a US Labor Share, Nonfinancial Corporate Business Sector
Source: Gomme and Rupert (2004)

Gomme and Rupert's (2014) report is significant for a number of reasons. First, and most importantly for the purposes of this study, Gomme and Rupert report a slightly rising labor share during the first three decades of neoliberalism. Their results stand in stark contrast with numerous other studies that report a marked decline in labor's share in recent decades. They are not alone, however, in their description of the US labor share, as both Kliman (2011, 2013a, 2013b) and Winship (2014) report a virtually trendless labor share over the same time period.

Secondly, Gomme and Rupert's findings are at odds with Armenter's (2014) Cleveland FED Report, which is surprising given the unique methodology (which factors the labor and capital shares of nonfinancial corporate sector) that Armenter specified in his report is seemingly the same as that which is underscored by Gomme and Rupert (2004). The discrepancy resides in the fact that the labor share that Armenter reports is virtually trendless from the late 1960s through 2001, while Gomme and Rupert's reported labor share trends upward over the same period. It is not clear what accounts for this discrepancy but clearly the methodology of the two studies differ in some respect.

Armenter's study is published nearly a decade later and demonstrates the continued decline in the labor share trend that Gomme and Rupert first identified in 2004. As mentioned above, Gomme and Rupert did not acknowledge this decline as signaling a significant shift, it merely brought labor's share back to its historical average. Of course they had no way of knowing that the decline that they observed would continue for the rest of the decade and on into the next. Nevertheless, given the discrepancy between their and Armenter's findings, with respect to the labor share trend through 2001, it's unclear if their methodology would produce results that are comparable to Armenter's for the 2004-2014 period.

The Great Recession is undoubtedly one important factor that explains a substantial part of the continuation of the declining trend. A comprehensive analysis of the Great Recession's impact is beyond the scope of this analysis, which is primarily concerned with the effects of neoliberalism in general, albeit affects that have been frequently referenced as a cause of the Great Recession (Duménil and Lévy 2011, Kotz 2012, Palley 2012, Wolff, 2012). Nevertheless, the present analysis abstracts from the Great Recession in order to

assess the general impact of the neoliberal class war proper. While the two phenomenon are undoubtedly related - with some seeing a causal link between the two, while others see both as a symptom of an underlying crisis of capitalism - they are also analytically distinct. A critical, anti-neoliberal paradigm surfaced among the radical Left decades before the Great Recession. The effects of the decade's long neoliberal class war should be clearly discernable from the effects of the Great Recession. The former is the primary object of inquiry of the present analysis.

The literature reviewed in this section demonstrates a lack of consensus with respect to the question of whether labor's share of income declined during the neoliberal period leading up to The Great Recession. The discrepancy in the reported findings can be explained by the different methodologies that are utilized in studies that report a declining labor share as compared to studies that report a trendless or slightly rising labor share. One important difference between the studies that report a constant or slightly rising labor share during the "neoliberal" decades leading up to the Great Recession concerns their decision to focus their analysis on the corporate and non-farm business sector, and thereby exclude certain economic sectors and/or shares of GDP from the measure of output (income) that they employ in their definition of labor's share. Later on, I attempt to measure the cumulative effect of many of these factors which are included in frequently reported labor shares that are based on GDP, but which are absent from the corporate and non-farm business sector of the economy.

In the following chapter, I expound upon the theoretical implications of these questions as they relate to the objective of discerning the proportion in which national income is distributed as labor income and profit. Many recently reported labor shares that

are based on GDP imply an increase in profit vis-à-vis labor income and/or the existence of a “pay-productivity gap” during the decades leading up to The Great Recession. Yet the labor’s share of corporate net output and non-farm business output has been virtually trendless in recent decades.

While this dissertation does not specify a single right or wrong approach under all circumstances, it does underscore the importance of utilizing definitions and measurements that conceptually consistent with the guiding theoretical objectives of one’s study. In the following chapter, I discuss the components that are included in GDP and thus effect labor’s share of GDP but which are excluded from the net output of the corporate sector. Following Bridgman 2014, Kliman 2014, Rognlie 2015, Winship 2014, I agree that labor shares based on GDP are a poor measure of the distribution between capital and labor.

Chapter 4

Labor's Share as an Analytical Construct

The present study seeks to bring issues related to method and measurement front and center. However, before we can ask ourselves whether or not labor's share is measured correctly, we must first ask ourselves what we expect this analytical construct to achieve. Factor shares have a wide variety of analytical applications. Consequently, numerous definitional and methodological procedures are utilized to specify labor's share, as no single procedure is useful in all circumstances (Armenter 2015).³⁰ As Krueger (1999) has pointed out, factor shares have been used to test models of the functional distribution of income, to estimate the parameters of productive functions, to discern the division of rents between workers and firms, and even to predict tax revenues. Adding to the list, Atkinson (2009) has emphasized three useful applications of factor shares including: "to make links between incomes at the macroeconomic level and incomes at the level of the household; to help understand inequality in the personal distribution of income; to address the concern of social justice with respect to the fairness of different sources of income.

What is Labor's Share?

The multiple applications listed above can be grouped into two primary types, which are differentiated according to whether or not the objective of the analysis is concerned with reflecting the structure of production or whether the analysis is inequality-

³⁰ As Krueger (1999) has pointed out, factor shares have been used to test models of the functional distribution of income, to estimate the parameters of productive functions, to discern the division of rents between workers and firms, and even to predict of tax revenues. Adding to the list, Atkinson (2009) has emphasized three useful applications of factor shares including: "to make links between incomes at the macroeconomic level and incomes at the level of the household; to help understand inequality in the personal distribution of income; to address the concern of social justice with respect to the fairness of different sources of income.

related and focused on describing the *distribution* of output (income) between capitalists and workers, or between compensation and profit. Sometimes it is difficult to discern the overall objective, as some studies are often ambivalent in this regard or seem to serve both ends simultaneously (Armenter 2015).

Preoccupation with the structure of production bleeds over into distributional analyses, I believe, in instances in which the estimation of the capital-labor split of proprietor income (income of the self-employed) becomes a top priority. From the standpoint of distribution, it's not clear to me why the income of the self-employed – which is routinely divided between returns to capital and labor according to one or another methods of estimation. However, in a study whose objective is to assess labor and capital's respective contribution to production, the relevancy of proprietorships and the capital-labor split of proprietorships is self-evident.

Or consider the extent to which Armenter's (2015:3) complaint about the national accounts assignment of all government output to labor is relevant to a distributional analysis between capital and labor. "[T]here is no question that capital is a factor of production for government services, so the BEA is clearly overstating the labor share in this sector." Clearly, capital formation relative to worker compensation in the government sector is not relevant to questions concerning the distribution of income between profit and workers' compensation. Yet Armenter complains that the government labor share is inflated. Armenter is essentially complaining that the productive contribution of labor is overstated because the government also employs a significant amount of capital, which also contributes to the production of government output.

A number of the labor share investigations that were reviewed in the previous chapter reported a change in distribution of income between labor and capital. Many of these are essentially inequality-related investigations that utilize gross labor shares (labor shares based on GDP or value added) to make claims about the *distribution* between owners of capital and workers. However as I discuss below, there are components of GDP that do not accrue as income to either class, to either capitalists or workers. The fluctuation of any of these components of GDP can affect the overall trend of labor's share without the occurrence of an actual redistribution between labor and capital. Labor shares based on GDP, then, can paint a distorted picture of the actual distribution between labor and capital. The primary aim of the present chapter is to evaluate the theoretical justification of certain methodological decisions in terms of their appropriateness and compatibility with a distributional analysis of capital (profit) and labor (compensation).

Labor's Share: measuring the distribution between workers and capitalists?

As mentioned at the beginning of this chapter, the underlying objective of some labor share investigations is not always made clear. However, we have reviewed many inequality-related investigations that explicitly utilize factor shares to make claims about the *distribution* between owners of capital and workers. Kristal (2013:363) for instance, who “[i]n a stylized Marxian manner” ... “define[s] capitalists as people who own and control the capital used in production, and workers as all employees excluded from such ownership and control,” describes the objective of factor shares in terms of discerning “...the division of the national economic pie between profits going to capitalists and the labor share... [which] ...includes all of the wages and benefits earned by workers.”

Moreover, this is a “zero-sum game: the portion of the total national income that is not going to the workers go to profits for capitalists.” Likewise, Andrew Kliman’s (2015, 2014, 2013) analysis of labor’s share is largely aimed at explicating the precise accounting procedures and definitions that are required to discern the distribution of output between employees’ compensation and profit. Magdoff and Foster (2013) characterize the results of their labor share study as indicating a “vast redistribution of income—Robin Hood in reverse... that is boosting the share of income to capital.”

However, there can be a tension between discerning the distribution between labor and capital or between compensation and profit, and discerning the distribution between “workers” and “capitalists.” This is because profit and compensation are potentially poor proxies of social class according to some definitions of the term. During the mid- 20th century a host of new terms were developed to denote what Wright (1985) has referred to as “contradictory classes.” The “new petty bourgeoisies,” or the “New middle class,” for instance were concepts that were developed to grapple with the new reality that some workers, to quote Harry Braverman had “one foot in the bourgeoisies and one foot in the proletariat” (Giddens and Held 1982). One cannot forget Mills’ (1951) frequent reference to the “white collar people,” or the “white collar world” in his description of the class hierarchy of the mid-20th century.

Even among Marxists, there was no clear consensus with respect to how the working and capitalist classes should be defined. Most Marxists contributions’ to class theory at this time tended to reject in one way or another the conception of class as a purely economic category. Althusser (1969), for instance defined class as a combination of political, ideological, and economic considerations. This multi-dimensional approach was

very much in vogue for the time period. A similar position was put forth by Poulantzas (1973), who also expands the definition of the bourgeoisies to include those who control the means of production. This refers to those who work in upper management and who primarily subsists on salaries, albeit well above the median, but salaries (not profit) just the same. According to Ollman (1968), Marx used the term “class” rather loosely to demarcate different sets of political and economic relations at different times and contexts.

When we consider factor shares, however, we are by definition bracketing ideological and political characteristics to focus on the distribution between labor income and profit. While there are disadvantages to defining social class in terms of factor ownership, there are also important advantages. Not the least of which is the fact that the distribution between labor income and profit form the basic structure of inequality in capitalist societies. As Edwards, Reich, and Weisskopf (1986: 214) have so clearly articulated:

The most basic source of income inequality in a capitalist society is the vastly unequal distribution of property income that results from the capitalist-class monopoly of the means of production. Under capitalism a small minority of the population (the capitalists) own most of the means of production and a large majority (the workers) own virtually nothing productive other than their labor-power. Since income from property is dependent on ownership of property, this concentration of ownership of the means of production results in a corresponding concentration in property income.

The concentration of property income that accompanies the concentration of capital ownership is an important basis of legitimacy for the classical conception of social class. Recall that one of the reasons why the classical conception of social class, based on factor ownership, fell out of favor was due to the fact that the income of an increasing number of

individuals was composed of both property income and labor income Atkinson (2009). It is plausible that many capitalists hold occupations that provide them with labor income and a significant number of workers own shares of company stock that provide with some measure of property income. For those who define social class in accordance with classical conception - i.e., based on factor ownership - a common rule of thumb for classifying individuals as either capitalist or worker depends on the degree to which an individual's livelihood is supported by either labor income or by property income. Based on this criterion, a capitalist may work a job but they are still capitalist so long as their property income is substantial enough to enable them to maintain their livelihood without working if they so choose. Moreover, if the property income that a worker receives from their stock is insufficient to break their dependency on wage work, they are still a worker (Edwards, Reich, Weisskopf 1986). Given the immense concentration of capital stock ownership and the property income that accompanies it, most individuals can be classified unequivocally as either workers or capitalists.

It is true that a sizeable number workers now own company shares, mostly in the form of 401K retirement plans. Nevertheless, capital ownership remains heavily concentrated. And size matters! The value that is generated from 401Ks in most instances constitute a "flow" of income that is directed toward the consumption of goods and services after retirement. It is not accumulated as a "stock" of wealth, that functions as capital (self-expanding value).

Some recent factor share investigations have seemingly questioned the class implications that can be derived from an analysis of the distribution between compensation and profit (Magdoff and Foster 2013). Magdoff and Foster (2013:3), for instance, point out

that “aggregate data also includes the compensation going to CEOs and other upper-level management, which ought to be counted as income to capital rather than labor.” They recalculate the labor share based on the labor income of the “working class.” It is unclear, however, what Magdoff and Foster hope to achieve with their “working class” labor share. Perhaps one motivation could be an underlying and unspecified “blue-collar” conception of the working class. Based on such a conceptual sensibility, including the salaries of upper-level management as a component of labor income might seem ridiculous. If this is so, then it is an example of the tension that I spoke about above, between the objective of discerning the compensation – profit distribution, and discerning the distribution between “workers” and “capitalists.” Perhaps because Magdoff and Foster assume managers to be capitalists and not workers, they find problematic the inclusion of managers’ salaries within labor’s share. The down side of this approach is that it clearly precludes an assessment of the distribution between profit and compensation. Managers may not fit the description of the “working class” according to some definitions of the term, but more problematic is to tacitly assume that manager salaries are profit and therefore not a cost to business.

This is precisely the critique that Kliman (2014) makes when he argues that Magdoff and Foster cast their net much too narrow in terms of what they define as “worker” income. Their definition of labor income includes only that which accrues to “production and nonsupervisory” workers. Kliman (2014) counters by pointing out that if managers and supervisors are not “workers” according to some definitions of “working class,” their incomes are nevertheless a cost to business. One dollar of manager or supervisor compensation is a dollar deducted from profit, irrespective of whether it was received by a production worker or by a manager. Kliman (2014) complains that Magdoff and Foster’s

estimate of the income of “real working class,” distorts the labor share by removing the income of the demographic of workers who have experienced the highest income gains in recent years. Over the last decade there has been increasing inequality *among* workers, much of which can be attributed to recent income gains experienced by more educated workers (Kliman 2013). Kliman cites the Congressional Budget Office (CBO 2009) who report that between 1979 and 2007 real median hourly wages rose substantially among women with some college education and among men with at least a 4-year college degree. When Magdoff and Foster exclude higher paid workers from the ranks of labor, these income gains get misinterpreted as gains to capital when the profit share is assumed as the compliment to the labor share.³¹ Nevertheless, Kliman (2014) agrees that there are “super-mangers” that own significant shares in the businesses that they manage and whose compensation is potentially a share of profit. That is to say that the compensation that they receive is more characteristic of “disguised profit,” disguised in the sense that it is recorded in the NIPA as compensation. To estimate the share of compensation that is actually profit

³¹ Using their alternative compensation measures, Magdoff and Foster find that P&NS workers’ share of GDP fell by roughly 11 percentage points between 1964 and 2010. Kliman (2013) points out that Magdoff and Foster’s findings are significantly at odds with the May 2007 Occupational Employment Statistics (OES), published by the U.S. Bureau of Labor Statistics, which reported that the combined wages of employees in management occupations and “first-line supervisors/managers” made up only 16% of total wages and salaries.³¹ That is, according to OES estimates, the wages of P&NS workers account for 84 percent of the total, private sector wage bill, nearly 30 percent more than that what Magdoff and Foster estimate. Kliman (2013: 7) continues: “One reason why Magdoff and Foster produced such a gross underestimate of the share of wages received by “the working class” is that—once again—they mixed and matched different datasets with abandon. Their wages for private-sector P&NS workers come from the Current Employment Statistics (CES), while their total wage bill for all private-sector workers comes from the National Income and Product Accounts (NIPAs). The CES data indicate that P&NS workers received 67%, *not* 55%, of total wages in 2007, \$2908 billion out of \$4348 billion. But Magdoff and Foster ignored or overlooked this fact, and instead chose to express the P&NS figure as a percentage of the total NIPA wage bill, which was \$5326 billion. There is a huge difference between the two total wage bills, \$978 billion. *Magdoff and Foster improperly treat this \$978 billion discrepancy between two datasets as if it were additional wages received by non-P&NS employees.* This procedure artificially boosts their share of wages from 33% to 45% and artificially depresses P&NS workers’ share from 67% to 55%. With equal justification—i.e., none—they could have treated the discrepancy between the CES and NIPA data as additional wages of P&NS workers, which would have brought their share of total wages to 73%.”

in disguise, one must try and distinguish between compensation that is payment for labor services and which accrue to top corporate executives who exercise significant ownership over their corporations. Kliman (2013) suggests that estimates of disguised profit should be based on income levels of top corporate managers as opposed to occupation classifications alone. He argues, “even the wages received by a large segment of “chief executives” seem to be payment for the labor services they perform rather than profit in disguise.” His reasoning is based on the fact that the annual incomes of large numbers of corporate managers are not significantly higher than the national average of all workers’ annual incomes.

According to the Occupational Employment Statistics (OES), three-fourths of managers received an annual wage of only \$121,690, less than triple the overall average. While 25 percent of “chief executives” received an annual salary of only 2.4 times the overall average wage (Kliman 2013). Kliman (2013) concludes that it is “advisable to include, as recipients of profit disguised as wages, only the small percentage of management employees who were paid well in excess of triple the average wage.”

Kliman (2014) estimates the share of output that he believes can be realistically regarded as disguised profit by examining income and occupation data compiled by Bakija, Cole and Heim (BC&H) in a study that examined the occupations of the top 1 percent. Because BC&H do not report the proportions in which the total income of the top 1 and 5 percent of corporate executives are composed of wages, interest, dividends and other types of income, Kliman had to make estimations. Kliman therefore estimates the compensation share of top corporate managers by assuming that their dividend, interest, and wage and salary income composition are proportional to others in their income group. These

assumptions change the results very little. The share of output that accrued to salaried managers in the top 0.1 percent was once again estimated at 0.4 percent, while the portion of the output achieved by managers in the top 1 percent was estimated at 0.6 percent. Kliman concludes that it is extremely unlikely that the share of net output that is potentially received as disguised profit is greater than 1 percent. Kliman (2014) concludes that the rise of super managers' salaries that might be properly categorized as corporate profit but that are included in the NIPA compensation data could artificially inflate the labor share by a little less than 1 percent. Kliman, then, is in agreement with Kristal (2010, 2013) who concludes that the inclusion of top CEO pay within NIPA compensation data does not significantly affect the labor share and therefore does not compromise its efficacy as a meaningful descriptor of the income distribution between labor compensation and profit.

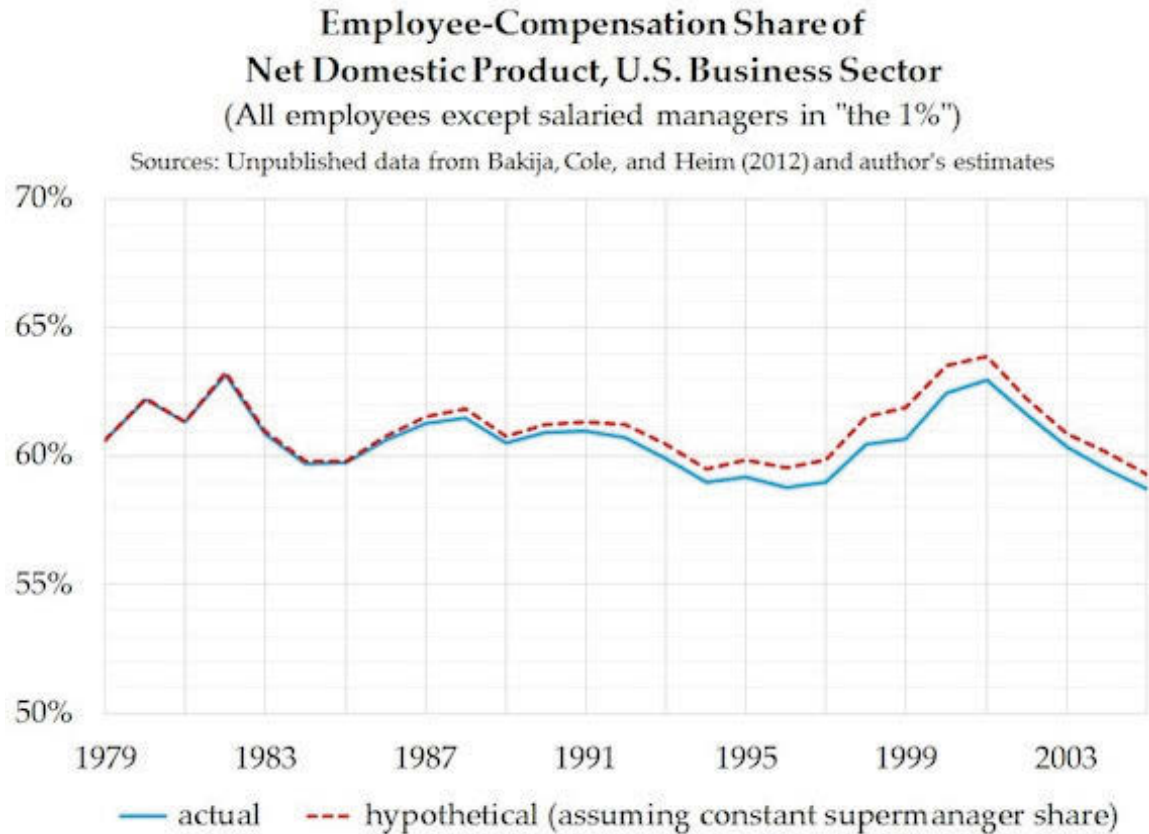


Figure 4.1 Employee Compensation Share of Net Domestic Product, US Business Sector
Source: Kliman (2014)

Deriving Labor's Share to Describe the *Distribution* Between Labor (Compensation) and Capital (Profit)

Clearly, there can be a tension between describing the distribution between profit and compensation on the one hand and deriving the class implications from such a description on the other. Profit and compensation are poor proxies of social class according to some definitions of the term. Clearly, Magdoff and Foster find problematic the labeling of supervisors as the “real working class.” However, their “real working class” labor share precludes a description and analysis of income distribution between owners of capital (profit) and those who subsist by selling their labor (compensation). As I have discussed,

the compensation-profit distribution continues to be underscored as an important determinant of the overall structure of inequality. Given that compensation and profits (in the form of dividends, interest, and rent) are the primary sources of personal income, a variation in the distribution between compensation and profit, can potentially affect how overall income is stratified within populations, i.e., within the personal distribution of income (Solow 2015, Piketty 2014, Atkinson 2009). This is why Piketty (2014) fears that the coming rise in the profit share will produce levels of inequality that are potentially “incompatible with the *meritocratic values and principles of social justice fundamental to modern democratic societies.*”

In many of labor share investigations reviewed above, the analyst report to factor labor’s share in order to discern the shares of output (income) that accrues as labor income to workers vs. returns to capital. However, as I have discussed, the latter cannot be implied as the complement of the labor share if the compensation of higher paid workers is excluded. The objective of the rest of this chapter is to provide a comprehensive discussion of the theoretical, conceptual issues that must be addressed in order to execute a labor share analysis that accurately specifies the proportion in which economic output is distributed between labor income and profit. Below, I expound upon the conceptual and analytical dimensions of a factorial analysis that describes the distribution between labor income and profit. In this discussion, I elaborate on these dimensions in terms of how they relate to the methodologies of many recent labor share investigations.

Income - Output Identity

Income is typically defined as the total amount that an economic entity can spend without reducing its net worth (Fox et al. 2012).³² Income that is allocated to the factors of production, however, is conceptually restricted to include only that which is derived from *current production*. The previous definition still applies, but within the context of “current production.” Income that is derived from the current production of goods and services - is just another name for the price of the current year’s output. It is simply the total payment for all of the goods and services produced during the current year.

Economists often refer to the “income-output” identity to denote the equivalence between the total price of the output and the total income that is derived from producing it. Different kinds of income e.g., employee compensation, corporate profits, rent, interest etc., are slices, or “shares” of the output pie. “Capital gains,” which have received considerable attention in recent inequality investigations, are not derived from current production, as they do not reflect changes in the real stock of produce assets. Capital gains are derived from changes in the price of already existing assets and therefore are not directly associated with current production.

One other factor to consider when accounting for income from production is the geographic boundary in which current production takes place. Total output (income) is typically measured in terms of either “domestic” production or “national” production. “Domestic,” measures of output (income) correspond to production that takes place within a country’s borders, irrespective of whether the production operation is foreign owned or

³² Some economists have included in this definition, expected income, which would include the projected appreciation of existing assets such as regular capital gains for instance (Fox et al. 2012).

owned by US residents. “National” measures, in contrast, correspond to the output (income) that is attributable to US residents, irrespective of whether the production operation is domestically located, or located abroad.³³

The Bureau of Economic Analysis (BEA) is chiefly responsible for preparing the official income and output statistics from current US production. The principle measure of total output (income) is GDP, which is defined as the total value of goods and services that is produced inside the US, in a particular year. The BEA utilizes a number of different accounting methods to derive this statistic. I give a brief overview of these different methodologies below.

Accounting for GDP

The central challenge in measuring the total value produced in an economy is to avoid counting the same output more than once. For instance, if we were to simply sum the price of the goods and services produced over a year we would grossly overstate annual GDP. Imagine, for example, that Company A issues bonds to borrow \$5,000 that it uses to purchase the labor and capital inputs to produce steel. Company A then sells the steel to Company B for \$10,000. In turn, Company B makes the steel into an automobile which it sells to Company C, a dealership, for \$15,000. Finally, Company C sells the automobile to

³³ According to the BEA (2012: 2-5) “U.S. residents,” include, “individuals, governments, business enterprises, trusts, associations, nonprofit institutions, and similar organizations that have the center of their economic interest in the United States and that reside or expect to reside in the United States for 1 year or more. (For example, business enterprises residing in the United States include U.S. affiliates of foreign companies.) In addition, U.S. residents include all U.S. citizens who reside outside the United States for less than 1 year and U.S. citizens residing abroad for 1 year or more who meet one of the following criteria: owners or employees of U.S. business enterprises who reside abroad to further the enterprises’ business and who intend to return within a reasonable period; U.S. government civilian and military employees and members of their immediate families; and students who attend foreign educational institutions.

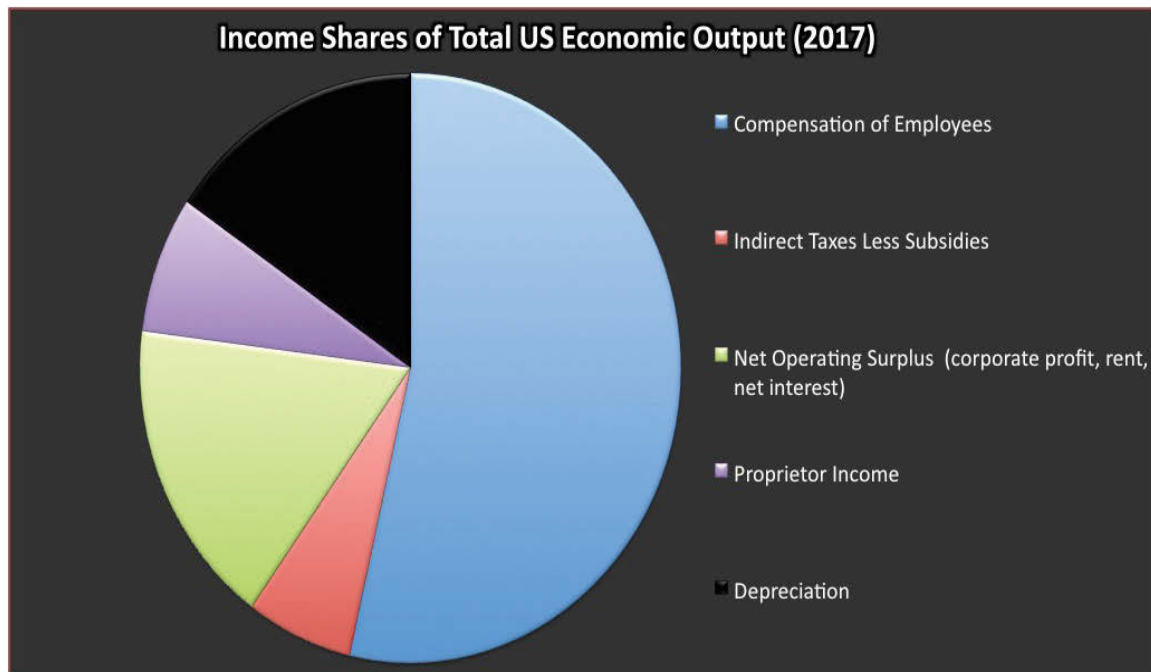


Figure 4.2 Income Shares of US Output
Source: BEA³⁴

a consumer for \$20,000. If we were to calculate GDP by summing the sales price of each transaction ($\$5,000 + \$10,000 + \$15,000 + \$20,000 = \$50,000$) we would be counting the value of the loan three times, the value of the steel three times, and the value of automobile manufacturing twice.

There are three different accounting methods that economists use to factor the total output (income) from production. These include the *value added*, *expenditure*, and *income* methods of accounting. Because “value added” and “expenditure” are fundamentally “product” concepts they are the methods by which GDP is derived. The conceptual focus of the income approach, in contrast, is on the income that is derived from the production; and therefore, is the method by which gross domestic income (GDI) is derived. In theory, all three methods of accounting should arrive at the same estimate. In practice, however,

³⁴ Data for Figure 4.2. were derived from NIPA table 1.11, lines 1, 2, 7, 8, 9, 13, and 21.

they yield slightly different results due to a statistical discrepancy that results from variations in data sources, input-output schedules, and estimation techniques (BEA: 2015). Let us briefly explore these three different methods of accounting for total output (income).

The *value added* method of accounting focuses on the “new value” added at each stage of production. More specifically, value added is equal to the sales price of a good or service minus the cost of all intermediate inputs (goods and service) utilized in its production. Returning to our previous example, we can recalculate the output at each stage of automobile production using the value added approach as follows: bondholders added \$5000 to the value of the steel when they advanced their capital to Company A, which in turn added another \$5000 (\$10,000- \$5,000) after selling their steel to Company B. Company B, for its part, added another \$5,000 (\$15,000 – \$10,000) after selling its automobile to Company C. Finally, Company C added additional \$5,000 (\$20,000 - \$15,000) after selling its output. In total \$20,000 of output was produced, not \$50,000.

The *expenditure approach* focuses on the goods and services sold to final users, or final sales.³⁵ Returning to our previous example, if we had only calculated the value of the output in terms of the price the consumer pays, \$20,000, we arrive at precisely the same answer as provided by the value added approach. In the reality, however, final purchases are not only made by consumers but also include purchases made by businesses, governments, and foreigners. They are categorized as the following components. *Personal consumption expenditures* (which include consumer goods purchased by households,

³⁵ In practice, however, the BEA’s measures of output (income) constructed to reflect that which is generated from “current production,” which is independent of sale. In practice, this means that the BEA includes in GDP, the output that is produced, but not sold, in a given year is. This output is “valued at current prices” (BEA: 2015).

nonprofit institutions serving households, private welfare funds, and private trust funds, *gross private fixed investment* (which consists of purchases of capital goods and fixed structures), *change in private inventories* (which measures the value of inventories in current market prices), *net exports of goods and services*, *government consumption expenditures and gross investment* (which consists of both consumer goods expenditures that are provided to households and expenditures on capital goods and fixed structures).

Finally, the *Income* method focuses on the income payments and other costs that are reflected in the market price of goods and services. It is tabulated by summing *compensation of employees* (including wages, salaries, and non-wage compensation - such as employers contribution to health benefits and social security), *taxes on production and imports* (which consists of taxes that are incurred when a good or service is produced, delivered or sold, including duties, sales tax, taxes on production and ownership of assets used in production such as local real estate taxes), *government subsidies to private business*, *net-operating surplus* (which consists of profits from production before deductions of interest and rent charges), and *consumption of fixed capital* (which consists of economic depreciation of capital stocks due to physical deterioration, obsolescence, and accidental damage) (BEA 2015). When output is factored utilizing the income approach, the aggregate measure is referred to as GDI or gross domestic income.

The BEA industry accounts utilize the “value added” approach to measure industrial sectors’ contribution to GDP. Alternatively, the NIPA - which provide statistics on aggregate output and income for the US economy - derive GDP by way of the expenditure approach and GDI, by way of the income approach. Again, all three methods of accounting should arrive at the same estimate. However, GDP and GDI estimates differ

as a result of variations in data sources, input-output schedules, and estimation techniques (BEA: 2015). The empirical analysis of this dissertation will utilize the NIPA and industry accounts data, and will analyze data that are derived from all three methods of accounting.

GDP as a Basis For Deriving Labor's Share

The methods by which labor's share is derived vary, and there is debate with respect to what types of income should be categorized as income to labor or capital. Decisions regarding which slices of the pie to include as income distributed between capital and labor can have a significant impact on reported labor shares. The inclusion of depreciation and indirect taxes for instance have been implicated in overestimating the decline in labor's share (Bridgman 2014, Kliman 2013a, Rognlie 2015, Winship 2014). As I explain below, this issue relates to those studies that measure output in terms of GDP or value added.

Generally speaking, labor's share is derived by dividing some measure of workers' income by some measure of total output (income). There is a tacit understanding that capital's share, or the profit share, is expressed indirectly as the complement to the labor share ($= 1 - \text{labor's share}$). Arguably the most important dimension of the utility of "labor's share," resides in this function as a simultaneous measure of both labor and capital' share, i.e., as an expression of the shares of income that are given to *both* factors of production.

However, whether or not a reported labor share expresses the shares given to both factors of production will depend on the precise procedures from which it is derived. Gomme and Rupert (2004) have warned against interpreting all reported labor shares as expressing the distribution between labor and capital. The reason being that "wedges'

between labor and profit income exist in many reported labor shares. “Wedges,” here denote the existence of shares of the total output that are given neither to labor or capital, but which are included in the denominator of labor’s share. In the event that any such shares of output grow, labor’s share can potentially be effected despite the distribution between labor and capital remaining unchanged. Such labor shares can give rise to misleading assumptions regarding the actual distribution between labor and capital, between compensation and profit.

A measure of output that is typically featured in national economic statistics - and which often serves as the measure of output that is utilized in definitions of labor’s share – is GDP (Blanchard 1997, Magdoff and Foster 2013, Kristal 2010, 2013, Armenter 2015). However, using GDP as a basis for calculating the labor share presents a number measurement challenges. One problem concerns the fact that GDP expresses the whole output pie which includes slices that are not distributed as labor or capital income, such as those represented by indirect taxes, government expenditure, and non-profit institutions. There has also been an historical precedent (albeit less recognized in recent decades) to exclude depreciation - which is also a slice of GDP - as income to capital. Historically, economists have deemed it necessary to distinguish between revenue that is allocated to replace depreciated (worn-out and obsolete) capital and that which constitutes a sum of value that is in addition to the initial capital invested.

GDP also includes the income (output) of so-called “private households.” The labor income and output of private households does not reflect the compensation that this sector’s workers receive for the output that they produce. Therefore it is problematic to include the compensation and output of private households in a labor share that is calculated to express

class struggle between labor and capital, in terms of the share of income that workers receive for the output that they produce (Kliman 2015).

Finally, another problem with GDP as a basis for deriving labor's share concerns the labor income and profit of the self-employed, or proprietors. The BEA reports only the total output (income) that is attributable to proprietorships, without distinguishing between their profit and labor income. Over the years, analysts have utilized various accounting procedures to produce various estimates of the labor-profit split of proprietorships but, unfortunately, there has been little agreement on which accounting procedures produce the most reliable estimates. Below, I elaborate on each of the above-mentioned measurement challenges.

Depreciation

With respect to depreciation, the measurement dilemma hinges on whether to calculate labor's share in gross or net terms. GDP (value added) includes the portion of value that must be allocated to recover costs associated with worn-out and obsolete capital equipment, otherwise known as "depreciation." The gross labor share expresses labor income as percentage of GDP (value added). An alternative specification of labor's share entails dividing labor income by Net Domestic Product (NDP), or net value added. NDP (net value added) is equal to GDP (value added) less depreciation. NDP (net value added), is the portion of a pie that can be consumed, while leaving the existing capital stock intact (Moss 2007).

Historically, economists have shown considerable interest in the net share. Much of the attention that labor's share received during the mid-Twentieth-Century related specifically to the net labor share. Keynes characterization of trendless labor shares as "a bit of a miracle," was in reference to the trajectory of net shares of Great Britain and the US over the course of roughly half a century. Likewise, Kaldor's (1957) classic study, which sought to establish the constancy of labor's share as an economic "fact" was based on the historical trajectories of net shares. Recently, however, gross shares have commanded much more attention than net shares (Rognlie 2015). Some economists, however, have explicitly critiqued the recent usage of gross shares in the context of class analysis, as the net share has received the most theoretical justification as the "go-to" labor share for exploring the *distribution* between capital and labor (Bridgman 2014, Fieldstein 2008; Kliman 2015, 2013a; Piketty 2014; Rognlie 2015).

The justification that has been provided for prioritizing net over gross shares, in the context of distributional analyses, is theoretical in nature and consistent with the typical definition of income. Recall that income is generally defined as the amount that an economic entity can consume without reducing its net worth (Fox et al. 2012). Based on this definition, the revenue that corporations allocate to replace the depleted capital stock should not be categorized as capital income or profit because the consumption of this income would take place at the expense of corporations' net worth.³⁶

Bridgeman (2014), Feldstein (2008), Kliman (2015, 2013a), Piketty (2014), and Rognlie (2015) have rejected expressing income shares as percentages of gross output in

³⁶ Note that we are strictly referring to the replacement the *initial* capital outlay, not capital accumulation (the expansion of the net capital stock).

the context of distributional analysis. When calculating the income shares between capital and labor, Piketty remarks that,

... [O]ne must subtract from GDP, the depreciation of the capital that made this production possible: in other words one must deduct wear and tear on buildings, infrastructure, machinery, vehicles, computers and other items during the year in question. This depreciation is substantial, today on the order of 10 percent of GDP... and it does not correspond to anyone's income: before wages are distributed to workers or dividends to stockholders, and before genuinely new investments are made, worn out capital must be replaced or repaired. If this is not done wealth is lost, resulting in negative income for the owners.

The same point is invoked by Dean Baker (2007:1) who pointedly remarks that, "Productivity [or output per worker] is measured against gross output, while *income* must come from *net* output - *no one can eat depreciation*."

Justification for prioritizing gross shares has taken a few different forms. Economists have occasionally commented that the gross share better suited to examine questions related to the productivity of workers. (Baker 2007:1, Giandrea and Sprague 2017, Rognlie 2015). This point is invoked in Baker's (2007:1) statement above. Similarly, Giandrea and Sprague (2017:3) argue that:

[w]hether one uses net value-added or gross value-added depends on the question to be answered. If one is interested in the extent to which workers share in the output available for consumption, then net value-added may be more appropriate. Gross value-added is more appropriate if one is interested in the extent to which compensation tracks productivity.

Using more or less the same language Rognlie (2015:6) comments:

Whether a gross or net measure is more appropriate depends on the question being asked. The allocation of gross value-added between labor and gross capital more directly reflects the structure of production, while the allocation of net value-added between labor and net capital reflects the ultimate command over resources that accrues to labor versus capital.

Rognlie (2015:7) goes onto theorize another dimension of the potential utility of gross shares, one that implicates distribution not between capitalists and workers but between workers.

[i]n an industry where most of the output is produced by short-lived software, the gross capital share will be high, evincing the centrality of capital's direct role in production. At the same time, the net capital share may be low, indicating that the returns from production ultimately go more to software engineers than to capitalists - whose return from production is offset by a loss from capital that rapidly becomes obsolete... a rise in the gross capital share in a particular industry is particularly salient to an employee whose job has been replaced by software, and it may proxy for an underlying shift in distribution within the aggregate labor force.

Rognlie's argument is particularly intriguing given the substantive redistribution that has taken place *within* the working class - between traditionally lower wage occupations to more technically specialized ones - and in the context of rising depreciation of computer software. Kliman (2011) in different contexts has documented both of these trends but to my knowledge has not connect them. Nevertheless, "[w]hen one considers the ultimate breakdown of income between labor and capital, particularly in the context of concern about the distribution in the aggregate economy, the net measure is likely more relevant" (Rognlie: 2015:7).

An empirical justification that has utilized to prioritize gross over net shares - in the context of questions related to the distribution between labor and capital - concerns the purported "arbitrary" methods by which depreciation is calculated (Kalecki 1938; Krippner, 2012, Kristal 2013). The thrust of this position is that gross measures of output are empirically more reliable than net measures of output. This position has recently been taken up by Kristal (2013) who acknowledges that the falling labor share that she reports is based on gross value added and therefore the rising profit share that it implies, includes

depreciation. Kristal refers to the profit that is implicated in her falling labor share as “gross profits,” explicitly acknowledging that she includes depreciation as profit. To my knowledge, this is a unique and peculiar use of the concept of “profit,” which traditionally has been distinguished from the *recovery* of investment (depreciation) as a *return* to investment, i.e., a sum that counts as an addition to the initial investment. Kristal (2013:386) justifies the inclusion of depreciation as profit by arguing that depreciation figures are based on “net incomes of firms whose allowances for depreciation is more or less arbitrary.” Kristal does not expound on what she means by “arbitrary.” However, she previously justified the inclusion of depreciation “[b]ecause capital depreciation measurements... may be affected by tax policy” (Kristal 2010: 759). It appears that her objection concerns what Krippner (2011) refers to as the “liberalization of depreciation allowances.”

Krippner (2011: 34-35) correctly points out that corporations regularly get tax breaks based on the depreciation estimates that they report to the Internal Revenue Service (IRS). It is also true that Congress frequently pressures the IRS allow firms to depreciate investments more quickly (sometimes referred to as “depreciation holidays”) so as to decrease taxes on corporate earnings and thereby encourage capital investment. However, both Krippner and Kristal derive their data from the National Income and Product Accounts (NIPA). The NIPA does not tabulate depreciation figures based on what corporations report on their tax returns.

Rather, they use a comprehensive classification scheme that catalogues all capital assets by type. The depreciation of every type of asset is estimated in advance based on the average operative life of the asset, what a used asset of the same kind sales for in secondary

markets, and the cost of replacing a new asset of the same kind. Depreciation costs are determined by comparing the resale values of the respective asset that are (x) years old to their replacement cost. Therefore, *NIPA data are not affected by changes in tax policy, including “depreciation holidays.”* Krippner (2011: 173) writes that she “closely follows” Fred Block’s (1990) unpublished study of depreciation and national income accounting. Yet Block’s study does not appear to take issue with depreciation for the same reasons as Krippner or Krystal. Block does not reject NIPA depreciation data because he assumes that changes in tax policy, e.g., “deprecation holidays” that are granted and extended by Congress, inflate NIPA figures, nor does he argue that NIPA depreciation figures are based on arbitrary allowances. Rather, Block’s contention with criticism of NIPA depreciation figures concerns their decision to calculate depreciation based on the *replacement* costs of capital stock. He argues that the effect of calculating depreciation based on replacement cost has the effect of vastly overstating the amount of depreciation, especially in nonresidential construction. Consequently, Block proposes that depreciation be calculated in terms of *historical* cost, which is data that is also recorded in the NIPA. However, preliminary research demonstrates that valuing depreciation at historical cost has little effect on labor share trends. What matters in the case of calculating the labor share trend is not whether NIPA current cost depreciation figures overestimate or underestimate actual depreciation as compared to the historical cost figures. Rather, what matters is the relative movement between the historical cost and current cost figures over time.

A final justification for prioritizing gross share over net shares, to my knowledge, originates from two reports by the Cleveland FED that were published roughly a decade apart. Gomme and Rupert’s (2004:4) Cleveland Fed Report, in effect argues against

prioritizing net shares on account of the fact that “depreciation merely compensates owners of capital for the physical wear and tear.” This “is a weak justification,” they argue, because “[l]abor is likewise subject to wear and tear, both physical and intellectual.” Roc Armenter (2015:3), also of the Cleveland Fed, makes essentially the same argument:

The depreciation, or consumption of fixed capital, is merely compensation for the physical wear and tear of capital. It is thus naturally assigned exclusively to capital income. However, it is fair to point out that workers are also subject to wear and tear! Yet, there is no entry for labor depreciation in the national accounts.

This argument - the first of its kind, in so far as I am aware - implicates an interesting dimension of labor exploitation under capitalism. Marx argued long ago, that workers on average receive wages that only compensate them for the costs associated with maintaining their ability to do work. The equilibrium wage – when supply for labor equals demand for labor – is determined by the socially necessary (the average) labor time necessary to reproduce worker’s capacity to perform labor at a level in which the quality of labor is not diminished through hunger, lack of shelter, or to use Gomme and Rupert’s language, through “wear and tear, both physical and intellectual.” If we expand the concept of net worth to include the physical and intellectual capacities of workers, then wages arguably more closely approximate depreciation than income.

However, capital income, or profit, consists of a sum that is over and above that which compensates capital’s wear and tear. Not only are capitalists compensated for their capital costs, they also receive profit. Though arguably exploitive, this process is completely legal under bourgeois law and fundamental to the distribution of income under capitalism. I agree that workers, like capital assets, also suffer depreciation. However,

without a concept of depreciation that reflects the differences between the manner in which capital is remunerated as compared to labor, we impede our ability to measure accurately this important exploitative dimension of income distribution under capitalism. More precisely, if we define depreciation as capital income, without any stipulations, then we impede our ability to quantify the degree to which capital is compensated by a magnitude that is over and above its costs. This is an important consideration and arguably the main objective behind why inequality related investigations are interested in the labor share in the first place.

Imagine for instance two scenarios. In the first scenario, a firm suffers a considerable loss of plant and equipment over a given year of production. In the next year, the same firm suffers little to no loss of plant and equipment, but produces roughly the same amount of output as the previous year. If we define depreciation as capital income, without any stipulation, then we would imply that the firm was no better off in the second scenario as compared to the first. For the total sales revenue in both scenarios remained roughly constant, as consequence of the fact that roughly the same amount of output was produced in both years. However, it would be illogical to draw such a conclusion. In the first scenario, the firm must spend a considerable amount of its revenue replacing worn-out or obsolete capital stock. In the second, the firm is free to use the money to expand its capital outlay (to accumulate capital), or to distribute more dividends to stockholders. In the absence of a definition of capital income that distinguishes between depreciation and profit it is impossible to assess the overall health of a firm from one year to the next, as the rate of depreciation changes; and more importantly, assess the degree to which workers share in fruits of their labor.

In recent decades a sizeable and growing portion of GDP has included depreciation, of which Kliman (2011) attributes the marked rise in the depreciation of information technology. He argues that the perpetual obsolescence of computer systems and software, is driving the depreciation of corporations' fixed assets at an increasing rate.

When GDP growth is increasingly driven by depreciation, *ceteris paribus*, worker compensation will be expressed as a smaller percentage of output. Hence, a rise in depreciation can depress labor's share of GDP without a change in the distribution between workers' compensation and profit. This is the basis of the criticism of economists who argue that gross shares have overestimated the decline in labor's share (Bridgman 2014, Kliman 2013a, 2015, Rognlie 2015, Winship 2014).

GDP and Mixed Income of Proprietors

Another measurement challenge posed by the use of GDP concerns the output (income) of proprietorships. Proprietors or the self-employed constitute a category of people that do not fit neatly into the worker-capitalist dichotomy. Nor do the data allow us to distinguish between their profit and labor income. The BEA defines proprietor income as income from current production that accrues to sole proprietorships and partnerships and tax-exempt cooperatives. However, the BEA reports only the total output (income) that is attributable to proprietorships, without distinguishing between profit and labor income of proprietors. Over the years, analysts have utilized various accounting procedures to produced various estimates of the labor-profit split of proprietorships but, unfortunately, there has been little agreement on which accounting procedures produce the most reliable estimates. Moreover, Elsby et al. (2013) have demonstrated that reported labor shares are

significantly affected by decisions regarding which accounting procedures to adopt when estimating the labor-profit split of proprietorships.

Some analysts have derived estimates for the capital-labor split of proprietorships, yet there is no consensus with respect to which estimates better reflect the actual distribution between the returns to proprietors' capital and labor. Moreover, some analysts appear to employ estimates at random and for reasons that are arbitrary. For instance, Kristal (2013) estimates the labor income of proprietorships as two thirds of total proprietor earnings. Later, in the same study she re-estimates the labor earnings of proprietorships (without providing any theoretical justification) according to the average wages in their industry. This latter estimate appears to be based on Gollin's (2002) approach, which was developed to compare "labor shares" of different countries. Gollin argues that estimating the labor earnings of the self-employed according to their industry wide average is a better measure of the labor income of developing nations, where a huge fraction of the workforce exists as self-employed agriculture workers. However, Gollin (2002: 469) admits, "This adjustment will be good to the extent that the self-employed command essentially the same wages as people who work as employees. It will be a poor assumption if there are systematic differences in earnings ability between employees and the self-employed."

For analysts that seeks to describe the distribution between workers' income and profit, I find the inclusion of proprietorships as an intrusion. In so far as I know, no one has provided a theoretical justification for why proprietorships should be included in a distributional analysis of social class defined in terms of labor and capital. In this context, I believe the only solution to the conundrum posed by proprietorships is to derive labor's share based on measures of compensation and net output that do not include them.

Unfortunately, private industry data in the NIPA accounts include proprietorships, in addition to nonprofit institutions. This poses a serious problem for Kristal (2010, 2013) and others who wish to measure labor's share (specifically in terms of the distribution between labor income and profit) in the private industry sector. Although Kristal wishes to explain why capitalists' profits have increased at the expense of workers' pay, her analysis is thwarted by the existence of third group that is neither capitalist nor worker. In this context, even if Kristal could accurately approximate the labor-capital split of proprietor income, what can it tell us about the distribution between capitalists and workers and/or how this distribution is affected by union density, an independent variable in her analysis?

Using NIPA corporate sector data, in contrast, would make possible a comparison of labor income and net output without the interference of proprietors. However, given that Kristal's analysis also focuses on disaggregating the total private industry in order to isolate the effect of each industry, there is no clear solution to the problems that that encumber her analysis, as corporate sector data are not broken down by industry.

Nevertheless, for investigations that wish to describe the distribution between capitalists' profits and workers' compensation, NIPA corporate sector data provide the obvious solution to the challenges posed by the inclusion of shares of GDP that are not distributed between these two groups.

The Output of Private Households

With respect to the "private household" share of GDP, note that the output of this sector is measured in a most peculiar way; as the value added of housing services provided by owner occupied homes. The Bureau of Economic Analysis (BEA) which is responsible

for generating NIPA data conceives of all output as coming from property and labor. In the case of the housing sector, it is solely the property or owner-occupied homes that are conceived of as producing this service, the value of which is determined by the rental income that accrues to owners of tenant-occupied housing units of similar size and location.

The compensation of the private household sector, however, is based on the income that domestic servants (e.g., employed housekeepers and/or nannies) receive. Therefore, the output and compensation of this sector are not relatable in a meaningful way, in a that reflects the degree to which workers are compensated for the output that *they* produce. Hence, the labor share of this sector does not proxy for the distribution between capitalists and workers.

Once again, the net value added of corporations, which also exclude the “private household” sector, appears to be a better measure of output for studies that wish to discern the profit labor income split.

Government, Indirect Taxes and Non-profit Institutions

Government expenditure, indirect taxes and the output (income) non-profit institutions all contribute to GDP, yet there are shares of the economy’s gross output that are allocated to neither profit or compensation, such as that which is represented by indirect taxes (also known as “taxes on production”) which Gomme and Rupert (2004) refer to as a “wedge” between the capital and labor shares. Indirect taxes, or taxes on production are not directly levied on the income of individuals, as in the in the case of income tax. Instead, they are levied at the stage of production as an addition to the price of goods and services (e.g., sales tax or value added tax). Businesses collect and transfer these proceeds to

government. Labor shares that are utilized to describe the distribution between labor and capital income frequently subtract indirect taxes from output, resulting in what is often referred to as labor's share at "basic prices" (Armenter 2015, Gomme and Rupert 2004, Kristal 2013).

In addition, there are other sectoral shares of gross output, including those represented by government and nonprofit institutions, that are not divisible between profit and compensation. Rather, virtually all of the output of these two sectors is distributed as compensation. Consider, for instance, the portion of output that is typically referred to as "government expenditure," which includes all government spending on goods and services, including investment in fixed capital stock. The compensation share of government is equal to 1, reflecting the fact that all of government output is distributed as compensation to government workers. In the event that government output (income) grows (shrinks) as a percentage of GDP, the total compensation share of GDP will rise (decline), all else being equal. However, variation in the compensation share that results from an increase (decrease) in the output of government or nonprofit institutions does not reflect a redistribution between profit and compensation. In sum, the inclusion of any of these sectors in a distributional analysis of profit and compensation, or capital and labor is highly problematic and can paint a distorting picture of the profit-compensation income distribution.

Empirical Agenda and Research Design

In the previous sections I discussed the methodological challenges that require careful consideration when attempting to describe the distribution between labor income

and profit. A whole series of measurement challenges present themselves as a consequence of deriving labor's share based on GDP. While it is common practice for analysts to calculate labor's share based on GDP, the utilization of this measure of output, I argue, is inappropriate for investigations that wish to discern the labor income and profit shares. There are slices of the GDP pie that are not distributed between capitalists and their workers, such as those represented, by indirect taxes, government expenditure, non-profit institutions, proprietorships, and private households. Depreciation is another component of gross output that historically has been excluded in labor shares whose focus is on the *distribution* between compensation and profit. Following Bridgman (2014), Feldstein (2008), Kliman (2014), Piketty (2014), and Rognlie (2015) I find the theoretical justification for prioritizing net shares over gross shares (i.e., the justification for excluding depreciation) – particularly in the context of addressing the question of *distribution* between labor and capital – valid.

Kliman's (2013a) calculation of labor's share of corporate industry net output (net value added) overcomes the problems associated with deriving labor's share based on GDP. As discussed in a previous section, Kliman demonstrates that the compensation share of corporations' net value added was basically trendless, after accounting for disguised profit (potential profit income that is included in NIPA compensation data), through 2005. Kliman's analysis implies that falling labor shares that are based on GDP are not the result of changes in distribution between labor income and profit. It is important, then, to consider factors that affect the total-economy labor share but not the net corporate-sector labor share, namely depreciation, government, nonprofit, and private households sectors, as well as proprietorships. Through a disaggregation of labor's share of GDP, this analysis will

underscore the contribution of these factors on the movement in labor's share of GDP during the decades leading up to the Great Recession and thereby clarify the degree to which labor's share of GDP falls as a consequence of movements in shares of GDP which do not constitute a redistribution between profit and compensation.

Chapter 5

Data and Analysis:

Decomposing the Compensation Share of GDP

The virtue of an operational definition resides in its “goodness of fit” with the concept or theoretical orientation that underlies the analysis. The derivation of labor’s share is often based on GDP, frequently defined as economy-wide compensation, plus imputed “labor” income of proprietors, divided by GDP. Moreover, the results that are generated by this definition of labor’s share are often reported as describing the distribution of the pie between capitalists and workers, or alternatively between profit and compensation. However as we have discussed, utilizing the economy-wide labor share as a measure of distribution between capitalists and workers, or between profit and compensation is problematic. Firstly, there are shares of the economy’s gross output that are allocated to neither profit nor compensation, such as indirect taxes, which Gomme and Rupert (2004) refer to as a “wedge” between the capital and labor shares. In addition, there are other shares of gross output that should be removed, especially if the objective is to discern the distribution between profit and compensation. This would include the output (income) generated by government, nonprofit institutions, and private households. Finally, the shares of the pie that are attributable to proprietors and to the depreciation of capital also present measurement challenges to a profit – compensation distributional analysis. A rise (fall) in any of these shares of GDP can affect the labor share trend without an actual change occurring in the distribution between compensation and profit. Consequently, Gomme and Rupert have warned against making the tacit assumption that the profit share is always given as the complement of the labor share. This interpretation can be justified only if the measure of output (income) being utilized in the definition of labor’s share is solely

divisible between profit and compensation. If, however, the measure of output contains “wedges” between profit and compensation, it does not describe the actual distribution between capital and labor, or profit and compensation. While some authors have warned of the intrusive influence of one or another components of GDP, to my knowledge there has been no attempt to measure the cumulative effect of proprietorships, depreciation, the private household sector, and or other shares of gross output that are divisible between profit and compensation. The present analysis is one such attempt.

In this chapter, I disaggregate the compensation share of GDP, during the “neoliberal” decades leading up to the Great Recession, in order to isolate the effects of various factors on the total compensation share of GDP. The corporate sector is included in this disaggregation because it is the part of the economy that provides the best conceptual fit with a distributional analysis of profit and compensation. The net output, or net value added of corporations (at basic prices) is divisible only by compensation and net operating surplus, a before-tax profit-like measure that includes all corporate income after subtracting compensation of workers, depreciation, and taxes on production and imports less subsidies, but before subtracting income tax and financing costs (net interest).³⁷ Neither does the corporate sector contain the mixed-income of proprietors, of which there is no clear consensus regarding its distribution between profit and compensation (Armenter 2015, Gomme and Rupert 2004, Giandrea and Sprague 2017, Gollin 2002, Kristal 2013, Krueger

³⁷ “At basic prices” means that taxes on production and imports less subsidies are excluded. Such taxes are sometimes referred to as indirect taxes, and include for instance sales tax and duties on imports. This share of income should be excluded from a distributional analysis of capital and labor, or profit and compensation because neither class receives it, as it is confiscated by government. Recall that Gomme and Rupert (2004) characterize indirect taxes as a “wedge” between capital and labor income, or profit and compensation. If, over time there is an increase in the share of the output that government confiscates in the form of indirect taxes the labor’s share will be expressed as smaller percentage of output (income) *cet. par.*

1999).³⁸ The labor share of corporations' net output is arguably the best proxy of the distribution between capital and labor, especially if one's conception of "capital income" is profit. A decline in labor's share of GDP says nothing of the distribution between compensation and profit. Additional evidence is required to demonstrate that a decline in labor's share of GDP resulted or partly resulted, from a decline in labor's share of corporations' net output. The following decompositions will allow us to discern the effects of multiple factors that affect labor's share of GDP.

In the following decompositions of this chapter I reference the "compensation" share as opposed to the "labor share." This is in keeping with the terminology of those studies that designate the latter term exclusively to measures in which labor income is derived by summing together the estimated labor income of proprietors and the compensation of wage and salary workers. Measures in which labor income is factored solely according to total worker compensation is sometimes referred to as the "payroll share."³⁹ However, I refer to this latter formulation as the "compensation share;" and again, it is the focus of the first series of decompositions included in this chapter. In the next chapter, I measure the effect of estimating the labor income of proprietors. I therefore refer to the "labor share" in those series of decompositions.

³⁸ If discerning the capital-labor split of proprietorships did not constitute a significant measurement challenge, their inclusion in an analysis of neoliberal class struggle would still be an intrusion, since proprietors do not fit neatly into the classical dichotomy of social class, as workers or as capitalists.

³⁹ Total compensation includes wages and salaries, and also fringe benefits. These components of compensation are paid by employers and are therefore a cost to business. It is impossible to describe the distribution between labor and capital by defining labor income merely in terms of wages and salaries - i.e., without factoring labor income as total compensation (inclusive of fringe benefits) - because the compliment of the resulting labor share would not express the profit share.

Figure 5.1 below is based on the following decomposition of the total compensation share of GDP, at basic prices.⁴⁰ “At basic prices” indicates that indirect taxes have been subtracted from the output.

$$\frac{C}{GDP} \approx \left(\frac{\frac{C}{NDP}}{\frac{c}{nva}} \right) \left(\frac{NDP}{GDP} \right) \left(\frac{c}{nva} \right)$$

The change in the total compensation share of GDP can be decomposed into changes in the ratio of the total compensation share of net domestic product to the compensation share of corporations’ net value added (net product), multiplied by the ratio of net domestic product to gross domestic product, multiplied by the compensation share

⁴⁰ Where

C= total compensation

c = corporate sector compensation

GDP = GDP

NDP = Net Domestic Product

nva = corporations net product

C/GDP = The economy wide compensation share of Gross Domestic Product

c/nva = the compensation share of corporations net product

C/NDP = The economy-wide compensation share of net domestic product

NDP/GDP = the ratio of net to gross product.

of corporations' net value added (net product). The purple series is the total compensation share of GDP. The first term on the other side of the equation, which is denoted by the pink series in the graph below captures the effects of factors that impact the aggregate economy compensation share but not the corporate sector compensation share. The second term, which is denoted by the brown series captures the effect of depreciation and the last term, denoted by the white series, captures the effect of the compensation share of corporations' net value added (net product). The white checked line in the trend line for compensation share of corporations' net value added (net product).

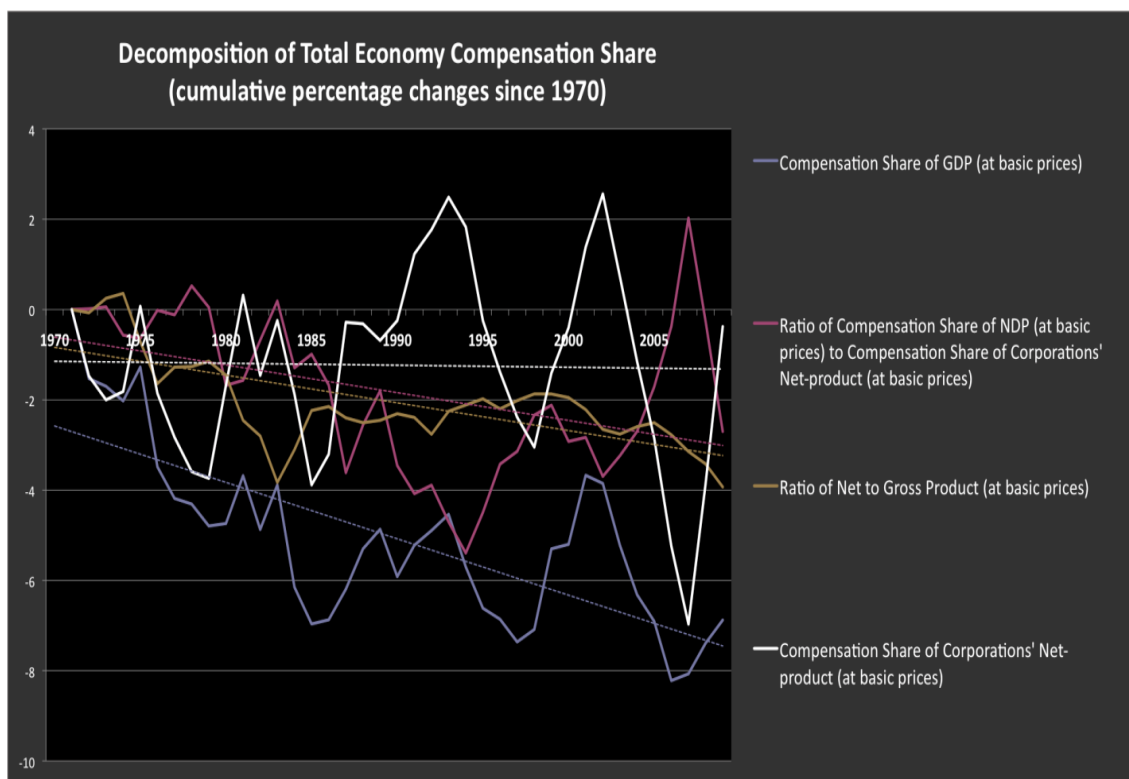


Figure 5.1 Decomposition of Total Economy Compensation Share, 1970-2008
Source: BEA⁴¹

⁴¹ In Figure 5.1, the data were obtained from NIPA table 1.14, lines 1, 3, 4, and 7; NIPA table 1.7.5, lines 1, 5, and 18; NIPA table 2.1 line 2.

It follows from this identity that the percent change in the total compensation share of GDP is approximately equal to the sum of the percentage changes in these three terms. Between 1970 and 2008 the total compensation share of GDP fell by 6.8%, while the ratio of the total compensation share of net-domestic product to the compensation share of corporations' net value added (net product) declined by 2.7%, the ratio of net to gross product, for its part, fell by 3.9%, and finally the compensation share of corporations' net value added (net product) was virtually trendless, increasing by less than .4%. Hence, the fall in the compensation share of GDP is completely attributable to depreciation and factors that affect the aggregate economy but not the corporate economy. A little more than 57% ($3.9/6.8$) of the decline in the total compensation share of GDP was due to depreciation, while roughly 40% ($2.7/6.8$) was due to factors that affect the aggregate economy but not the corporate sector.

These findings are consistent with Kliman (2013a, 2015) who reports a trendless compensation share of corporations' net-value added. The fact that the net corporate share was trendless for more than three-and-a-half-decades leading up to the 2008 Great Recession should raise doubts about the general success of the frequently reported neoliberal assault on workers. That is to say, that aggregate profit did not increase at the expense of aggregate compensation during the first three-and-a-half decades of neoliberalism, notwithstanding the potential variation that could have occurred *within* these aggregates.

Aside from depreciation, the graph above demonstrates that the aggregate economy labor share, is significantly affected by factors that are external to the distribution between worker's compensation and corporate profit. It is to these additional factors to

which my attention now turns. Figure 5.2 illustrates why it is important to consider these factors. It charts compensation of employees as a share of various legal organizational forms' contributions to net domestic income.

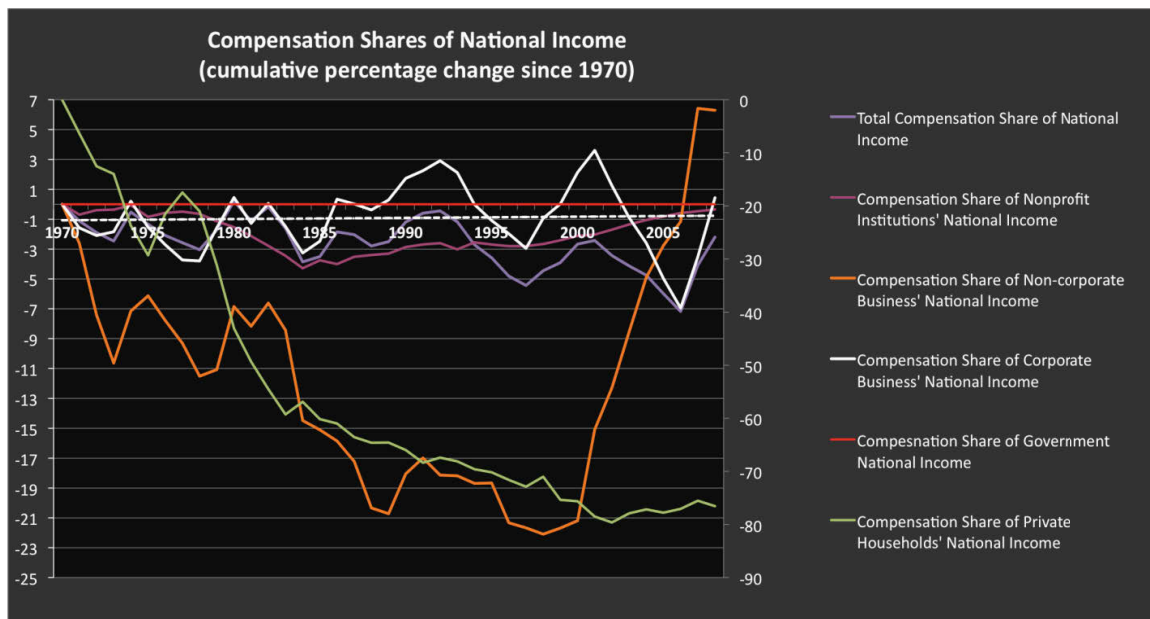


Figure 5.2 Compensation Shares of National Income, 1970-2008
Source: BEA⁴²

“Legal form of organization,” is the term that the NIPA uses to denote the classification scheme that disaggregates the aggregate economy’s income (output) according to the corporate, government, nonprofit, proprietor, and private household sectors. One problem facing a decomposition of net domestic product (aggregate economy output less depreciation) concerns the fact that NIPA product accounts do not include data on net value added by legal form of organization. Fortunately, however, NIPA income accounts has such data but it is derived according to the income accounting approach, not the value added approach.

⁴² The data in Figures 5.2 through 5.7 were obtained from NIPA table 1.13 lines 3, 4, 9, 10, 11, 17, 42, 43, 48, 49, 50, 55, 56, 57.

NIPA table 1.13 is a table of national income. Recall that “national” measures correspond to the output (income) that is attributable to US residents, irrespective of whether the production operation is domestically located, or located abroad. While “domestic,” corresponds to production that takes place within a country’s borders, irrespective of whether the production operation is foreign owned or owned by US residents. In theory, moving between “domestic” and “national” measures of income (output) in the same decomposition would be inappropriate because both refer to different aggregates. However, NIPA table 1.13 lists “domestic industries” so called national income, which based on what I have explained above is a fundamental contradiction in national accounting terminology. While in theory, “national income” should not include the income of foreign chartered corporations operating within US borders, the “domestic industries” in NIPA table 1.13 include the income of all corporations –regardless of their country of origin - operating within the US.⁴³ In practice, this means that the “domestic” industries in NIPA, national income table 1.13 refer to the same industries listed in the domestic product accounts, and upon which the compensation shares in figure 1 are derived. Finally, because national income by definition does not include depreciation, the income of domestic industries in NIPA table 1.13 is conceptually equivalent to the net domestic product or net value added of domestic corporations. The only difference is the statistical discrepancy that results between product and income accounting procedures.

⁴³ I have verified that “domestic industries” in the national income accounts indeed refer to the same domestic industries that are included in the product side accounts. “[T]he income of domestic corporate business, which is shown in lines 3 through 9 of table 1.13 (these lines are consistent with estimates of domestic corporate income shown in NIPA table 1.14, which shows the derivation of the gross value added of domestic corporate business)” - Kurt.Kunze@bea.gov.

To consider just how close conceptually equivalent output and income measures can be, note that the difference between the compensation share of corporations' net-value added (the white series in the figure 1) and the compensation share of corporate national income (the white series in the figure 2) between 1970 and 2008 is a little more than half a percent.

Notice that the compensation shares of the corporate, government, and nonprofit sectors are virtually trendless. The compensation share of the private household sector, however, suffered a continual decline for the whole period up to 2001, after which it flattened out and then rose slightly. Nevertheless, by 2008 the compensation share of private households fell by 86% relative to its level in 1970. As previously mentioned, the compensation share of private households is quite unusual as compensation shares go. Recall that in the NIPA, the compensation of private households is recorded as the wages, salaries and benefits that accrue to household domestic workers e.g., nannies, domestic servants, and caregivers, while its national income is based on the imputed rental value of owner occupied homes.

This peculiar non-relationship is obviously unrelated to the question of how well workers are compensated for the output that they produce. Yet, as we shall see, it factors in the economy-wide compensation share. According to Rognlie (2015), the increase (decrease) in the economy wide net capital (labor) share since 1948 is entirely attributable to the effect imparted by the private household sector.

The graphs below illustrate the effects of various compensation shares according to legal form of organization on the aggregate compensation share. In each of the graphs, aggregate compensation share (represented by the purple line) is paired with another series

that excludes one of the sectors. The difference between the two trends demonstrate how the aggregate compensation share is effected by the given sector.

When the purple line appears below (above) the series that excludes the sector, the sector is said to have a depressing (augmenting) effect on the aggregate compensation share.

Figure 5.3 demonstrates the effect of the non-corporate business sector, which includes proprietorships, partnerships, and government enterprises. Overall, non-corporate business suppressed the overall compensation share of national income. The percentage-point difference between the total compensation share and the total compensation share excluding non-corporate business grew as much as 2.9% by 2001, which means that non-corporate business depressed the overall compensation share by 2.9% during this period. By 2004, however the two trends moved virtually in tandem, meaning that the compensation share of non-corporate business moved at the same rate

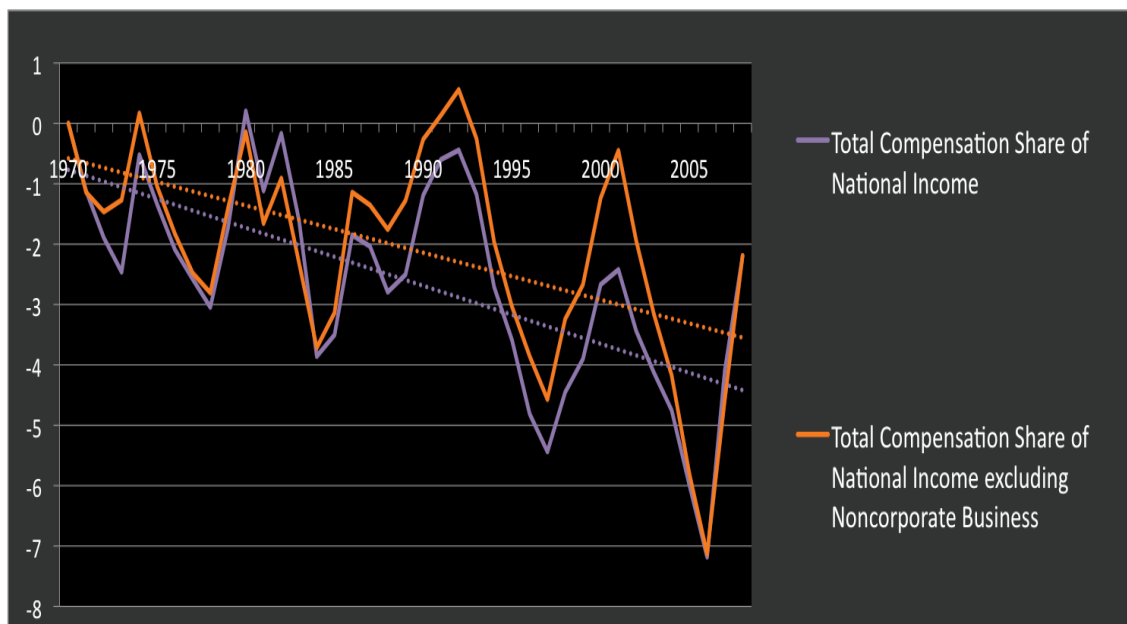


Figure 5.3 Compensation Share of Net Domestic Income without Contribution From Noncorporate Business
Source: BEA

and in the same direction as the total compensation share, which was roughly 2.2% lower than in 1970.⁴⁴

Figure 5.4 shows that nonprofit institutions had a slight positive effect on the overall compensation share of national income. Between 1990 and 2006, nonprofits consistently gave the overall compensation share a roughly 1% bump, followed by a brief period where it had much less of an impact. By 2008, the nonprofit sector once again buttressed the decline in the aggregate labor share by about 1%, which resulted in the 2.2% decline - as opposed to a roughly 3% decline - in the aggregate labor share



Figure 5.4 Compensation share of National Income without contribution from Nonprofit Institutions

Source: BEA

⁴⁴ Note that the proprietorships that are included here in the non-corporate business sector does not include an estimation of proprietor “labor” income. This would imply that the compensation-profit split of proprietor national income is on par with the overall average of the non-corporate business sector as a whole. In the next chapter, I will explore the effects of estimating proprietor “labor” income.

Figure 5.5 demonstrates that government's impact on the aggregate labor share occurred primarily between 1980 and 2005, where it suppressed the total compensation share between a range -.5% and -1%. However by 2004 the government compensation share moved in close proximity to the total compensation share. The effect of government, like that of nonprofits is not a result of fluctuations in their compensation shares. Both sectors' compensation shares were trendless throughout the series because virtually all of the income (output) that they generate is distributed as compensation. Their influence on the total compensation share is the result of change in their overall weight within the economy.⁴⁵ It is telling that governments impact on the total occurred in the series beginning in 1980, which is the beginning of neoliberalism, a period in which the state was purportedly rolled back in order to make greater room for the private sector (Harvey 2005). The compensation share of nonprofits and government between 1970 and 2008 remained trendless at 97.5 and 1, respectively. However, their "weights" varied significantly. Between 1970 and 2008, nonprofits increased their overall weight as a share of national

⁴⁵ The total economy compensation share is a "weighted average" of the sectoral compensation shares. The "weight" of each sector is determined by the ratio of its output to the total output. Each sector's contribution to the total weighted average is the product of the sector's compensation share and the sector's weight. This can be expressed by the following equation:

$$\left(\frac{C_j}{N_j} \right) \left(\frac{N_j}{\sum N} \right) \text{ where the compensation share of any sector (e.g., } j) \text{ is expressed as } \frac{C_j}{N_j} \text{ and where the}$$

"weight of any sector (e.g., } j) \text{ is expressed as } \frac{N_j}{\sum N} \text{ .}

Because the compensation shares of government and nonprofits are always trendless and equal to 1, as virtually all of the output is distributed as compensation, the effect of these sector's will be determined by their overall "weight" within the aggregate economy.

income by 75% = $[(5.8-3.3)/3.3 \times 100]$. The government lost ground by 10.5% = $[(15.2-13.6)/15.2 \times 100]$.



Figure 5.5 Compensation Share of Net Domestic Income without the Contribution from Government
Source: BEA

Figure 5.6 illustrates the positive influence of the compensation share of the corporate sector on the total compensation share. Between 1979 and 2006, corporations exercised the most positive influence in the series. The corporate sector boosted the overall compensation share by as much as 10%, in 2000.

Finally, Figure 5.7. shows that the household sector indeed had a meaningful and consistent impact on the overall compensation share from 1986 on. The difference in percentage-point changes between the two series climbs as high as 2 % in 2001, indicating the magnitude in which the private household sector depressed the total economy compensation share during the same year. By 2008, the total domestic economy

compensation share of national income would have been approximately equal to its level in 1970, if not for the effect of the private household sector.

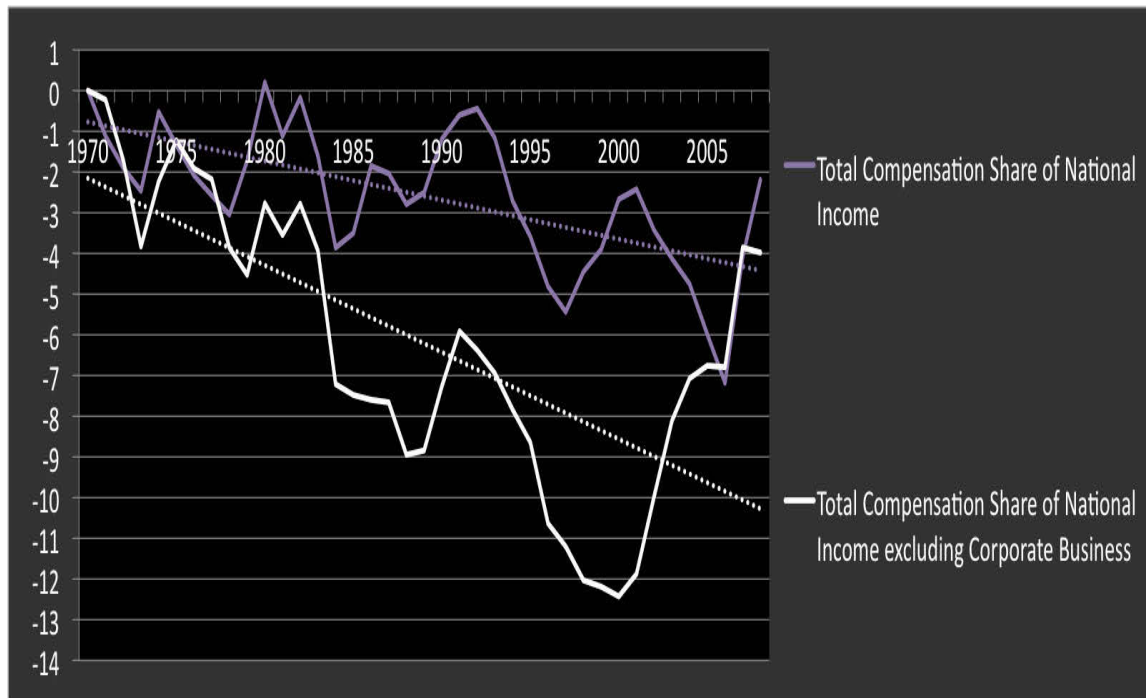


Figure 5.6 Compensation Share of Net Domestic Income without the Contribution of Corporate Business
Source BEA

When we consider the effects of depreciation, as demonstrated in figure 1, the decline in the compensation share of GDP, between 1970 and 2008 is entirely attributable to depreciation and the private household sector. Combining the analysis in figure 1 with figure 7 suggests that roughly 60 percent of the decline in the compensation share of GDP is attributable to depreciation while roughly 40 percent is attributable to the private household sector.



Figure 5.7 Total Compensation Share of Net Domestic Income without the Contribution of Private Households
Source: BEA

In this chapter, I disaggregated the compensation share of GDP, between 1970 and 2008, in order to isolate the effects of depreciation and of factors that affect the total economy but not the corporate sector. Of the factors that had the most pronounced effect depreciation and the private household sector are most important. Between 1970 and 2008, the compensation share of GDP declined by roughly seven percentage points, fifty-seven percent of which was attributable to depreciation alone. The remainder was caused by factors that effected the total economy but not the corporate sector. Abstracting from depreciation, then, we explored the factors that affect the total economy through a decomposition of the total compensation share of national income - which includes all of the income that is generated from production, net of depreciation. We disaggregated the total compensation share of domestic income according to the compensation shares of all the various legal forms of productive organization including: nonprofits, non-corporate business, government, corporate business, and private households. This analysis allowed

us to examine how the effects of other organizational forms compared to that of the corporate sector, in terms of influence on the aggregate compensation share.

Here, most noteworthy was the private household sector which alone accounted for virtually all of the fall in the total compensation share of national income by 2008. Other organizational forms such as government and non-corporate business periodically played a decisive role in exerting downward pressure as well, including the non-corporate business and government sectors. However by 2008, the inclusion of non-corporate business and government had little effect, as their compensation shares moved in lock-step with the overall compensation share of domestic income. Only private households continued to demonstrate a negative effect on the compensation share net domestic income through 2008. Finally, corporate business and nonprofit institutions demonstrated a positive effect on the total compensation share of national income between 1970 and 2008.

Of these organizational forms, only the compensation and output of corporate business is applicable to an analysis of the distribution between compensation and profit. The only other organizational form that has profit is non-corporate business, which contains proprietorships whose labor and capital are not differentiated in the NIPA. Moreover, there is no consensus regarding the proportion in which total proprietor income should be divided between capital and labor, or between profit and compensation (Armenter 2015, Elsby, Hobijn Sahin 2013, Giandrea and Sprague 2011). However, in the next chapter I disaggregate the net domestic share in a manner that isolates the effect of proprietorships when proprietor labor income is estimated according to the national average compensation of wage and salary workers (a common estimation of proprietor labor income).

In concluding this chapter, I would like to emphasize that the compensation share of the corporate business was virtually trendless, both as a share net-value added (net product) and as a share of national income (net income). Above all, these findings demonstrate that the compensation share factored at the level of the total economy, or at a level that contains depreciation and/or other sectors' output that is not divisible between profit and compensation, cannot describe the profit – compensation distribution. Above, I displayed a complete breakdown of all the official organizational forms in which production takes place. Some of these sectoral, organizational forms are not directly related to the struggle between capital and labor, as their output (income) is indivisible between profit and compensation; yet, they have proven to be influential in shaping the trajectory of the compensation share of GDP. By itself, a decline in the compensation share of GDP does not reflect the distribution between compensation and profit. Additional evidence is required to demonstrate that the compensation share of GDP declined because, or partly because, of a redistribution between profit and worker compensation. However, as the above analysis demonstrated, the compensation share of corporations' net value added was trendless throughout the first 38 years of neoliberalism. Hence, the data do not support the thesis that capitalists were generally successful in suppressing workers' incomes and boosting profit.

Chapter 6

Data and Analysis:

Estimating the Effect of Proprietor “Labor” Income

In the previous chapter, I disaggregated the compensation share of GDP to identify the components responsible for its decline. Moreover, I have argued that the components which this analysis identified as being responsible for the decline in labor’s share of GDP constitute an intrusion in a distributional analysis of profit and compensation.

Proprietorships are another factor that pose measurement challenges to a distributional analysis of profit and compensation. The BEA defines proprietor income, as income from current production that accrues to sole proprietorships and partnerships and tax-exempt cooperatives. Proprietorships do not fit neatly into the classical categories of social class, as they share attributes of both capitalists and workers. While they may own capital, they also utilize their own labor to add value to the goods and services they produce. Hence the income of proprietorships reflects not only the capital they employ, but also their labor. The NIPA, however, record only total proprietor income, without differentiating between returns to capital and labor, or profit and compensation. Analysts have, nevertheless, produced various estimates of proprietor “labor income,” which have resulted in significant variation in reported labor share trends (Armenter 2015, Elsby, Hobijn, and Sahin 2013; Kristal 2010, 2013; Gollin 2002, Gomme and Rupert, 2004). Nevertheless, it is unclear what role proprietorships play in a class analysis that focuses on the distribution between capital (profit) and labor (compensation), notwithstanding an accurate measure of the labor-capital split of proprietor income.

In what follows, I will assess the degree to which one popular estimation of proprietor “labor” income affects the labor shares of GDP and national income. The steps

contained in this part of the analysis are essentially the same as those included in the previous one, with the only exception being that the estimated labor income of proprietors are included in the numerator of the labor share, along with the compensation of wages and salary workers. As mentioned in the previous chapter, “labor share” is sometimes referenced as applying to cases in which the estimated “labor” income of proprietors is added to the compensation of wage and salary workers (Armenter 2015, Kristal 2013). I have adopted this usage in this chapter and in the last chapter in order to assist the reader in demarcating the two different definitions of labor’s share of which whose trends I compare in this chapter. Let us now turn to an investigation of the effect of proprietorships on the labor share of GDP.

Below I decompose of the total labor share according to following equation.

$$\frac{L}{GDP} = \frac{C + \left[P \left(\frac{C}{W} \right) \right]}{GDP} \approx \left(\frac{C + \left[P \left(\frac{C}{W} \right) \right]}{\frac{c}{nva}} \right) \left(\frac{NDP}{GDP} \right) \left(\frac{c}{nva} \right)^{46}$$

⁴⁶ Where

L = total labor income

P = total number of proprietors

W = total number of wage and salary workers

C = total compensation

c = corporate sector compensation

$\frac{C}{W}$ = compensation per wage and salary worker

GDP = Gross Domestic Product

NDP = Net Domestic Product

nva = corporations net product

C/GDP = the economy wide compensation share of Gross Domestic Product

c/nva = the compensation share of corporations net product

C/NDP = the economy-wide compensation share of net domestic product

NDP/GDP = the ratio of net to gross product.

This accounting identity decomposes changes in the total economy labor share into changes in the ratio of the total labor share of net domestic product to the compensation share of corporations' net value added multiplied by the ratio of net domestic product to gross domestic product, multiplied by the compensation share of corporations' net value added. This is essentially the same decomposition as reported in Figure 5.1, of the previous chapter, with the only difference being that estimated proprietor "labor" income of proprietors is summed with total worker compensation in the numerator of the Labor share. In this series, as is commonly done, I estimate the labor income of proprietors according to the average compensation of wage and salary workers (Armenter 2015, Kristal 2013, Gollin 2002, Krueger 1999).

The purple series is the total labor share of GDP. As before, the pink series captures the factors that affect the total economy but not the corporate sector. Once again, the brown line is the ratio of net to gross product, which captures the effect of depreciation. Finally, the white series, captures the effect of the compensation share of corporations' net value added. The white dotted line is the trend line of the compensation share of corporations' net value added.

One striking difference between Figure 5.1 and Figure 6.1 is the degree to which the total share falls. By 2008, the labor share of GDP fell by 8.6 percentage-points, roughly 2 percentage-points more than the compensation share of GDP reported in figure1. Also notice the difference between the total economy net share and the corporate sector net share as illustrated once again by the pink series. By 2008, the ratio of the labor share of net domestic product to the compensation share of corporations' net value added fell by 4.5 percentage-points, almost 2 percentage-points more than the ratio of the compensation

share of net domestic product to the compensation share of corporations' net product, the comparable series in figure 5.1. Also note that the ratio of net to gross product, which measures the effect of depreciation, was a considerably less influential on the total labor

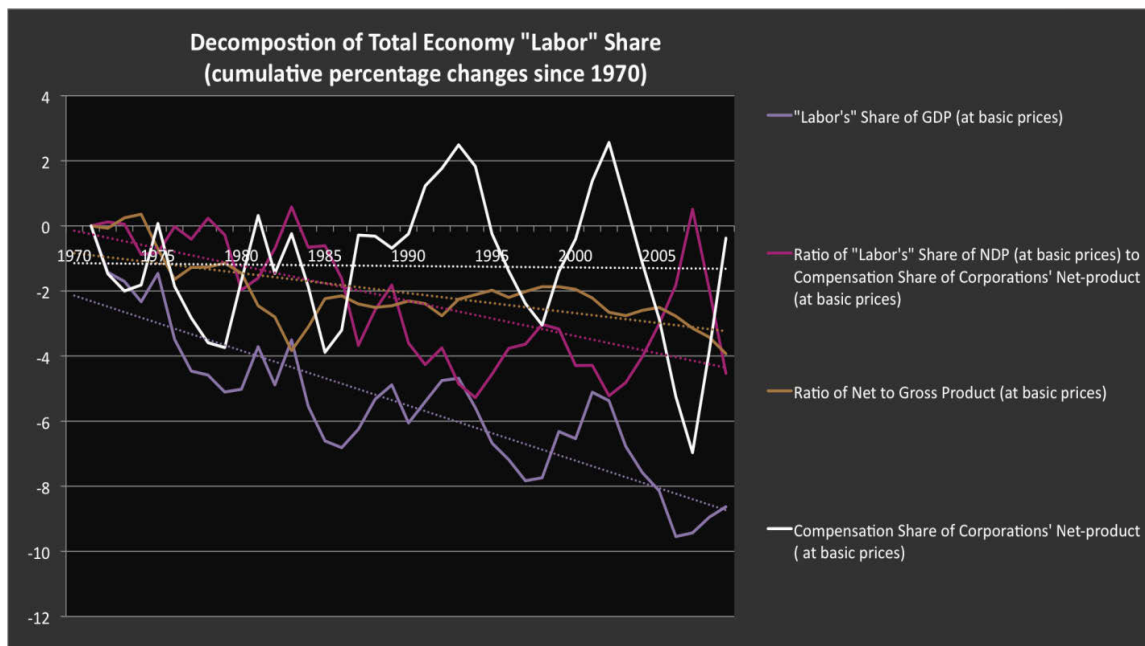


Figure 6.1 Decomposition of the Total Economy Labor Share
Source: BEA⁴⁷

share as compared to its influence on the total compensation share in Figure 5.1. Whereas depreciation accounted for more than 57 percent (-3.9/-6.8) of the fall in the total compensation share in Figure 5.1, it was responsible for only about 45 percent (-3.9/-8.6) of the fall in the labor share in Figure 6.1. These figures, in effect, signify that the total economy share, this time around, was influenced considerably more by an additional factor that effected the aggregate economy i.e., the estimated labor income of proprietors.

⁴⁷ For Figure 6.1, the data were derived from NIPA table 1.14, lines 1, 3, 4, and 7; NIPA table 1.7.5, lines 1, 5, and 18; NIPA table 2.1 line 2, NIPA table 6.4 line 1; NIPA table 6.7 line 1.

The graph below is the equivalent of figure 5.2 for this part of the analysis. It describes the labor and compensation shares of domestic income for various legal organization forms of production. Notice that it contains an additional yellow series dedicated to the labor share of proprietorships, and that the total economy share, like in Figure 6.2, is the labor share, not the compensation share (figure 5.2), indicating that labor income includes the estimated labor income of proprietors in the numerator. For this series I isolated proprietorships from the rest of non-corporate business, which also include government enterprises, and “other” private business. Overall, the sectoral trends are the same this time around as in figure 5.2, except, as just mentioned, the labor share of GDP experiences a steeper decline than did the compensation share of GDP.

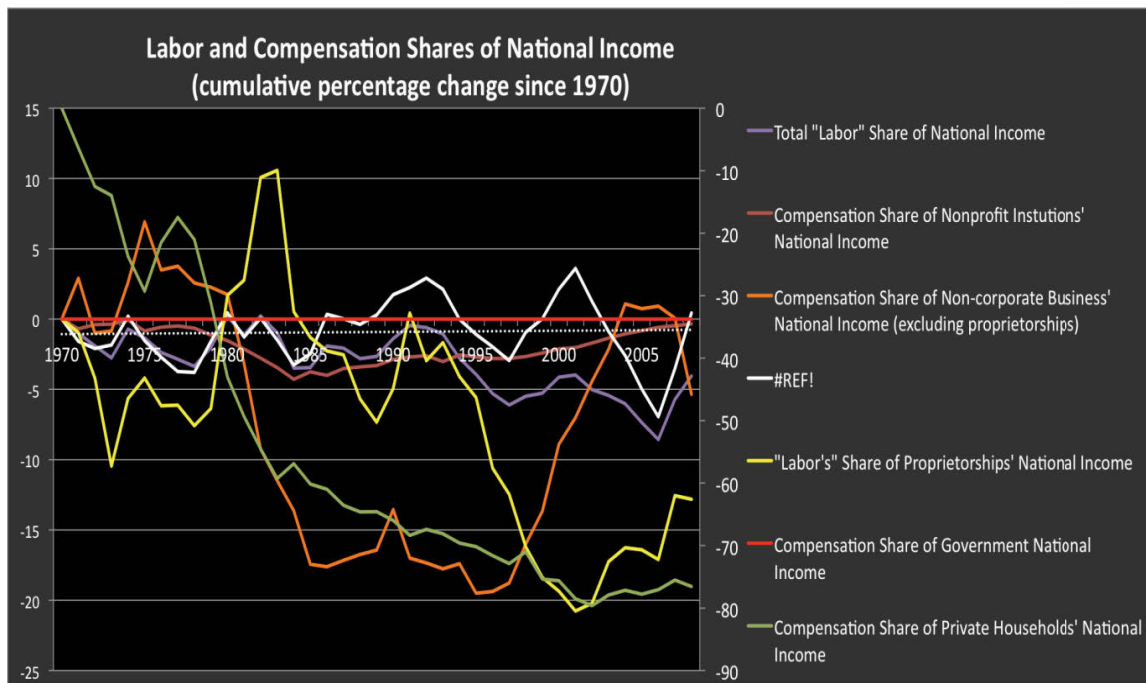


Figure 6.2 Labor and Compensation Shares of Net Domestic Income
Source: BEA⁴⁸

⁴⁸ For Figures 6.2 through 6.9, the data were obtained from NIPA table 1.13 lines 3, 4, 9, 10, 11, 17, 42, 43, 48, 49, 50, 55, 56, and 57.

This is explained by the steep decline in the new yellow line, the labor share proprietorships.

The graphs below illustrate the independent effect that the labor shares of each organization form of production has on the total labor share of net domestic income. Figures 6.3, 6.4, and 6.5 illustrate the effects of the non-corporate business, nonprofits, and government compensation shares, respectively. Notice that their respective effects are much less pronounced this time, as was also the case with depreciation in figure 5.2. By 2008, the inclusion of government and non-corporate business had virtually no effect on the overall labor share, while nonprofit institutions boosted the total labor share only by about eight-tenths of a 1 percent.

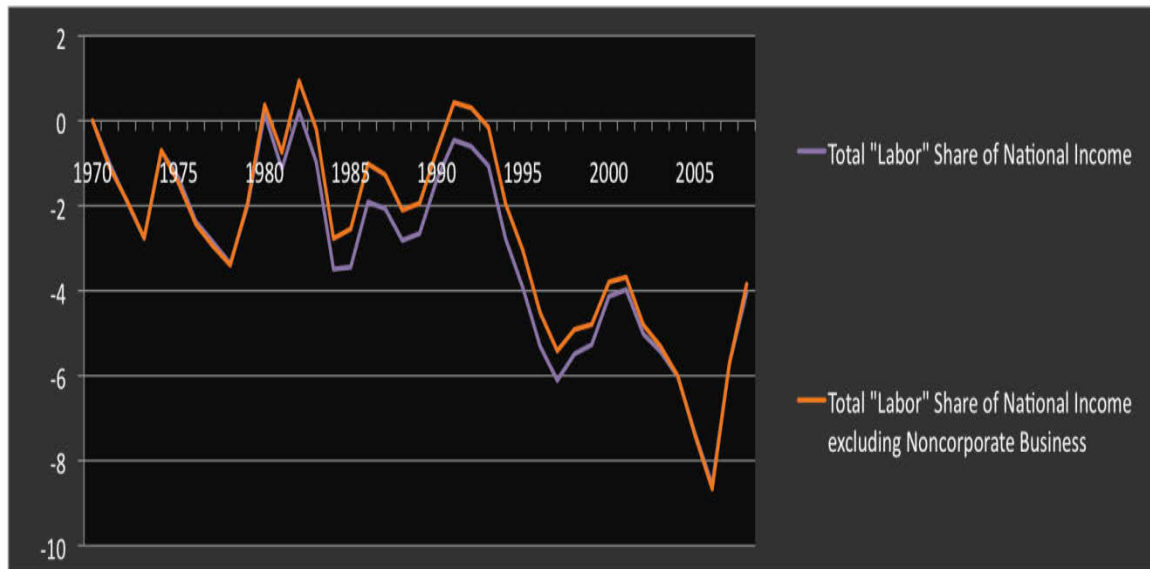


Figure 6.3 Total Labor Share of Net Domestic Income without the Contribution of Non-corporate Business
Source: BEA

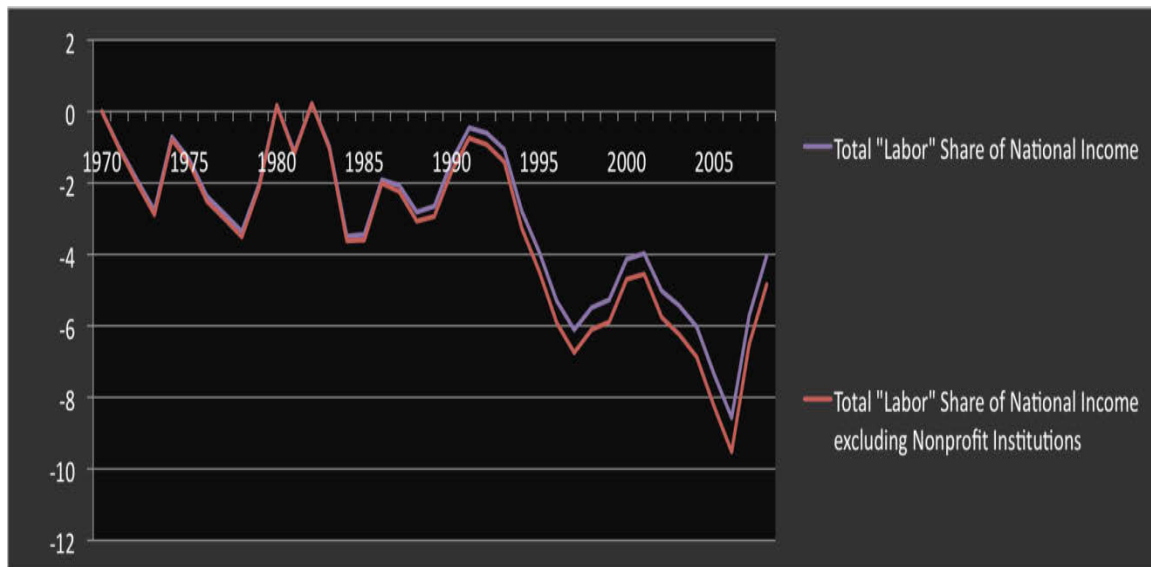


Figure 6.4 Total Labor Share of Net Domestic Income without the Contribution of Nonprofit Institutions
Source: BEA

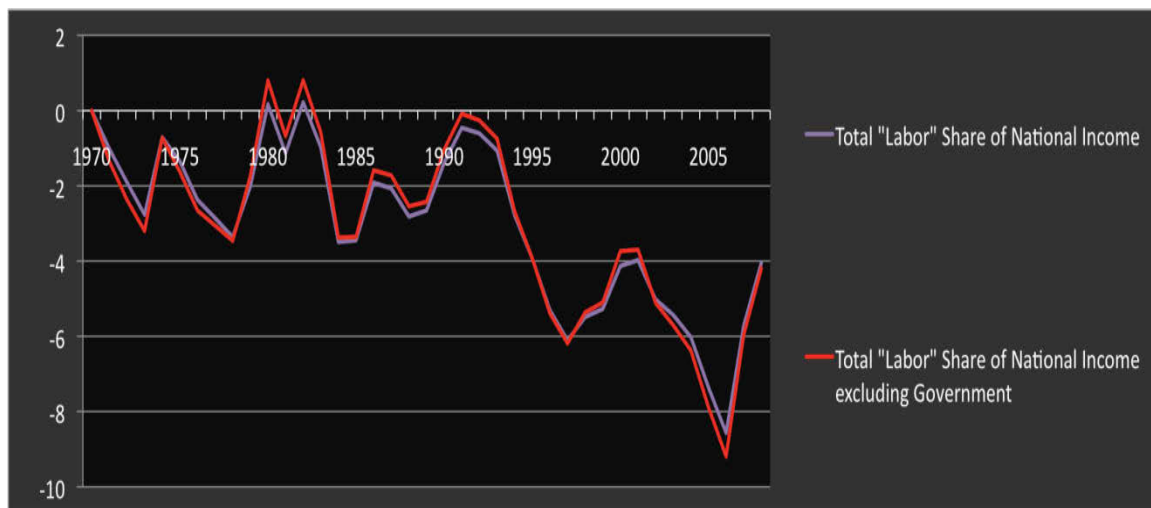


Figure 6.5 Total Labor Share of Net Domestic Income without the Contribution of Government
Source: BEA

In contrast, the positive effect of the compensation share of corporate business (figure 13) was more pronounced for the total labor share than for the total compensation share, giving the total labor share roughly a 5 percentage-point boost by 2008.

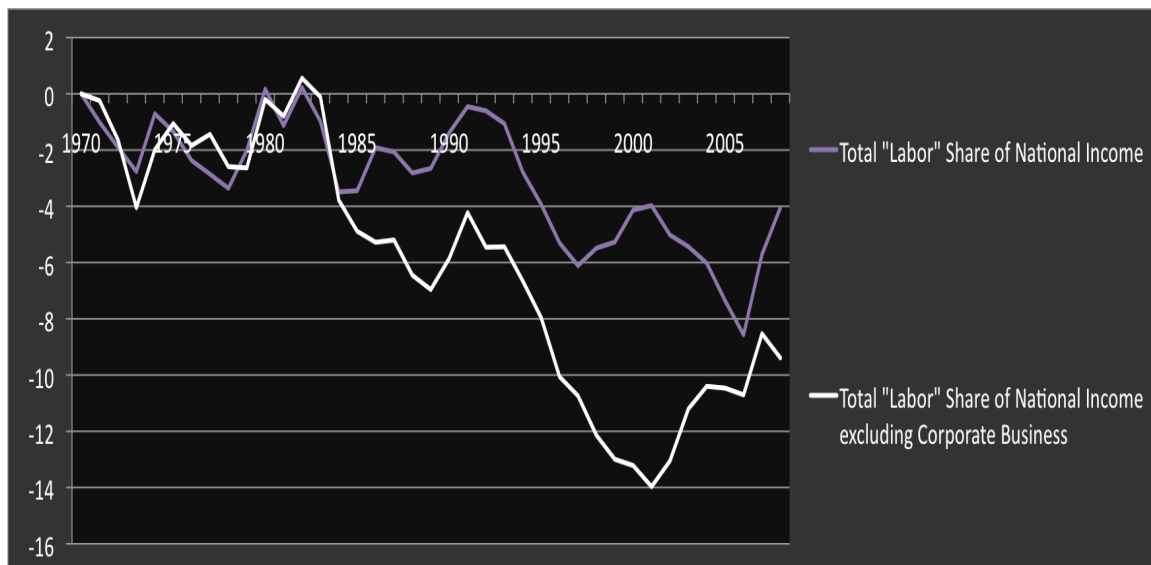


Figure 6.6 Total Labor Share of Net Domestic Income without the Contribution from Corporate Business
Source: BEA

Figure 6.7. shows that the Private household sector, this time around, was responsible for about 50 percent of the decline in the total labor share, as the change in the total labor share was about - 4 percentage points by 2008, and only about - 2 percentage points when private households are excluded. That is, the inclusion of private households is responsible for about 2 percentage points, or about 50 percent of the total change ($-2 / -4 = .05 * 100 = 50$ percent) in labor's share of net domestic income.

The other 50 percent was attributable to proprietorships, which is demonstrated in Figure 6.8 below. Again, the total labor share fell by about 4 percentage points, when proprietorships are excluded the total declines by about 2.3 percentage points ($2.2 / -4 = .055 * 100 = 55$ percent). Hence, between 1970 and 2008, all of the decline in the labor share of national income is attributable to proprietorships and private households. Figure 6.9 illustrates what the labor share would look like if both the sectors were removed.

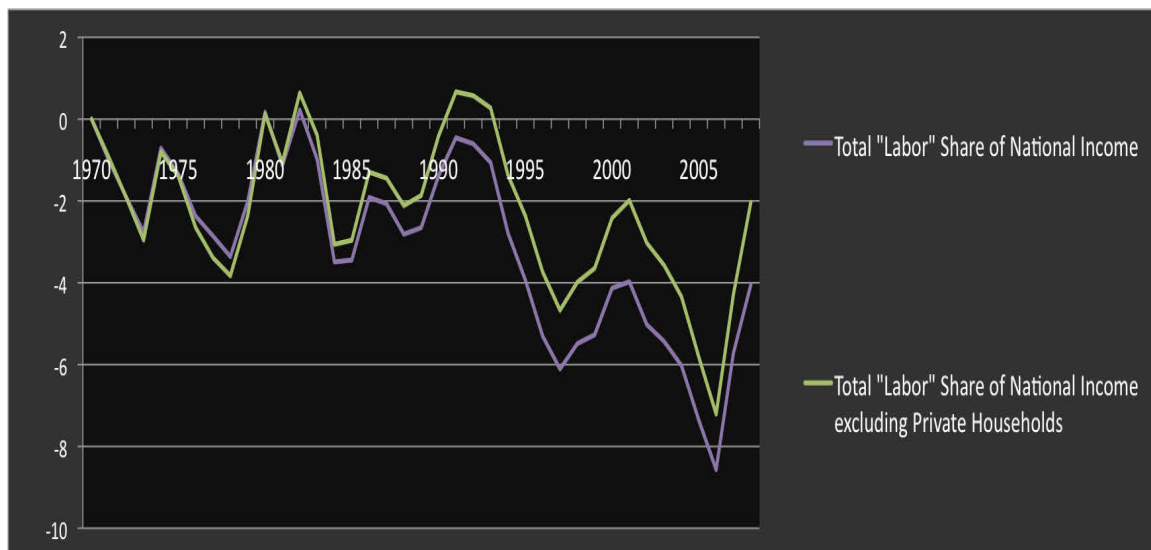


Figure 6.7 Total Labor Share of Net Domestic Income without the Contribution of Private Households
Source: BEA

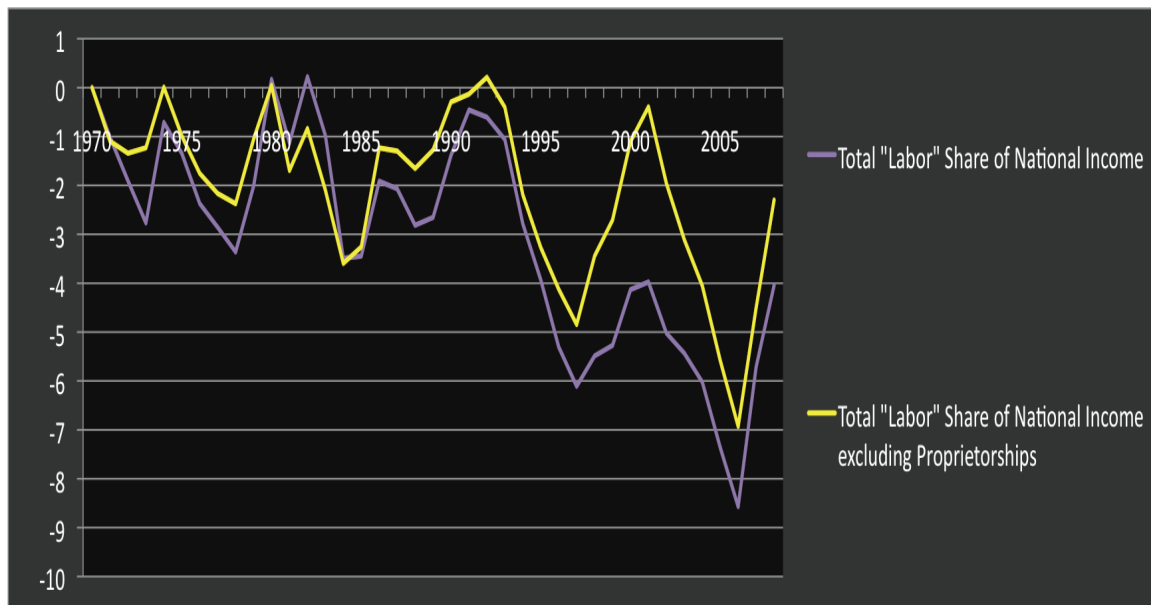


Figure 6.8 Total Labor Share of Net Domestic Income without the Contribution from Proprietorships
Source: BEA

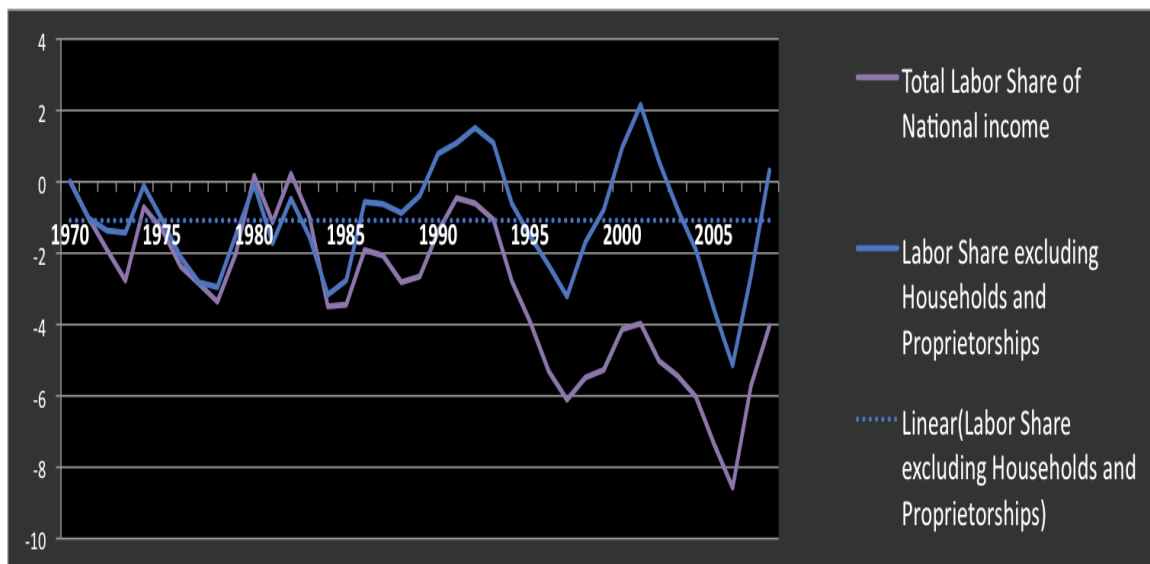


Figure 6.9 Total Labor Share of Net Domestic Income without the Contribution from Private Households and Proprietorships
Source: BEA

To sum up the results of this chapter, the inclusion of proprietors' estimated labor income, private households, and depreciation fully explain the decline in labor' share of GDP up to 2008. Nonprofit, non-corporate and government compensation shares also had discernable effects at various moments between 1970–2008. The effects of these shares of national income, unlike proprietorships and private households however, tended to dissipate by 2008. This was especially the case with their contribution to the change in the labor share of net domestic income.

Nevertheless, the inclusion of any of these sectors in a distributional analysis of profit and compensation, or capital and labor is highly problematic and can paint a distorting picture of the profit-compensation income distribution. For instance, the output (income) of government and nonprofits are not divisible between profit and compensation. Rather, virtually all of the income that are produced by these sectors is distributed as compensation. The compensation share of government is equal to 1 for instance. In the event that government output (income) grows (shrinks) as a percentage of GDP, the total compensation share of GDP will rise (decline), all else being equal. However, variation in the compensation share that results from an increase (decrease) in the output of government or nonprofit institutions does not reflect a redistribution between profit and compensation.

Similarly, When GDP growth is increasingly driven by depreciation, worker compensation will be expressed as a smaller percentage of output, *ceteris paribus*. In sum, the upward or downward movement in any share of GDP that is not profit or compensation, or divisible by profit and compensation can produce a change the compensation share or labor share of GDP without effecting the actual distribution between workers and capitalists, or between compensation and profit. Hence, if such shares are not excluded

from the analysis, the resulting figure should not be interpreted as simultaneously expressing both the capital and labor share, or profit and compensation share. Factor shares produced in this way are incapable of describing the distribution between compensation and profit.

Factor share studies aimed at describing the distribution between profit and compensation should define their labor shares based on corporate sector output. Subtraction of depreciation and indirect taxes from corporate sector output or “value added” results in “net value added,” which consists only of employee compensation and “net operating surplus.” The latter is a profit measure that reflects the share of value that corporations receive from the production of output, after workers have been paid and worn out capital stock is replaced but before financing costs and taxes have been paid. Analysis aimed at the corporate sector level is not encumbered by sectors whose output is not divisible between profit and compensation, or by proprietorships, whose output (income) is not clearly distinguishable between the categories of profit and compensation.

Chapter 7

Data and Analysis: Decomposing the Private Industry Share

In the previous chapter I decomposed the movements in labor's share of GDP according to movements in depreciation and the labor share of various organizational forms net domestic income. Of all of these organizational forms, only the net domestic income of the corporate sector is divisible between profit and compensation. Nevertheless, depreciation, private households, and proprietorships (when the labor income of proprietors is estimated according to the national average of wage and salary workers) have had a significant impact on the trajectory of labor's share of GDP.

These same factors that are a part of the total economy, and which can paint a distorting image of the profit-compensation income distribution, can also persist at other levels of analysis. At the level of private industry output, for example, which include the gross output of private households, nonprofit institutions, and proprietorships. The total output (income) of private industries, or private industries' "gross value added" is a measure of private industries' contribution to GDP and therefore includes depreciation. Gross value added of private industries, for instance, forms the basis of Kristal's (2013) reported labor share, which shows a marked decline in labor's share of private industry output from the mid-20th century through the decades leading up to the Great Recession.

Kristal (2013: 363) moreover, interprets her results as demonstrating, "in a stylized" Marxian manner" the income distribution between the "working and capitalist classes." Kristal (2013: 362) argues that the "income inequality between capitalists" profits and workers' compensation ... is primarily a function of classes' positional power, and that both utilize their relative strength to bargain over a larger slice of the national income pie."

According to Kristal's regression analysis, the fall in the overall private industry labor share is partly due to "class-biased technological change," "computerization" in particular, and partly due to declining unionization. Together these factors converged to undermine workers' positional power vis-à-vis the capitalist class. She also tested the independent effects of other "positional power indicators," When Kristal disaggregates the total private industry labor share into the labor shares of its various constituent industrial sectors, her analysis reveals that virtually all of the decline in labor's share of manufacturing, between 1978 and 2002, was attributed to declining unionization.

Methodologically, there are some important factors to consider with Kristal's analysis. Kristal's calculation of the labor share is unconventional, in terms of the factors she includes and excludes in her definition of labor income and private industry output. Kristal takes the necessary steps to remove the private household sector but also sectors "with substantial government employment". Kristal does not specify exactly which sectors she excludes, she only identifies healthcare, education, and social services as examples.

The NIPA private industry data does not allow her to exclude nonprofit institutions nor proprietorships, which given her theoretical focus on the distribution between capitalists and workers, is clearly a problem. On one occasion Kristal says that she estimates proprietor labor income according to the average wages, of wage and salary workers, which as far as I know is the first definition of proprietor labor income of its kind. Recall that the conventional approach is to estimate the labor income of proprietors according to the average compensation of wage and salary workers. Given that between 1950 and 1984 the wage and salary share of employee compensation has declined while the share of employee compensation that corresponds to "supplements to wages and

salaries,” increased by a corresponding amount, this definition of proprietor labor income will trend lower during the first half of Kristal’s series as compared to the estimate based on average compensation.⁴⁹

Below I have decomposed a labor share that is based on the limited information that Kristal (2013) provides.⁵⁰ While the bold-line trend in my calculation is not exactly the same as the one she reports in Figure 7.1, as it appears to fall by an approximately 1.5 to 2 percent less than my calculation between 1970 and 2008; nevertheless, I can demonstrate how the private industry labor share that I report, and which is based on my interpretation of her instructions, is effected by depreciation, the exclusion of households, health services, and education, and of estimating proprietor labor income according to average wages.

Figure 7.1 below is Kristal’s (2013) graph that depicts the labor share of private industries between 1948 and 2008. The red box demarcates the same time series of Figure 7.2, which is my calculation. Figure 7.2 decomposes the labor share of private industry value added, with proprietor income estimated according to the average wage (the purple series). This labor share was calculated according to the procedures that Kristal (2013) reportedly used to calculate her ***labor share in Figure 7.1. The labor share of net value added, with proprietor income estimated according to average compensation (the green

⁴⁹ Total compensation is the sum of wages and salaries and supplements to wages and salaries. The latter includes employer contributions to employee pensions, health insurance, and social security. Kliman (2013) demonstrates that the wage and salary share of total compensation fell but was offset by a corresponding rise in supplements to wages and salaries. In recent decades (after 1985) wages and salaries and supplements have grown at virtually the same rate (Mishel et al. 2012:182).

⁵⁰ I have spent many months trying to replicate Kristal’s results. The private industry data are incomplete and fraught with problems, not the least of which is the fact that after 1987 the NIPA change their industry classification scheme from the Standard Industrial Classification (SIC) to the North American Industrial Classification System (NAICS). In some instances the data are incomplete, even in the same series and/or have to be pieced together from other tables, which Kristal acknowledges.

series) is a measure of labor's share of private industry net output, and with proprietor labor income estimated according to the national average of US wage and salary workers.

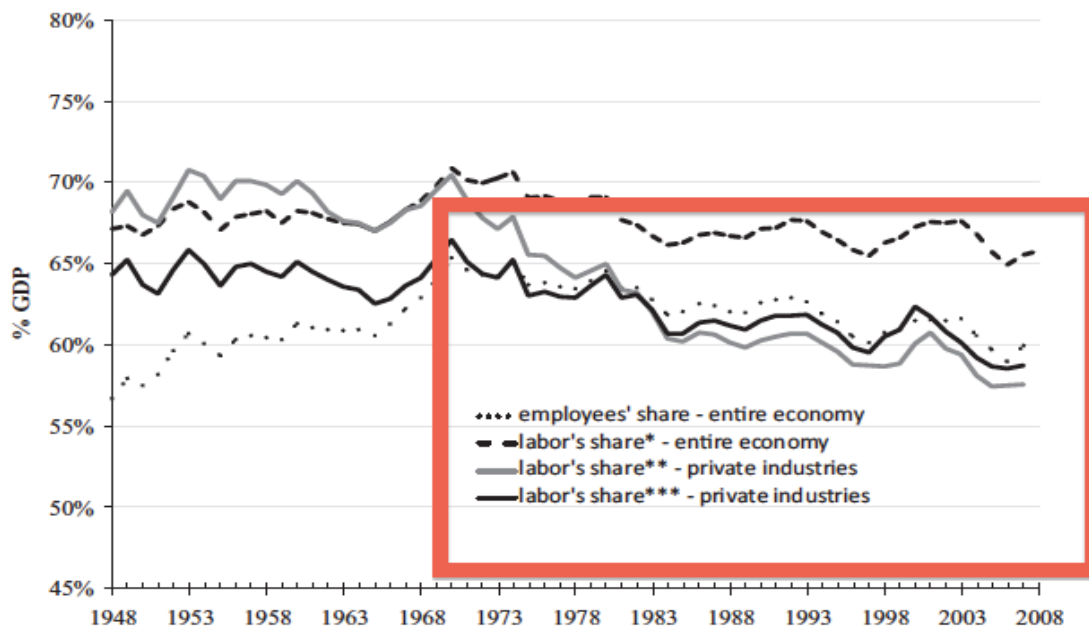


Figure 7.1 Kristal's Labor Shares of Private Industry Output, 1948-2008

Source: Kristal 2013

Changes in this labor share can be decomposed into changes in the labor share of net value added, with proprietor income estimated according to average compensation (the green series), multiplied by the ratio of net to gross value added (the brown series), multiplied by the ratio of proprietor labor income, estimated according to the average wage, to proprietor labor income, estimated according to average compensation. Notice that the percentage changes in the labor's share of private industry value added is approximately equal to the sum of the percentage changes in the other three series.

Between 1970 and 2008, the labor share of private industry value added fell by 9 percentage-points. The brown series – the ratio of net to gross value added - represents the effect of depreciation. It fell by 5 percentage points, which means, therefore, that rising

depreciation that was responsible for about 55 percent ($= 5.0 / 9.0 * 100$) of the fall in labor's share of private industry value added.

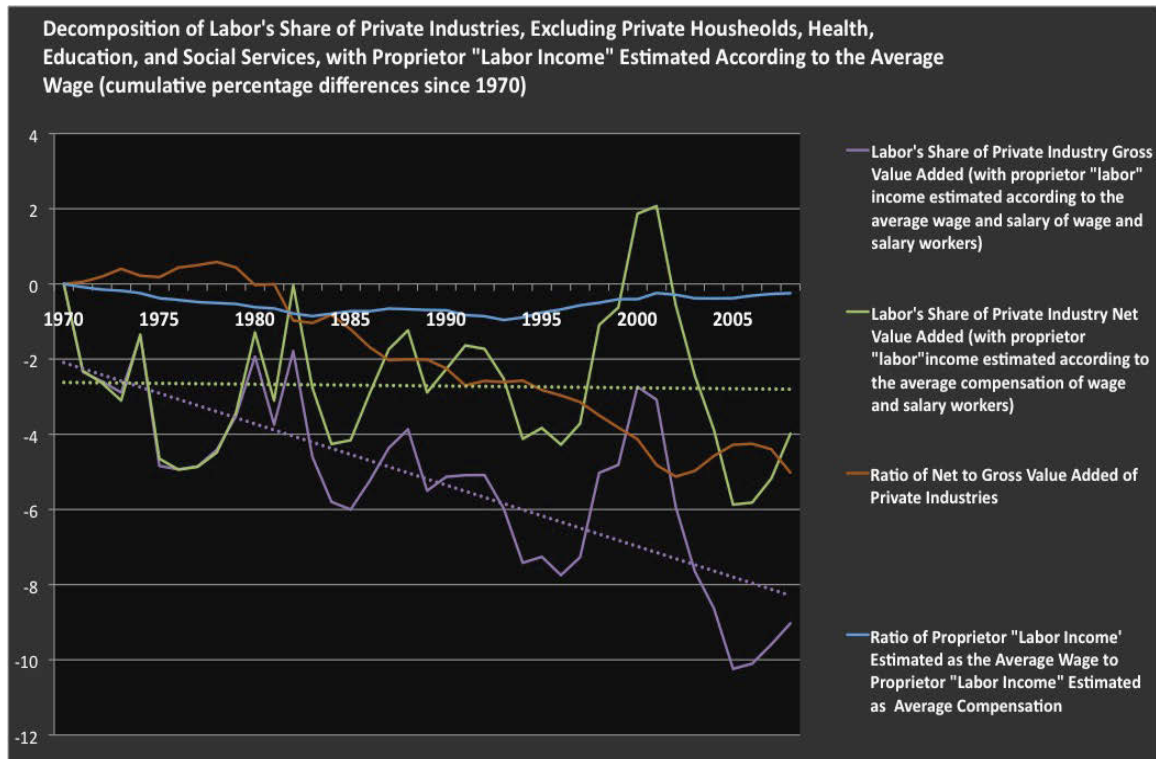


Figure 7.2 Decomposition of the Labor Share of Private Industries, a la Kristal
Source: BEA.⁵¹

⁵¹ The data for Figure 7.2 through 7.4 were obtained from two different BEA data series in the industry accounts. Table "GDPbyInd_VA_SIC", which is available in the BEA "Historical Industry Accounts" (https://www.bea.gov/industry/io_histannual.htm) was utilized to derive data between the years of 1948 and 1997. As the title of this table indicates, the industry data contained in the table are classified according to the "standard industrial classification" (SIC). Beginning in 1987, this classification system was phased out and replaced with North American Industry Classification (NAICS). The NAICS classification system is the classification system in which the current industry data are classified. Kristal acknowledged to me that she utilized data from both classification systems to derive her aggregate private industry share ***. She did not specify, however, how she arrived at a single, consistent data series between the two tables of data, which is necessary in order to derive her time series beginning in 1948 and ending in 2008. I derived a complete series for the data that are utilized in Figure 18 by imputing missing NAICS data for the years between 1948 and 1986, based on the slope of the variance between NAICS and SIC values, for the years 1987 through 1997 (the years in which the two series overlapped). More specifically, I calculated the ratio between NAICS and SIC values for each year in which the two series overlapped. Using the least squares method, I regressed the yearly variation of each year with the number of years for which there was overlap to derive the slope of the yearly variation. I utilized the slope to project the estimated yearly variation backwards beginning in 1986 through 1948. To complete the imputation, I then multiplied actual SIC yearly values with corresponding yearly estimated variance, beginning from 1948 up until 1986, after which the actual NAICS series begins. Ideally, I would have preferred to impute data based on a slope that was derived from many more years of overlap. For this reason I am cautious about relying to heavily on the results of these procedures. Kristal

The difference between Kristal's estimation of proprietor labor income and the conventional definition had a modest effect, accounting for about 2.5 percent ($=.24 / 9.0 * 100$). The movement in this trend behaves according to what we would expect based on data that have been reported regarding the differential in the rate of wage and compensation growth (Mishel et al. 2012:182). After diverging throughout much of the mid-20th century, in recent decades, the rate of wage and compensation growth have moved closer together which by 2008, minimized the significance of Kristal's estimation of proprietor labor income, based on the average wage, as compared to the more conventional estimation, based on average compensation. Finally, the labor share of private industry net value added, with proprietor labor income estimated according to average compensation, was trendless on average between 1970 and 2008, but dropped by 3.9 percentage points and therefore was responsible for the remaining 43 percent ($= 3.9 / 9.0 * 100$) decline in the labor's share of private industry value added by 2008.

The series based on net value added, with proprietor labor income based on average compensation represents the labor share of private industries, after depreciation has been

does not clarify how she derived her complete series. The primary purposes of this graph is to demonstrate that one can produce a labor share trend -based on the limited information that Kristal provides – that behaves similar to Kristal's (2013) trend. Additionally, one can demonstrate that this trend declines for reasons that Kristal is reluctant to consider and which are not attributable to redistribution between labor income and profit. The SIC classified data that I utilized for Figure 18 and 19 were obtained from the BEA "Historical Industry Accounts" (https://www.bea.gov/industry/io_histannual.htm), Table "GDPbyInd_VA_SIC," sheet "72 SIC_VA, GO, 11," lines 4, 71, 73, 74, 77; sheet "87 SIC_VA, GO, 11," lines 4, 71, 73, 74, 77; sheet "72 SIC_ Components of VA," lines 4, 71, 73, 74, 77, 93, 160, 162, 163, 166, 271, 338, 339, 340, 341, 342, 343, 344; sheet "87 SIC_ Components of VA," lines 4, 71, 73, 74, 77, 93, 160, 162, 163, 166, 271, 338, 339, 340, 341, 342, 343, 344; sheet "72 SIC_ Employment," lines 4, 71, 73, 74, 78; sheet "87 SIC_ Employment," lines 4, 71, 73, 74, 78. The NAICS classified data that I utilized for Figure 18 were obtained from the BEA private industry accounts. Table "Value Added by Industry," lines 2, 75, 76, 77, 78, 79, 80; Table "Components of Value Added by Industry," lines 5, 6, 7, 297, 298, 299, 301, 302, 303, 306, 307, 317, 318, 319; NIPA Table 6.2 lines 3, 69, 71, 74; NIPA table 6.3 lines 3, 69, 71, 74; NIPA table 6.4 lines 3, 69, 71, 74; NIPA FAA table 3.6 ESI lines 1, 66, and 67.

removed and with the labor income of proprietors estimated to according to the conventional approach. Again it is important to emphasize that this measure of labor's share was trendless on average throughout the series, and if we expand the series out to cover the range of years of Kristal's (2013) time series we can see the same holds true. Figure 7.3 below extends the purple and green lines back to 1948.

These two trends demonstrate the degree to which different definitions of "labor's share" effect the overall trend. I doubt that either of the labor shares reported below tell us much about the actual distribution between profit and compensation, or between capitalists and workers, as both include proprietorships and there is no consensus regarding what percentage of proprietor income is allocated to labor and what percentage is allocated to profit. Yet, even if it was possible to discern the capital-labor split of proprietor income, what could this tell us about the distribution between capitalists and workers; or in keeping with Kristal's (2013) theory, about workers losing their positional power vis-à-vis the capitalist class due to declining unionization? Proprietorships are an intrusion in this theoretical context.

Finally, I am cautious about relying too heavily on the trends demonstrated Figures 7.2 and 7.3, as multiple decades of data had to be imputed from a very limited number of years of actual data. Kristal (2013) does not clarify how she derived her complete series. The primary purposes of this graph is to demonstrate that one can produce a labor share trend based on the limited information that Kristal provides – that behaves similar to Kristal's (2013) trend. Additionally, one can demonstrate that this trend declines for reasons that Kristal is reluctant to consider and which cannot attributed to a redistribution between labor income and profit.

Once proprietor labor income is estimated according to the conventional methodology, and once depreciation is controlled for, there is no falling labor share for declining unionization to explain. However, this does not necessarily mean that declining unionization played no part in shaping the trajectory of the private industry labor share. The total private industry share is a weighted average of the labor shares of its various constituent industrial sectors. While, according to my calculations, the overall weighted average did not fall, the shares of some industry sectors undoubtedly did but their effect was, nevertheless, offset by those industry sectors whose labor shares increased. Manufacturing, according to Kristal (2013) was an industrial sector that imparted a considerable effect on the total private industry share. Kristal reports that labor's share in manufacturing declined by 14 percentage points as compared to her aggregate private industry share, which fell by about 6 percentage points. Moreover, it was manufacturing, according to Kristal, that experienced some of the largest declines in union density.

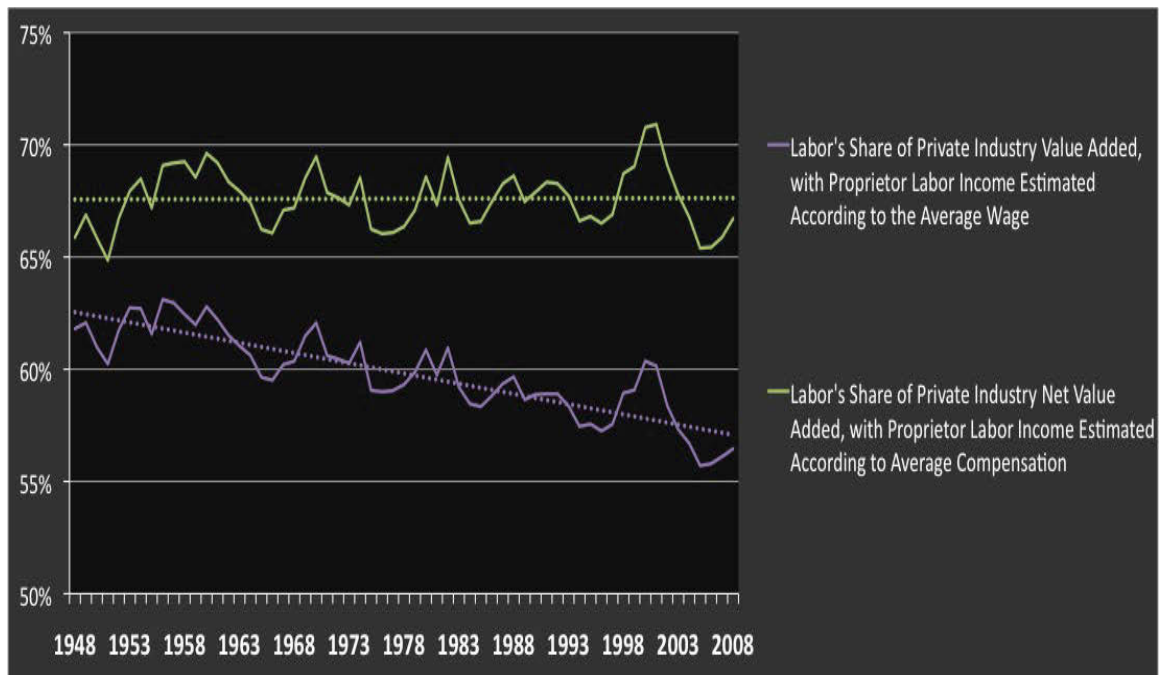


Figure 7.3 Labor Share of Private Industry Output, a la Kristal, vs. Labor Share of Private Industries' Net Output, with Proprietor "Labor" Income Estimated According to the Average Compensation of Wage and Salary Workers
Source: BEA

It may be that declining unionization did in fact undermine workers' positional power in manufacturing and that this led to the decline in manufacturing workers' share of the output (income). The declining unionization thesis is one in which the labor share falls as a consequence of declining wages, or a "shift in the distribution of rents between workers and firms" (Kristal 2013:370). An alternative thesis is that the labor share falls due to sectoral shifts in demand for labor that accompany increases in labor productivity (technological change). That is to say, if labor's share in manufacturing fell, is the decline attributable to a fall in workers' wages or is it instead attributable to fewer workers being required to produce the same or a higher level of output. In the case of the latter scenario, workers' incomes are structurally determined by market forces; again, from sectoral shifts in demand that accompany increasing labor productivity that is attributable to technological

change. Whereas with the former, shifts in the political power, between capitalists and workers, might possibly determine the wage and hence labor's share. Of course it is possible that a mix of both dynamics are at play.

The following accounting identity allows us to assess the variation between the labor share in manufacturing and the total private industry labor share according to changes in productivity verses changes in compensation per worker.⁵²

$$\frac{c/y}{C/Y} = \frac{\left[\frac{\left(\frac{c}{e} \right)}{\left(\frac{C}{E} \right)} \right]}{\left[\frac{\left(\frac{y}{e} \right)}{\left(\frac{Y}{E} \right)} \right]} \left[\frac{\left(\frac{c}{e} \right)}{\left(\frac{C}{E} \right)} \right] \left[\frac{\left(\frac{Y}{E} \right)}{\left(\frac{y}{e} \right)} \right]$$

The first term on the left-hand side of the equation expresses the difference between the manufacturing and private industry compensation shares. The first term on the right-hand side of the equation is equivalent to the left-hand side term. The difference between the left-hand side and first right-hand side terms is that each share's compensation and output are divided by their respective number of workers. The second right-hand side term expresses the ratio of compensation per manufacturing worker to compensation per private

⁵² Where

c = manufacturing compensation, adjusted for inflation (2014 dollars)

y = manufacturing net value added

e = number of manufacturing workers

c/y = manufacturing compensation share

c/e = compensation per manufacturing worker

y/e = manufacturing productivity

C = private industry compensation, adjusted for inflation (2014 dollars)

Y = private industry net value added

E = number of private industry workers

C/Y = private industry compensation share

C/E = compensation per private industry worker

Y/E = private industry productivity

industry worker. Finally, the third term expresses the ratio of private industry productivity to manufacturing productivity.

It follows from this accounting identity that the percent change in the difference between the manufacturing and private industry compensation shares is equal to the sum of the percent changes in the ratio of compensation per manufacturing worker to compensation per private industry worker and the ratio of private industry productivity to manufacturing productivity. Note that only employee compensation, and not the estimated labor income of proprietorships, is included in the numerators of each of the labor shares.

Figure 7.3 graphs the cumulative percentage change of each of these terms between 1987 and 2008. Because the BEA private industry accounts switched from the SIC to the NAICS industry classification scheme, it is only possible to get a consistent (NAICS) series starting in 1987. While a longer time series would have been preferable, the current one; nevertheless, describes the trajectory of these terms over the two decades of neoliberalism that led up to the Great Recession.

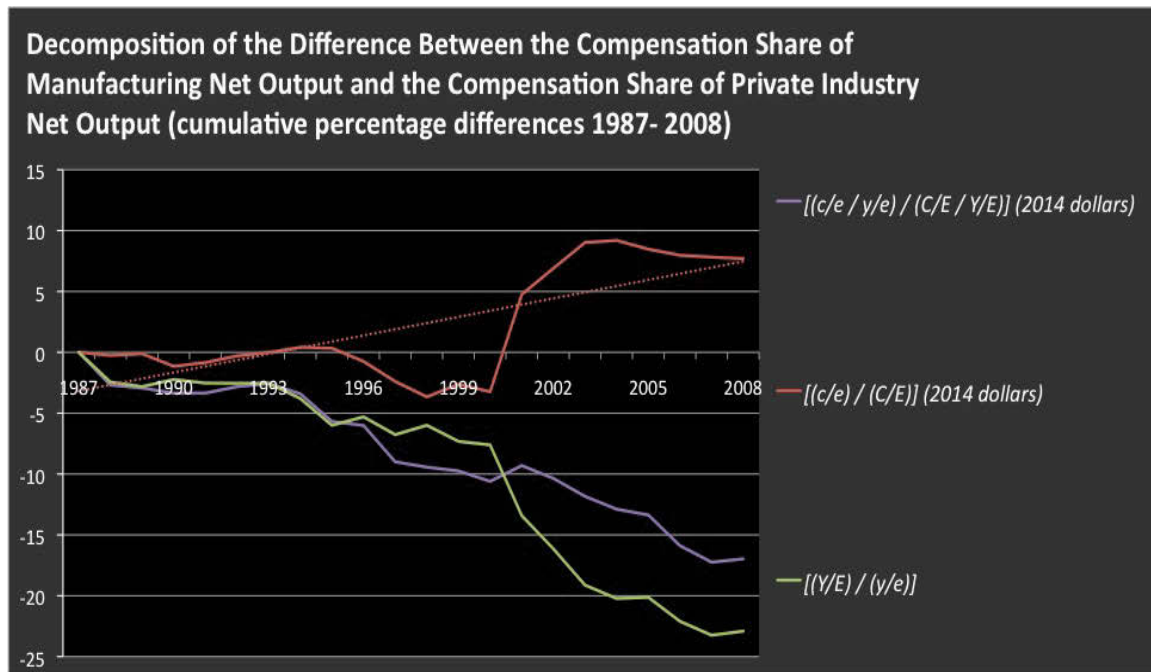


Figure 7.4 Decomposition of the Variance Between the Compensation Share of Manufacturing Net Output and the Compensation Share of Private Industry Net Output
Source: BEA

The purple series clearly indicates that the compensation share of manufacturing net output declined markedly as compared to the total private industry share of net output between 1987 and 2008. Hence, the compensation share of manufacturing declined significantly, even after subtracting depreciation. The ratio between the manufacturing share and the private industry share fell nearly 17 percent by 2008. The question that concerns us is whether the decline in the manufacturing share is attributable to declining wages, increases in productivity, or whether a mix of both dynamics are at play. The two other series give us a clear picture as to what lies behind manufacturing workers' falling share. It's not falling wages. Between 1987 and 2008, real compensation per worker in manufacturing rose by about 8 percentage points relative to compensation per worker in private industries as a whole. These data are not consistent with the thesis that declining unionization undermined workers' bargaining position, which in turn led to a fall in

workers' share of manufacturing output. On the contrary, compensation per worker increased markedly in manufacturing - despite suffering a 20 percentage point decline in union density - as compared to compensation per worker in private industries - which experienced a 14 percentage point decline in union density.⁵³ Why then did the manufacturing share decline relative to the private industry share? The only other series in Figure 7.3 that declined was the ratio of private industry productivity to manufacturing productivity, and it fell by roughly 23 percentage points. "Productivity" is just another name for output per worker. Figure 20 demonstrates that the net output per private industry employee grew considerably slower than the output per manufacturing worker. It was the marked increase in the output per manufacturing worker relative to the output per private industry worker that led to the decline in the manufacturing share after 1987. The fall in the manufacturing share, then, appears to be rooted in "market forces," i.e., sectoral shifts in demand for labor in the face of technological change. The data do not support the thesis that the labor share in manufacturing fell because of the loss of political, or positional, power that accompanied the decline in union density.

Nevertheless, that Kristal's (2013) analysis reveals that the steepest sectoral labor share declines were concentrated in heavily unionized industries is very interesting. This, of course, is why the declining unionization thesis is appealing. However, another interpretation that might explain this paradox sees declining unionization as not a cause but rather an effect of larger structural forces that were generally hostile to and disempowered traditional blue collar workers, namely the offshoring of traditional blue collar jobs and

⁵³ The union density statistics that are referenced above come from Kristal's (2013: 376-377) analysis.

technologically induced unemployment in manufacturing. The factors will receive further attention in the conclusion.

To conclude this section, labor or compensation shares defined at the level of private industries face many of the same measurement challenges as those that are defined at the level of the aggregate economy. There are shares of private industry output that are not distributed between profit and compensation or between workers and capitalists as income. For example, there are nonprofit institutions whose output is not allocated in any proportion to profit. There is also depreciation, which constitutes a recovery (not a return) of capital investment and as such, cannot function as income to be consumed without reducing net worth. The inclusion of private households within the private industries sector also presents a challenge as the labor share in this industrial sector does not correspond to the percentage in which workers are compensated for the output that they produce. The compensation of this sector does not constitute a share of its output in any meaningful sense. The compensation of private households is based on the wages that housekeepers and/or other domestic workers receive for their work within the home. Whereas the output, is based on the imputed rent of owner occupied homes. These two revenue streams are not tied to one another in any meaningful sense.

Fortunately, NIPA private industry data allow for the removal of many of these intrusive elements, including the shares of private industry output that correspond to private households, nonprofit institutions, and depreciation. Recently, Kristal reported a decline in labor's share of private industry output (income), which she explained in terms of a loss of labor's positional power vis a vis the capitalist class, following declines in unionization, especially in the manufacturing sector. However, after controlling for depreciation and

estimating labor income of proprietors according to the conventional standard, the labor share of private industries was trendless on average, between 1970 and 2008, and over the longer term between 1948 and 2008.

Nevertheless, the total private industry labor share is a weighted average of the labor shares of all private industries. While the aggregate did not decline during the run up to the Great Recession, the manufacturing sector did decline and significantly so. The ratio between the manufacturing share and the total private industry share (which was trendless) fell by nearly 17 percent between 1987 and 2008. However, the evidence does not suggest that the fall in labor's share in the manufacturing sector, despite manufacturing's marked decline in union density, is attributable to declining unionization. Rather, the evidence suggests that the decline in the manufacturing share is attributable to the increasing productivity of manufacturing workers. To hold that declining unionization was responsible for the decline in labor's share in manufacturing begs the question as to why compensation per manufacturing worker consistently outpaced compensation per private industry worker.

Conclusion

The literature on labor's share reflects a lack of consensus in regard to the trajectory of the labor share during the decades of neoliberalism. Armenter (2015), Kristal (2013, 2010), Magdoff and Foster (2013), have reported a marked decline in labor's share over the course of neoliberalism, while Kliman (2013a, 2013b, 2015) and Winship (2014) have concluded that labor's share has been basically trendless during the same period. This dissertation demonstrates that attention directed toward the methodologies of these studies reveal a clear pattern: labor shares that are based on GDP consistently exhibit a downward trend, while shares that are based on net value added of the corporate sector (Kliman 2013a) or the net value added of the non-farm business sector (Winship 2014) are essentially trendless. In this conclusion, I review these findings and the implications for broader, theoretical understandings of contemporary capitalism and of the key relationship between methodological differences and empirical findings.

One key methodological issue is the difference between net and gross labor shares. Historically, net labor shares have been prioritized as a more relevant descriptor of the *distribution* between capital and labor (Rognlie 2015). Yet, recently, gross shares have been increasingly utilized for purposes of describing the labor-capital income distribution. Bridgeman (2014) has argued the users of gross shares have overestimated the decline in labor's share. In addition to the effect imparted from deriving labor's share based on gross output or GDP, there are also measurement challenges that stem from the intrusion of components of the aggregate economy whose output is not distributed between labor or capital (e.g., nonprofit institutions and government), or distinguishable in terms of labor and capital (e.g., proprietor income), or whose labor and capital income lack a meaningful

relationship (e.g., private households). I label these components as “intrusive,” because their inclusion precludes a consistent description of the distribution between labor income and profits, which is the tacit objective of inequality related studies that utilize factor shares and the explicit focus of Marxist studies.

As far as I am aware, this dissertation is the first analysis that has attempted to disaggregate the variation in labor’s share of GDP according to movements in depreciation and the labor shares of various organizational forms, namely corporations, government, nonprofit institutions, proprietorships and private households. Of all of these organizational forms, only the net domestic income of the corporate sector is divisible between profit and compensation. Nevertheless, depreciation, private households, and proprietorships (when the labor income of proprietors is estimated according to the national average of wage and salary workers) have had a significant impact on the trajectory of labor’s share of GDP. According to my analysis, the inclusion of proprietors’ estimated labor income (estimated according to the average compensation of wage and salary workers), private households, and depreciation fully explain the decline in labor’s share of GDP during the neoliberal decades leading up to the 2008 Great Recession. When proprietor labor income is not estimated, the decline in labor’s share of GDP is fully attributable to private households and depreciation. Labor’s share of corporations’ net output, on the other hand, was trendless over the same period. Hence, the frequently reported narrative about the success of neoliberalism, in terms of redistributing the pie in favor of capital vis-à-vis labor is not supported by data for the first 38 years of neoliberalism, of which I have presented in this dissertation. Nor can the marked fall in labor’s share of manufacturing compensation be attributed to the neoliberal assault on unions, at least between 1987 and 2008. While

manufacturing experienced a steep decline in union density, the wages of manufacturing workers as a whole actually rose both absolutely and relative to private industry workers as a whole.

Sociological implications of this study

As I have discussed a number of different times in this dissertation, one reason why some economists continue to find relevance in factor shares (even though factor ownership has been rejected as a proxy for social class) is their relationship to inequality within the personal distribution of income (Atkinson 2009, Piketty 2014, and Solow 2015). All else being equal, a redistribution between capital and labor in favor of capital will likely lead to an increase in inequality within the personal distribution. However, the fact that the compensation share of corporations' net output was trendless during the run up to the Great Recession suggests that the widely documented increase in inequality within the personal distribution (Piketty 2013, Piketty and Saez,) is *not* the result of a general redistribution between capitalists and workers. It certainly is possible for inequality to grow within the personal distribution without a corresponding redistribution between profit and compensation. Kliman and Williams (2014) demonstrated that in recent decades corporate profits and dividend payments have not moved together in lockstep. Rather, corporations have dramatically increased dividend payments to stock holders despite suffering a general decline in profitability. Of course, a growing divergence in pay *between workers* also leads to rising inequality within the personal distribution. Hence, there is no necessary contradiction between growth at the top of the personal income distribution and a constant labor (profit) share.

Moreover, the finding that the compensation share of corporations' net output was trendless during the first thirty-eight years of neoliberalism suggests that we should reconsider the plausibility of agency-centered or political determinist arguments, in which the collective agency of capitalists is posited as exercising a determinacy over the structure of distribution under neoliberalism. The leftist discourse on neoliberalism as a "class project" (as exemplified by David Harvey's work) is the contemporary expression of the agency-centered, or "bounded autonomy" position taken in the classic epistemological debate between agency versus structural theories of causation, a debate that has largely defined sociology since its inception.

Within contemporary political economy, a major contribution to this debate takes the form of arguments between those who emphasize the agency of capitalists (who impose neoliberal regulatory reforms) as the determinant of the structure of distribution and those (classical political economists or Marxists) who posit the determinacy of "objective laws." It was Marx after all who viewed the rate of accumulation as the "independent variable" determining the rate of wages. In Marx's theory it is also the systemic compulsion of the accumulation of capital vis-à-vis the employment of additional workers that is responsible for the tendency for the rate of profit to fall. In addition, the rate of profit is a strong determinant of the profit share and, thus, of the labor share.

Within contemporary political economy, leading advocates of the former position include the French or Parisian regulation school and adherents of social structures of accumulation theory (SSA) (Aglietta 1979, Boyer 1990, Gordon, Edwards, and Reich 1982, McDonough, Reich, Kotz 2010). The theoretical similarities of these two camps far outweigh their differences and both camps view the mobilization of capitalists as

exercising considerable determinacy - through their political power to reconfigure the economic regulatory environment - over the structure of production and distribution (McDonough, Reich, and Kotz 2010).

There are others who have emphasized a middle ground between market structure and political agency. While acknowledging that political power can indeed influence the pay structure, some have argued that a lot depends on the balance between competition and monopolization of the market structure in question. O'Connor (1973), for instance, argues that in competitive sectors, wages and profits are determined by market forces while in monopolized sectors it is largely political forces – the struggle between organized labor and monopoly capital- that determine the structure of distribution.

However, even if unions can influence the pay structure under certain economic conditions, it has been widely acknowledged that union formation (and union strength) itself is contingent on “structuralist conditions” (Mason and Bain 1993). In particular, rising unemployment has been frequently demonstrated to have a negative impact on union membership while inflation has been associated with increases in unionization (Bain and Elsheikh 1976, Bain and Price 1983, Borland and Ouliaris 1989, Carruth and Disney 1988, Mason and Bain 1993).

The fact that labor's share fell in manufacturing – an industry that is frequently referenced as suffering the largest declines in union density – as a consequence of increasing productivity and not lower wages suggests that technical change, not deunionization, played the decisive role from 1987 on. Further analysis should explore other industry sectors that suffered both a decline in labor's share and deunionization in order to examine the relative impacts of wages and productivity. A decline in unionization

that accompanies a decline in labor's share, as in the case of manufacturing, might be explained by way of "lurking" technical change that is favorable to neither union formation (due to technological unemployment) or labor's share (due to the increasing productivity of labor). In any case, the reported link between declining unionization and labor's share is not supported by the data that I have presented in this dissertation, nor is the thesis that capitalists have been successful in redistributing the economic pie in their favor.

Finally, in contrast to what some readers might have gathered by this point, I have no qualms about references to "class war" as a characterization of the social relations of production under neoliberalism or any variety of capitalism for that matter. Indeed, I think the concept is useful as an accurate assessment of the relationship between owners of capital and the workers they employ. However, the question of the degree to which a united capitalist class can bring about the outcomes that are most consistent with its interests - through institutional restructuring or otherwise - is an empirical one.

SSA theory originated out of a desire to explicate the role that political forces play in shaping the institutional context in which accumulation takes place; and later even going so far as to define the institutional context as endogenous, and therefore determinant, of the accumulation process itself (McDonough, Reich, and Kotz 2010). Yet, as SSA theorists began to acknowledge that neoliberal restructuring failed to usher in a new era of sustained capital accumulation, a debate concerning whether or not to classify neoliberalism as a social structure of accumulation emerged as did the question of how SSA theory should define social structures of accumulation in the future (Wolfson and Kotz 2010). What if the regulatory reform that is implemented by and on behalf of a mobilized capitalist class fails to achieve a sustained period of accumulation and growth? That was the question that

SSA theorists were forced to grapple with. Ultimately, a consensus was reached wherein neoliberalism would continue to be referenced as an SSA. At the same time, however, new SSA theory emphasized profit making instead of accumulation as the primary criterion.

Around the same time, the financialization tradition emerged to explain why accumulation had not taken place under neoliberalism, a period in which a sustained recovery profitability was reported (Duménil and Lévy 2011). In sum, financialization writers argued that the corporate profits that neoliberalism generated were *diverted* to shareholders and financial markets in the form of financial market investment, interest and dividend payments, and stock repurchases, leaving corporations with less retained earnings with which to pursue productive investments (Stockhammer 2004, Duménil and Lévy 2011, Lazonick 2013). The financialization theorists, like SSA, thereby emphasized the role of capitalists, this time shareholder activists and financial speculators, to explain economic outcomes. These two groups of theorists have proved to be very compatible, as SSA theorists even adopted the diversion of profit thesis to explain why the neoliberal social structure of accumulation had failed to achieve a period of sustained accumulation and growth (Wolfson and Kotz 2010).

By contrast, Kliman and Williams (2015) referred to the collective claims made by these scholars as the “diversion thesis.” They challenged these claims by demonstrating that no diversion of funds from production to financial markets had occurred under neoliberalism or financialization. Rather, Kliman and Williams (2015) demonstrated that profitability did not recover under neoliberalism. And because profit was sluggish, so was the productive investment of profit (capital accumulation).⁵⁴ Moreover, the decline in the

⁵⁴ The rate of accumulation is by definition the product of the rate of profit and the investment share of profit. Because the investment share of profit was generally on par with the percentage of profit that was

rate of profit resulted not from a redistribution between profit and compensation, nor from a change in the rate at which money prices rose relative to commodities' actual values (measured in terms of labor time). Rather, "[w]hen one holds the factors constant, the rate of profit rises (falls) if employment grows more (less) rapidly than capital accumulates. Almost all of its long-term decline is attributable to the fact that capital continually accumulated more rapidly than employment grew" (Kliman and Williams 2015:88). This account - as I reported earlier when discussing Kliman's analysis of the 2008 Great Recession - is a substantiation of Marx's theory of why the rate of profit tends to fall.

With respect to contemporary political economy's theorization of economic outcomes - including, economic crises, accumulation, and the structure of distribution - arguably too much emphasis is placed on actors' motivations and actions as determinant causes. The compulsion to explain economic outcomes in terms of political forces is reminiscent of Kliman's (2011) account of the history of US economic planning, which shifts back and forth between a position that advocates for stronger government regulation and one that argues for greater liberalization. For a time, one side will achieve consensus until a crisis emerges to erode its hegemony. After which, the pendulum shifts in the opposite direction. A mistake that perpetuates the back and forth movement between regulation and liberalization is the assumption that capitalism is a system that can be controlled by people.

productively invested during the postwar period, the resulting decline in the rate of accumulation was largely attributable to the decline in the rate of profit (Kliman and Williams 2015).

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