Presidential era income inequality and economic performance: A historical examination

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ABSTRACT

Income inequality is analyzed in a historical context by examining the relationship between the share of capital income relative to the share of labor income for each of the United States presidents since 1913. The authors use a relatively simple method to study, analyze, and track income shares and compare the share of labor and capital distribution on a yearly basis for each of the presidential terms. The authors discuss the effects of changes in the marginal tax rates on the relative shares and how these changes impact inequality. The study indicates that higher labor shares relative to capital shares tends to occur with increasing marginal tax rates.

Keywords: Economic Inequality, Economic Growth, Labor/Capital Share, Marginal Tax Rates

INTRODUCTION

Perhaps nothing is more disputed than the concept of wealth and income disparity. Capitalism certainly promotes the creation of income, wealth, affluence, and prosperity. Capitalism rewards those who supply their capital and labor to the market to provide goods and services highly valued by society, and therefore tends to allocate resources to those goods and services most desired by society; a socially beneficial and economically efficient outcome achieved through impersonal market forces, without government control, interference, or influence. It is a cornerstone of capitalism. By its very nature, capitalism tends to produce inequalities in income, wealth, and consumption. Wealth is acquired by entrepreneurs and others, whose talents create innovative products, inventions, and new ways of doing things, creating countless jobs and improving the lives of everybody; entrepreneurs create wealth for themselves and wealth for society (Arnott, Bernstein, & Wu, 2015).

In the process of producing goods and services desired by consumers, firms attempt to minimize cost, including labor and capital cost, in order to maximize profits. Market forces reward factors of production that provide the goods and services demanded by consumers at the lowest cost. Looking at wages and profits, the wages of workers have not increased as much as profits and wealth for the top 5% of our nation have increased. Thus, one needs to explain, in historical terms, how the level of annual wealth creation relative to the economy and employment is related. The authors use a relatively simple method to analyze the economy and compare the share of labor and capital distribution throughout the twentieth century.

BACKGROUND AND LITERATURE REVIEW

Wealth and income inequality have both been regularly and intensively studied for many years with different conclusions, including studies by Pareto (1896), Kuznets (1953), Piketty's (2014), and Bourne, & Edwards (2019). The level of wealth and income disparity has a direct relationship over time to what happens within the economy. Individuals have different abilities, different education levels, different skills, and different job preferences. Some are willing to take more risks than others and these factors are reflected in the jobs they pursue and the incomes they receive. Individuals have different levels of intelligence and different personalities. Some are really good at sports, and some are not, some are good writers, and some are not. Some are lucky, and some are not. For example, some cite the "economics of superstars" as contributing to inequality, including sports figures, movie stars, singers, corporate executives, and super managers (Dew-Becker and Gordon, 2005; Mishel & Sabadish, 2012; Piketty, 2015). All of these differences, and more, are reflected in the incomes they receive and the inequalities that exists in society. Given these differences, inequality in society is expected. There are many factors that lead to inequality, including international trade, immigration, the increase in information technology, as well as labor unions (Katz & Murphy, 1992).

When individuals in society view themselves in more control of their lives and see merit, hard work, and achievement as determining factors of income and wealth, then they are more likely to view income and wealth inequality as acceptable, and a consequence of an individual's own hard work, as well as believing the world is just. While in those societies with more government control and where individuals view themselves with less control of their lives, are more likely to view income and wealth equality as a problem that should be corrected through government action (Lipkus, 1991; Cappelen, Hole, Sørensen, & Tungodden, 2007; Cappelen, Sørensen, & Tungodden, 2010; Cappelen, Konow, Sørensen, & Tungodden, 2013; Trump, 2018; Akbaş, Ariely, & Yuksel, 2019; Almås, Cappelen, &

Tungodden, 2020; Aldama, Bicchieri, Freundt, Mellers, & Peters, 2020; Mercier, Wiwad, Piff, Akin, Robinson, & Shariff, 2020).

Inequality in consumption is not mentioned as often as income or wealth inequality. However, consumption inequality is much less extreme compared to income or wealth inequality, and consumption inequality has remained fairly stable for years (Krueger & Perri, 2006; Blundell, Pistaferri, & Preston, 2008; Heathcote, Perri, & Violante, 2010; Hassett & Mathur, 2012; Winship, 2013; Meyer & Sullivan, 2013; Tanner, 2016; Cochrane, 2020). According to Hassett & Mathur (2012), relative consumption by the bottom, middle, and top income levels has not changed much over time. Today, people considered poor in the United States have smart phones, televisions, computers, internet access, cars, refrigerators, and many other consumer goods that they were not able to afford in the past (Tanner, 2016; Cochrane, 2020). The current ability for low income households to consume far exceeds past consumption patterns. The adoption and acquisition of new technologies by the poor is extremely rapid compared to the past and, therefore, their standard of living has increased tremendously, even if there is rising inequality of income, there has not been significant rising inequality of consumption in terms of a person's standard of living (Winship, 2013; Tanner, 2016; Cochrane, 2020). However, Fagerang, Guiso, Malacrino, & Pistaferri (2016), Carroll, Otsuka, & Slacalek, (2011), and Bostic, Gabriel, & Painter (2009) find evidence contradicting the idea of the existence of a stable consumption inequality, and maintain that high wealth individuals would consume more out of their additional wealth, and therefore consumption inequality would increase. The converse of this is seen when major wealth shocks occur in the economy (such as 911 in 2001, the financial crisis of 2008, and the Covid-19 pandemic in 2020) where the wealthy experience a sudden loss of wealth and significantly decreased their consumption relative to low wealth individuals (Fisher, Johnson, & Smeeding, 2015).

Individuals, businesses, and entrepreneurs that produce the goods and services that consumers want, develop new products, new technologies, and new ways of doing desired by consumers are rewarded with higher incomes, higher profits, and greater wealth. Therefore, greater inequalities will result from innovation and entrepreneurship that creates extraordinary benefits for society (Partridge, 1997; Barro, 2000). Studies by Cochrane (2020), Bourne, & Edwards (2019), Arnott, Bernstein, & Wu (2015), US Trust (2015), Kaplan & Rauh (2013), and BMO Financial Group (2013) found that the majority of people who have amassed significant wealth are entrepreneurs that provided innovative products, consumer goods, or services highly desired by individuals and creating benefits (as expressed by consumer demand) for society.

Inequality can also lead to economic growth and more job opportunities as described in a study by Fallah & Partridge (2007), where income growth and inequality were shown to be positively related. In addition, those seeking higher incomes and more job opportunities will work hard, acquire education, and develop skills leading to more inequality, but also generating significant benefits for society Welch (1999). Proposing pro-growth fiscal and tax policies, President Kennedy said, "A rising tide lifts all boats," therefore, making everybody better off, increasing economic opportunities, improving the standard of living for all, and reducing inequality in consumption (Kennedy, 1964).

As already mentioned, capitalism and free markets naturally result in inequality and an unequal distribution of income for the simple fact that people have different skills, talents, work preferences, and education (Mankiw, 2013). Compensating wage differentials is one of the principles proposed by Adam Smith (1776) that explains why there are different incomes for different individuals depending on their job choice and skill level. Mincer (1958), Schultz (1961), and Becker (1962, 1994) saw education, skill development, and labor as human capital, and that they are very important factors determining a person's productivity and

income level; therefore, more investment in human capital increases an individual's productivity, making them more valuable in the labor market, leading to higher incomes and inequality. This complements the ideas of marginal productivity theory and neoclassical economics concluding that inputs, such as capital and labor, are paid according to their marginal productivity (Clark, 1899; Wicksteed, 1894; Lazear & Rosen, 1981; Brown, 2005).

Interference in the free-market to try to reduce or eliminate inequality will distort the workings and efficiency of the market system, reduce marginal productivity, leading to less output and income for all, making everybody worse off (Conard, 2016; Watkins & Brook, 2016). The existence of inequality (where individuals can earn higher incomes than others due to their skill level) motivates individuals to work hard, acquire skills, or to become an entrepreneur, so they can earn more money and get a higher income (Kaldor, 1955; Lazear & Rosen, 1981; Jost, Gaucher, & Stern, 2015; Davidai & Gilovich, 2015; Shariff, Wiwad, & Aknin, 2016). The concern is not really the amount of income or wealth inequality, but the concern is really the amount of poverty that exists in society (Watson, 2015; Frankfurt, 2015). Would inequality be an issue or concern if poverty were eliminated? Economic freedom, equal opportunity, and the elimination of poverty would make the issue of inequality a moot point.

Even Marx (1867a, 1867b) assumed that individual incomes for skilled workers would be higher than for non-skilled workers, recognizing that skilled workers are more productive. Rubin (1973), an economist in the former Soviet Union, concluded that "the additional training of skilled workers makes them more productive." Rubin's statement could have been made by a proponent of human capital theory or neo-classical economics. However, Marx's (1867a, 1867b) idea of labor exploitation and his famous saying "from each according to his ability, to each according to his needs" significantly deviates from neo-classical economics, marginal productivity theory, and capitalism.

The amount of wealth disparity may have some influence on the level of poverty in society, and is likely to impact the middle income level of society, as well as the ability of the middle income households in society to increase their standard of living over time. One reason that poverty may occur is due to a lack of access to those items that the wealthy take for granted: education, credit, access to opportunities, networking, access to talented people and the access to, and availability of, many resources for their use. In addition, technological advancement, the use of robotics, and the development of artificial intelligence all increase inequality and leads to the use of more capital, as capital is substituted for labor, increasing capital factor incomes, but also increasing labor incomes for those working with the new capital (Milanovic, 2016).

According to Piketty (2014), the returns to capital and wealth has exceeded economic growth over a long period of time and Piketty believes that this trend is expected to continue, further increasing inequality of wealth. However, Rongnlie (2014) believes the return to capital and wealth will decrease over time due to the law of diminishing returns, "reversion to the mean," and the rapid depreciation of capital over time. In a study done by Hartley (2014), eighty percent of surveyed economist disagreed with Piketty's conclusions. Higher capital income returns would attract funds into capital related activities, increasing supply and leading to an eventual decline in the return to capital, contradicting Piketty's claim (Kotlikoff, 2014). Studies by Fagerang, Guiso, Malacrino, & Pistaferri (2016), Carroll, Otsuka, & Slacalek, (2011), and Bostic, Gabriel, & Painter (2009) indicated returns on wealth differ considerably across individuals, and their conclusions suggest that even if wealthy individuals were to earn higher rates of return on their wealth, therefore increasing wealth inequality, there would be no direct increase in income inequality.

Bourne, & Edwards (2019) found that there has been a significant decrease in those who have inherited wealth. According to Arnott, Bernstein, & Wu (2015), the descendants of

the wealthy lose half of their wealth every twenty-years, and it is the new entrepreneurs who capture the current wealth from their contributions to society. In addition, high wealth individuals on Forbes most wealthy list were found to have much lower growth in their wealth than would have be suggested by Piketty, and would have earned higher returns with passive investment in stocks funds and bond funds than speculative, or other risky investments, therefore it in implausible that return on capital income is greater than the growth rate (Arnott, Bernstein, & Wu, 2015).

The opportunity, capability, and possibility, of individuals in the United States to reach a higher income level and improve their standard of living is a much better measure of economic fairness than just concentrating on income or wealth inequality (Magness, 2019). Magness (2019) states that, "The mobility issue is the key statistic that we'd have to look to here." Magness (2019) goes on to cite studies that show that "the middle class was getting smaller, but it was only getting smaller because people were moving from the middle class into the upper class over time" (Geloso, Magness, Moore, & Schlosser, 2019).

Inequality is also impacted by marriage rates, when marriage rates go down there are more single family returns enlarging the difference between low income and high income earners. The United States has seen a large decrease in marriage rates over the last fifty years (Cole, 2014; Bourne & Edwards, 2019). Changing tax laws also affect the amount of reported taxable income. In addition, retirement contributions (such as 401ks) and health plans provided by employers are not reflected in taxable income (Cole, 2014; Bourne & Edwards, 2019). Excluding both would overstate income inequality so that people look poorer than they are. Other factors, such as realized capital gains, are counted in one year, but were really earned over many years overstating or understating inequality. Or, an entrepreneur who has run a successful business decides to sell and this puts the entrepreneur in high income in the year they sale their company. In addition, the use of limited liability companies, and other tax law changes, has increased the individual income reported, which would overstate inequality (Cole, 2014; Bourne & Edwards, 2019). Even the number of college students can influence the level of inequality since they are generally low income filers, and when included on their parent' returns would lower their taxable income (Cole, 2014; Bourne & Edwards, 2019). The distribution of a population's age can overstate or understate inequality. Young people generally earns a lot less than an older individual at the height at their career (doctors, engineers, and accounts to name a few). This again could easily overstate the amount of inequality (Cole, 2014; Bourne & Edwards, 2019).

It would take enormous amounts of government intervention, regulation, taxes, government control, income redistribution, asset confiscation, and government spending in the economy to eliminate inequality and establish equality of results (which is extremely unfair to everyone and it is impossible to achieve in the long run). Equality of opportunity is what should be most valued by society and what creates the most benefit for the economy, furthermore, equality of results severely impedes the efficiency, work incentives, and effectiveness of the market system. Some propose increasing tax rates to redistribute income and wealth to the poor. Increasing tax rates allows the government to take control of resources previously controlled by the private sector. The revenue the government acquires is then used in various ways to stimulate the economy and redistribute income to the poor, but it is the government (and not the private sector) that decides where the resources are used and who benefits and those who may not like what is produced have no choice but to consume the goods produced by the government or do without. No longer are the resources channeled to their most valued use by market forces. No longer are those who provide goods and services valued by the market rewarded for their efforts. The more resources acquired by the government the less economic freedom exists.

THE LABOR-WEALTH INDEX AND THE INCOME BEHAVIOR PYRAMID

Taxed money does not behave the same, nor have the same velocity, at every income level. Therefore, taxed money is a function of income level and velocity. How taxed money behaves is contained in an understanding of what different income levels do with their money, an income behavior factor. The higher the income level, the more money is available to be placed into either investments or speculation (see Appendix, Figure 1). The higher the income level the greater amount is placed into speculation money. Each step up creates greater movement from investment money and consumption money into speculation money. Each step up creates a lower velocity of money factor.

The authors use the Labor-Wealth Index (LWI) to study inequality over the last century. Given each generation creates its own wealth, and the concept of dynastic wealth accumulation is debatable, but inherited wealth unlikely to last for several generations (Bourne, & Edwards, 2019; Mirza, & Singh, 2019; Arnott, Bernstein, & Wu, 2015; Kaplan, & Rauh, 2013); therefore the authors use a yearly Labor-Wealth Index (LWI) to track the movements of incomes to capital and labor. The Labor-Wealth Index is a relative measure of the annual relationship between yearly wages created in the national economy, as reported by the IRS, and the yearly level of wealth (or capital income flow) created and measured by interest paid, dividends paid, capital gains and business profit gains. The LWI changes over time and is related to, and affected by, the marginal tax rate. The LWI is annual aggregate flow of wealth (capital income flow created from interest paid, dividends paid, capital gains and business profit gains) divided by annual aggregate wages. Using the definition of LWI, it follows that the lower the LWI index value, the more wages expand relative to capital, therefore a declining number indicates labor income is higher relative to capital. The resulting value indicates how much of the surplus value in the economy is moved to capital and how much is provided to labor. Consumer spending is considered about two-thirds of the economy, and thus money that moves to capital has a very low propensity to spend as opposed to wages which quickly moves into consumer spending in the economy.

Classical economist saw inequality as a way to benefit to society, encouraging economic development, promoting investment, and stimulating entrepreneurship. In addition, classical economist believed that the marginal propensity to consume decreased with wealth, leading to higher average savings for wealthy individuals and therefore increasing inequality (Kaldor, 1955). Classical economist go on to say that the high marginal propensity to save would lead to increased investment in real capital and stimulate economic growth (Kaldor, 1955).

Studies by Friedman (1953, 1957) indicated that wealthier individuals save a higher percentage of their income, while studies by Mayer (1966, 1972) did not find evidence that wealthier individuals save a higher percentage of their income. Bach, Calvet, and Sodini (2018) conclude that, “the total saving rate, which takes capital income into account, declines with net worth in brackets up to the 80th percentile of net worth and then stabilizes around 7% in the top 20% of the population”. In studies by Jappelli & Pistaferri (2014), Brinca, Holter, Krusell, & Malafry (2016), and Rhee & Kim (2018) lower income individuals were found to have higher marginal propensities to consume than those of higher income individuals. Other studies that found the marginal propensity to consume to be different for different levels of income and wealth include Slacalek, Tokuoka, & White (2017), Kaplan, Violante, & Weidner (2014), Kaplan & Violante (2014), Mian, Rao, & Sufi (2013), Krueger (2012), and Johnson, Parker, & Souleles (2006). Kaplan, Violante, and Weidner (2014) found that the highest MPC to be for those individuals without any savings and limited liquidity which they called “hand-to-mouth households.” In a study by Carroll, Slacalek, Tokuoka, & White (2017), their results estimated the MPC at eight percent for the wealthiest

twenty percent and ninety-four percent for the poorest twenty percent of Americans. Fisher, Johnson, Smeeding, & Thompson (2019) also found that the marginal propensity to save is higher for wealthy individuals.

In neo-Kaleckian macroeconomic models, as developed by Rowthorn (1981) and Dutt (1984, 1989), economic activity and growth are led by labor income, and the aggregate demand from labor used to produce goods and services. Therefore, in these models, movement of income to labor and wages would promote economic activity and increase company profits. Also in these models, the marginal propensity to consume is declining in income, so that more inequality will lead to decreased consumption due to the lower MPC. Neo-Kaleckian macroeconomic models were advanced to include the heterogeneity of consumption and savings at different levels of income for a variety of reasons (De Nardi and Fella, 2017). One explanation given by Carroll (2000) is that the marginal utility of consumption decreases more rapidly than the marginal utility of wealth leading to higher savings for higher income households creating more inequality, especially in general equilibrium models (Benhabib, Bisin, & Zhu, 2011; Gabaix, Lasry, Lions, & Moll, 2016). A major assumption, proposition, and conclusion of heterogeneity models is that at different levels of wealth and income, there will be different marginal propensities to consume.

Galor & Zeira (1988, 1993) emphasize heterogeneity in consumption, its role in economic activity, and its role in the macro economy. Galor & Zeira (1988, 1993) suggest a strong relationship exists between heterogeneity in consumption, income distribution, and income inequality, as well as the determination of macroeconomic activity, growth, and prosperity. Galor & Zeira (1988, 1993) also associate imperfect credit markets with inequality due to the difficulty of acquiring loans (a problem of asymmetric information, adverse selection, and moral hazard in the credit markets) to finance investment in human capital, and therefore impeding economic growth, distorting the distribution of income and leading to inequality.

From the early 1930s until 1982 the highest marginal tax rates were above 60%, and were above 50% until 1987, at which time they were lowered and remained between 20% and 40% up to the 2020 when this paper was written. The highest marginal tax levels from 1916 to 2020 are shown in Figure 2 (see Appendix). The U.S. income tax system has generally been a progressive tax system, therefore higher income individuals are exposed to a higher tax than lower income individuals, and this reduces some inequality.

Economist, such as Bivens & Mishel (2013), advocate high taxes on the wealthy and high income earners since they suggest these returns are due to economic rents, market imperfections, and monopoly profits and are not related to the returns needed to attract investment or the marginal productivity of capital or labor. Bivens & Mishel (2013) assert that the compensation of corporate and financial executives is comprised of significant levels of economic rents. Therefore, Bivens & Mishel (2013) conclude high tax rates (even up to 100%) would not change their behavior or interfere with efficiency; research by Mankiw (2013) completely contradicts the conclusion made by Bivens & Mishel (2013). According to Mankiw (2013) economic rents and monopoly profits are not significant enough to justify such high taxes. In addition, Mankiw (2013) believes that the differences in incomes are reflected by differences in ability, marginal productivity, and the demand for goods and services produced with the skills needed to produce the demanded goods and services. Therefore, according to Mankiw (2010, 2013) high taxes on individuals would discourage them for producing and working.

Krueger (2012) suggests higher taxes should be imposed on the wealthy because the marginal propensity to consume is lower for high income and wealthy individuals. Therefore, Krueger (2012) emphasizes the tax on high income individuals would transfer spending to low income individuals that have a higher marginal propensity to consume. Other

researchers, such as Piketty, Saez, & Zucman (2018) and Elsby, Hobijn, & Sahin (2013) agree with Krueger's (2012) recommendations. However, if high taxes are imposed on capital income, economic growth would likely decrease and unemployment would likely increase according to most economic literature (Fichtner & Feldman, 2015; Mankiw, Weinzierl, & Yagan, 2009) and, according to Fichtner & Feldman (2015), lowering taxes on capital income would increase wage income.

WEALTH TRANSFER

Understanding Wealth Transfer

The basics of how wealth is transferred (See Appendix, Figures 3 and 4) occurs when a company pays wages, that over time, do not increase by at least proportional to the increase in productivity and increased profits. As the rich accumulate money, they buy assets that earn more money from rental income, asset appreciation, inflation appreciation and leverage. Workers on the other hand seldom accumulate enough money to buy assets that will increase their own personal wealth, other than their own home. Higher income and wealthier individuals make more investments in the stock and bond market and therefore, when stocks or bonds increase in value this automatically concentrates wealth and increases inequality and as the market falls inequality also falls (Smith, 1987; Winnick, 1989; Wolff, 1987, 1992).

During periods of economic decline, both the upper income and the middle income households lose their asset wealth, but those that have enough money and wealth can buy assets at reduced prices, thus accumulating more wealth. In effect, this becomes a huge wealth transfer. This can be described as the distressed wealth conversion effect. The ability to buy assets when they are undervalued during periods of economic decline has allowed the top 5% to accumulate wealth in addition to the effects of low marginal tax levels economic behavior. As a result of this combination, wealth is accumulated virtually at all times during economic cycles.

Low marginal tax rates generally lead to increased company profits, resulting in the share of wealth moving to capital rising faster than the share of wealth moving to labor. Therefore, the relative wealth going to capital increases and the LWI rises (even with increasing marginal productivity of labor), this is most likely true when marginal tax rates are below 50%. In addition, real wage losses, relative to higher marginal productivity and a lower employment per dollar, also results in a form of relative wealth transfer from labor to capital, therefore increasing inequality. Furthermore, when there are large government deficits (possibly due to low tax rates, low tax revenues and/or excessive government spending) there can be a wealth transfer to capital income. More federal debt creates higher interest payments crowding out private spending and reducing consumer demand. The result is a movement of wealth to those who invest in public debt away from labor income and shifts the relative wealth to capital income.

During periods of economic expansion, wealth is acquired from increased profits and asset appreciation. Seeking higher profits, and due to adverse selection, banks make loans to less desirable loan applicants. As a result, it creates asset purchases that pay interest back to those who invest in loans, usually the wealthy. This is a transfer of working wage money into interest payment money that is then paid to the wealthy and increases their savings. Then, the price of housing increases, causing more people to do the same. When the underlying asset declines in price, banks repossess the asset, sells them off at significantly reduced prices to those who have money. In addition, a lower marginal propensity to consume also leads to a

higher concentration of wealth of those with higher incomes. The Figure 5 flowchart (see Appendix) illustrates the level of dollar transfer that has happened over the last 40 years.

THE MONEY MULTIPLIER AND TAX CUTS

One can see in Figures 6 and 7 (see Appendix) that when the cutting of marginal tax rates began in the 1980's, the velocity of money and the money multiplier began to decline. The money multiplier was consistently around 3 for decades. At this level, it meant that the value added gain in the economy was able to produce three times the economic activity from the gain in new value added, which would drive the growth in the economy. But, starting in 1981, by cutting the marginal tax rates from just under 70% in 1981 to under 30% in 1988, the money multiplier decreased to a level under 1. Now, the economy must produce more value added in excess of the actual ability for that money to multiply in the economy. This has resulted in a transfer of wealth from labor to capital. This is explained in the Income Pyramid concept in Figure 1 (see Appendix), and seen in the money multiplier graph in Figure 6 (see Appendix), and the velocity graph in Figure 7 (see Appendix). The idea that the MPC, money multiplier, and the velocity of money would be higher for lower and middle income household, compared to higher income households, makes intuitive sense. Those with limited funds, income, and wealth would probably spend the money on consumer goods and services to satisfy their demand.

As the surplus value added to an economy is distributed, the subsequent behavior of that money changes based upon whether it goes to labor income or to capital income. From Figures 6 and 7 (see Appendix), this can be seen by the dramatic change in money behavior. As the Income Pyramid explains, high level wealth individuals do not spend their increased income, but rather speculate with this money, and thus remove it from the production and consumption economy. The greater level of this money, the greater is the decline in both the velocity (fewer money moving around the economy) and the multiplier (less money moving means fewer movements between entities for this money). The result is that the economy in aggregate begins to be less efficient. This causes the need for more money to create the same expansion as was previously needed. This combination over time creates its own circle of less growth, meaning less income growth, which then creates less demand, and thus lower growth for the same money. The final result is the structural change in total numbers of unemployed (see Appendix, Figure 8).

PRESIDENTIAL ERAS AND THE LABOR-WEALTH INDEX

Wilson Era: 1913-1921

The first income tax in the United States was created by the Revenue Act of 1861 and was signed into law by President Lincoln to help pay for the Civil War. Congress repealed the income tax in 1871. In 1894, an attempt was made to establish a flat rate income tax (Income Tax Act of 1894, also known as the Wilson-Gorman Tariff Act), but in 1895 the Act was declared unconstitutional by the U.S. Supreme court in the landmark case known as Pollock v. Farmers' Loan & Trust Company. In 1913, the 16th amendment to the Constitution was ratified and permitted the taxation of income by the federal government without apportioning it among the states on the basis of population (it was ratified shortly before the March 4th inauguration of President Wilson).

The outbreak of World War I prompted President Wilson to increase military spending as a preparedness measure in case the United States were to enter the war. To finance this additional military spending, President Wilson supported the passage of the

Revenue Act of 1913, 1916 and 1918. Initially, the income tax on individuals was set at 1% for high income earners (greater than $20,000 per year) and 1% increments up to 6% surtax (total of 7%) on income levels over $500,000 (Revenue Act of 1913). The Revenue Act of 1916 raised taxes, and taxes were raised every year from 1916 to 1920. When the United States entered WWI marginal rates were subsequently increased to 77% (Revenue Act of 1918). As you can see in LWI graph in Figure 9 (see Appendix), wage income gained more than capital income after these tax increases.

The Wilson Presidency raised taxes on the wealthy from 7% to 77%. Even with higher taxes, the wage economy expanded at the fastest rate in American history up to this time. It expanded from $33 billion when he took office, to over $150 billion when he left, an increase of more than 350%. The result was that there was a decline in the LWI from 2.742 in 1917, to 0.549 in 1920, (see Appendix, Figure 9) that to this day has been unprecedented. This indicates before taxes were raised, capital received 2.742 times more from the surplus value than did wages, while the post-tax increase years reversed this so that capital still received a majority of the increase, 0.549, but created the most equal distribution in the history of the American economy.

The Harding-Coolidge Era: 1921-1929

The economy slowed and recession occurred in 1920 and 1921 leading to 10% unemployment, and then unemployment rising to close to 20%. The response of the Federal Reserve was to reduce the money supply and increase interest rates (Grant, 2014). The response of the federal government was budget tightening, fiscal contraction, lower taxes, and reduced regulation, a signal to the market that government interference would not hamper the economy, so the markets led the economy out of recession and it has been described by Grant (2014) as the "Forgotten Depression" because of how quickly it corrected itself without massive (or only limited) government intervention (Grant, 2014).

Presidents Harding and Coolidge are combined to analyze the LWI. The Revenue Act of 1921 substantially cut taxes; taxes were cut each year from a high level of 73% in 1921, to 25% in 1925 (Revenue Act of 1921, 1924). Within one year of President Harding taking office, the LWI began to increase as capital income increased (see Appendix, Figure 10 and Table 1). The tax cuts from 73% to 25% resulted in the increase in capital income relative to labor income. Wages declined from $159 billion in 1922 to $105 billion in 1925 following the series of tax cuts during this time. What this says is that while wages declined dramatically, the tax cuts provided the wealthy with a huge increase in wealth.

As can be seen from Table 1, following the Harding tax cuts, by 1925 wages had declined 27.8%, while wealth and capital had increased 123.5% concurrently. However, by 1929 wages had increased by 19.4% from their 1925 levels, while wealth increased by 24.4% from 1925 to 1929. The surplus value of the nation had completely inverted back to the pre-Wilson times. The result was seen in the Hoover era when the economy returned to what had been experienced during the 1800's of repeated periods of depression.

The Hoover Era: 1929-1933

President Hoover's economy experienced a catastrophic market crisis, severely impacting American society and hurting all income levels. A drastic decline in consumer demand led to reduced corporate profits. Stock markets collapsed, bursting the speculation bubble that had developed. The severe decline in the money supply and the money multiplier resulted in a dramatic plummet in aggregate demand and this tipped the economy into recession and ultimately depression that affected everyone. This also began to cause a

significant decline in employment that amplified the decline in demand, and thus economic contraction took place year after year.

Following years of wage decline there was an increase (see Appendix, Figure 10) in the LWI under the Harding-Coolidge Administrations. The collapse of the stock market in 1929 resulted in a decline in wealth. There was a short recovery after the crash, lasting a few months and recovering about 60%, but then stocks dropped again (Mishkin & White, 2002). The share of capital income peaked around 1928-29, and declined throughout the 1930s. The previous increase in the share of capital income was largely due to the increase of equity values. The decline in wealth followed the economic collapse and the 1929 stock market crash. However, lower income households lost much of their wealth due to the decline in housing prices and foreclosures, both in homes and farms. President Hoover might have been able to turn around many parts of the economy and prevented the huge increases in unemployment by using government stimulus, but President Hoover did not initially support a fiscal stimulus. Though, after the 1929 stock crash, the federal government took specific actions to try to stimulate the economy. For example, providing liquidity to the economy, providing loans to businesses, supporting banks & mortgage markets, providing funds to state and local governments, and assisting railroads. Congress and President Hoover created the Reconstruction Finance Corporation of 1932. Other legislation included, the Davis-Bacon Act (1931) requiring contractors hired by the government to pay wages that were not less than the local market wage, as well as to pay other benefits that were paid by private companies for similar work done on similar projects (Ohanian, 2009; Smiley, 2002).

President Hoover pressured businesses and corporations to refrain from slashing wages and laying off workers (Ohanian, 2009; Smiley, 2002). At first it was successful, but as profits decreased companies began a systematic process to cut labor costs and hire fewer workers, infuriating President Hoover. During President Hoover's time in office there was approximately 26 percent deflation (Eggertsson, 2008). During this time, the lack of both consumer demand and company product demand created this deflationary period. Adding to the slowdown was the passage of the Smoot-Hawley Tariff Act in 1930, creating high tariffs on imports, precipitating a trade war, and reducing U.S. exports due to high tariffs placed on American exports by U.S. trading partners. Though trade was a small part of the overall economy, it created further stress to an already unstable economy.

The extensive research done by Friedman & Schwartz (1963) concluded that the Federal Reserve's failure to provide liquidity to the banking system and act as a lender of last resort when a massive number (approximately 9000) of banks failed sealed the economy's fate and brought about the final collapse leading to the Great Depression. The Federal Reserve failed to use open-market operations to inject reserves into the banking system and help to save failing banks, and the Federal Reserve took no action to stop the outflow of gold and currency leaving the country (Wheelock, 1998). The fear of inflation was so pervasive that it paralyzed any actions and thus destroyed the banking system.

The economic collapse depleted government revenues, prompting the passage of the Revenue Act of 1932 by President Hoover, and leading to one of the largest tax increases in U.S. history, setting the highest marginal tax rate at 63%. President Hoover did this out of fear of the huge deficits that were expanding. During this period, wages were held high and not cut as many some thought might happen. This combination was evident as the LWI pattern shows (see Appendix Figure 11). One must remember when viewing this era that by 1932 profits had declined to very low levels, when wages were reasonably stable, thus creating the declining pattern seen in Figure 11 (see Appendix).

Franklin D. Roosevelt Era: 1933-1945

As President Roosevelt took office, the results of the Hoover administrations increase in marginal tax rates from 24% to 63% (Revenue Act of 1932) had taken effect in January 1933 and was just beginning to be felt in the economy. In the early months of 1933, a variety of programs were put into place that continued to be expanded for several years to stimulate the economy. Thus, the vastly increased government spending began to establish a recovery that reversed the distribution of the surplus value back to wages and thus created new demand that grew the economy.

As the first of many direct federal government job programs took effect, that injected additional wage demand back into the economy, the economy began to expand from its lowest point in 1933. During this time, private industry did not want to rehire workers, thus the government established direct job creation programs (known as New Deal programs) such as the Federal Emergency Relief Act, the Civilian Conservation Corps, Civil Works Administration, Works Progress Administration, the Federal Theater Project, the Agricultural Adjustment Administration, and the Soil Conservation and Domestic Allotment Act.

In addition, on June 5, 1933, President Roosevelt eliminated the gold standard used by the United States (just prior to this people began to horde gold, another factor contributing to the banking crisis). With the Emergency Banking Act of 1933, the Federal Reserve was able to print money backed by bonds instead of gold. In addition, President Roosevelt's Executive Order 6012, "ordered Americans to surrender their gold to the government by May, 1933. Violators would be subject to a $10,000 fine or as much as ten years in prison." All the gold confiscated by the government was kept and never returned to the individuals who were forced to hand it over. A similar Executive Order 6814 was issued regarding silver.

Over the last two years of the Hoover Administration, the money supply, and the price level, fell by more than a third, and there was a huge decline in the money multiplier. The need for additional stimulus was one of the first items that President Roosevelt had to address. Once the stimulus was put into place the deflationary economy began to inflate, inflation was 13% for the four years from 1933-37 under President Roosevelt (Eggertsson, 2008). The re-emergence of demand created the return of pre-depression pricing for commodities. Thus, as measured by the depression bottom of 1933, the economy was able to grow in real terms.

The crisis deepened when the Federal Reserve failed to take appropriate action to mitigate the banking crisis. To help the banking system to recover, Congress and President Roosevelt enacted the Glass-Steagall Act of 1933, which forced an examination of all banks, and only allowed those banks that were solvent to re-open. The Glass-Steagall Act also separated commercial banking from investment banking and created the Federal Deposit Insurance Corporation. It helped to regain the confidence of people who returned their deposits to the banks, stopping the banking collapse while allowing solvent banks to reopen.

President Roosevelt signed the Revenue Acts of 1934, 1935, 1936, 1937, and 1940 raising taxes that reached a peak of 94%, for the highest tax bracket. The high marginal tax rates continued until 1964 (lowered to 77%) and 1965 (lowered to 70%). Congress and the Roosevelt Administration increased marginal tax rates, created the Social Security payroll tax, as well as expanding the tax base by eliminating many exemptions (Social Security Act of 1935). President Roosevelt significantly increased government spending at the same time. This combination of extensive fiscal expansion and direct government job spending, stimulated the economy with new demand that began one of the fastest growth periods, up to this time, in USA history from 1934-1940; the war spending would further expand the economy and jobs. Never before in history had the U.S. government undertaken so much taxing, spending, borrowing, regulation, and government control of the economy during peacetime or wartime. The Great Depression was nearly over by the end of 1939 (though

unemployment was still around 17%) as wages and national income had regained their previous levels before the collapse.

The significance of Table 2 is contained in 3 areas. First, once the marginal tax levels were raised to 63% (1932-1935), wages immediately began to expand as this new government revenue went directly to the jobs programs while the level of profits remained static. However, once marginal rates expanded again in 1936 to 79%, profits also increased back to 1920s levels as the increased demand restored profitability to many companies.

The significance of the relationship between substantially higher marginal rates and wage growth is very important to understanding inequality. Surplus value money moved from speculation to wages and this increased consumer demand that, over time, expands profits as well. Even though the percentage of households who had to pay income taxes was small, there was a larger tax base created that expanded government revenue and increased government spending in the economy, further enhancing growth.

From 1933-1936, aggregate wages had a small continued decline that was much smaller than previous years, indicating a turnaround, capital also showed a marginal increase. The higher tax levels resulted in more government revenue, which created greater demand in the economy, that helped profits and employment begin to once again expand (see Appendix, Figures 12 & 13). During this time it is important to understand the lag effect of private job creation (see Appendix, Figure 13) that happens only after sustained demand increases. Especially after the collapse of demand, companies were reluctant to hire back workers, but profits increased as shown by Table 2 (see Appendix).

By 1934, the government job programs were in full effect, and that, combined with the tax increases, saw aggregate wages and employment expand dramatically (see Appendix, Figures 12 & 13, and Table 2). This process continued from 1934-37, during which the level reached pre-depression amounts. Unfortunately, as previously indicated, the U.S. Congress decided to remove the government stimulus from the still fragile economy much too soon, and quickly, the economy went into recession. The private sector, at this time, had not returned to its previous job levels, and thus could not, by itself, sustain the economy. However, once these cuts were restored, the economy immediately returned to the growth pattern of 1934-37 that established the largest annual growth amounts of the 1930's, and in up to this time, in American history.

The economic recovery had been underway for fifty months since 1933, when the Congress and the Federal Reserve changed their policies. Congress cut off the direct jobs programs, while the Federal Reserve raised reserve requirements three times from 1936 to 1937 (Friedman & Schwartz, 1963; Fishback, 2010; Park & Van Horn, 2013). During this period, the economy rapidly fell into recessions, production fell by an incredible thirty-two percent (Friedman & Schwartz, 1963; Fishback, 2010; Park & Van Horn, 2013). By 1938, the economy began to recover again, however, business, industry and investors were reluctant to rehire workers, invest in their companies and return to normal business practices. It was not until the rapid production increases demanded by the World War military that private industry rehired workers and invested in their production.

The general consensus is that World War II brought an end to the Great Depression. The above analysis suggests the economy was recovering by1934 and had regained much of it losses by 1937. There are many opinions regarding the initial recovery that took place during the Great Depression. It would be remiss, biased, and one-sided not to briefly mention at least one study that identifies monetary reasons for the initial recovery. For example, Romer's (1990, 1992) analysis concluded that monetary policy was the main stimulus leading the recovery after 1933. Romer persuasively argued that between 1933 and 1937, a ten percent annual increase in M1 and the monetary base led to a twenty five percent increase in GDP above what would have occurred otherwise. This led to lower interest rates,

increased investment, and a reduction in the rate of increase in the federal debt to GDP ratio (Romer, 1990, 1992). In addition, the M1 grew at higher rates than had ever been seen before at the beginning of the 1940s (Romer, 1990, 1992). From 1933 to 1937 output grew approximately 33%, the largest four year growth in history, excluding war times, and between 1938 and 1941 growth was approximately ten-percent per year even though 1938 save a five-percent decline (Eggertsson, 2008; Romer, 1990, 1992).

Truman Era: 1945-1953

The Truman Administration vetoed the bill to reduce marginal tax rates in 1948, but the veto was overridden by the Republican controlled Congress (Revenue Act of 1948). Marginal tax rates were increased in 1950 to finance the Korean War (Revenue Act of 1950). The lowest and highest tax brackets increased to 20% and 91%, respectively. In 1936, the LWI value was 0.858 (see Appendix, Figure 14). By 1953, the LWI had a steady decline to 0.22, so wages were receiving about 80% of the value added to the economy by this time. This was possible because the United States was a manufacturing economy that was creating real value for both labor and capital. While the LWI was declining, the totality of wealth was also expanding. The total wealth of the nation was increasing at levels never before seen, but based upon labor, not speculation as had happened in the 1900-1932 period. Historically, up until this point, it was also the longest sustained growth in history, lasting from 1933-1954. By 1944, the LWI was at 0.28, indicating that capital wealth was receiving about 28% of the economic surplus value added in the economy. It stayed about the same for the next eight years. The economy was growing in those years, and it appears to be a sustainable value for this index. In other words, 70-80% of the value added to our economy was going to workers, and 20-28% to wealth creation, for an economy that was self-sustaining.

One additional point that is evident from Figure 14 (see Appendix); even with massive levels of government spending for the war, both aggregate wages and capital wealth grew at similar levels even with the high taxation during this period. This is critical to understand as this growth created the middle class of America for the first time. Also the stock market did not return to 1919 levels until 1953, which is surprising, considering how much larger the economy and profits were compared to 1929.

Eisenhower Era: 1953-1961

During President Eisenhower's era, the LWI was fairly constant (see Appendix, Figure 15), ranging from 0.218 in 1953 to 0.24 in 1961. Thus, while we had 91% top marginal tax rates, we maintained almost the same ratio of capital income to labor income under President Eisenhower that we had since 1944. The highest marginal tax rates were at 92% in 1952 and 1953, but the other years, from 1951 to 1963 rates were 91%. Yet, the revenues generated from taxes, were just 7.5% of GDP (OMB, 2019). Because the LWI value maintained a level for wages around 75-80% for so long a period, growth occurred even when marginal tax levels were very high and, capital can also grow due to the increasing level of demand in the economy. Figure 15 (see Appendix) indicates the continual growth of wages in the economy.

While Eisenhower's era saw two recessions, they were very short in length and extremely moderate, even while the end of the Korean War put pressure on the economy when the soldiers returned. As had happened following World War II, the economy absorbed the new workers and continued a growth pattern rather than going into severe recession as was predicted by some economists. The Eisenhower Administration was able to succeed in creating a stable economic environment, and the economy maintained an emphasis on wage

growth rather than capital growth. Consequently, until the early 1970s, there were no severe recessions. This was accomplished in a period of marginal taxation that was over 90%. Aggregate wages continued to receive around 80% of the surplus value of the economy that created economic demand that also resulted in capital growth as well. This was opposite of the pre-1933 period of low marginal tax levels that favored capital growth.

Figure 15 (see Appendix) provides evidence of the impact of marginal tax levels of over 90% on the proportion of the surplus value created in the economy that goes to aggregate wages. Once marginal rates were over 60%, as was evident by 1936, aggregate wages began to receive more of what was created until reaching around the 70% level. What is interesting is that it was sustained over a very long period of time until it reached almost 80% of the economic gains.

Kennedy-Johnson Era: 1961-1969

Tax cuts sponsored by President Kennedy were approved by the Revenue Act of 1962 and the Tax Reduction Act of 1964. These tax acts had provisions that encouraged investment, provided for tax credits, accelerated depreciation schedules, as well as other provisions that were designed to stimulate the economy. The marginal tax rates were decreased for all income levels, including the highest marginal rates reduced to 70%. In addition, corporate rates had the highest marginal rates reduced to 48%. There were some loopholes that were eliminated in the Tax Reduction Act of 1964 and tax laws related to personal holding companies were completely rewritten (Lowndes, 1964). Thus, even with lower marginal levels, more taxes were actually collected than before the cuts. During this entire Kennedy-Johnson era, notice that the LWI index held steady (see Appendix, Figure 16), and then in 1969, the year after the tax increase (Revenue Act of 1968) to pay for the Vietnam War, the LWI declined to the lowest level ever measured.

Nixon-Ford Era: 1969-1977

During the Nixon-Ford Era, the LWI levels (see Appendix, Figure 17) held fairly steady, ranging from 0.210 in 1969 to 0.215 in 1976, even in the face of economic calamities of oil and the continued Vietnam War. Also, notice that following the Johnson tax increase, creating a temporary 10 percent income tax surcharge to help finance the Vietnam War, (Revenue Act of 1968) the LWI fell from 0.24 in 1968 to 0.20 in 1970 (see Appendix, Figures 16 & 17). What was happening was that the economy was growing and workers were receiving 80% of the value of the economy, and thus, buying products causing the economy to grow, while balancing the budget; even when oil price shocks occurred. Even with price controls and inflation, the economy was able to grow while keeping income disparity in check as tax levels remained high.

The high wage growth period was extended through the Nixon-Ford era as marginal tax levels remained high, with only minor changes in the tax structure. Wages continued to receive around 80% of the surplus value. The stability during this time carried over into the Carter era as well. From 1942 through the 1970s, aggregate wages were sustained at a level from 70-80% of the surplus value. During a period of over 35 years, with a variety of economic issues that the economy faced, as well as influences from both internal and external pressures; the economy sustained the same level and pattern associated with capital and wages. The only static element was the high marginal tax rate that was over 90%. The following Carter era sustains this period even with high inflation levels and the continued oil price influence on the economy.

Carter Era: 1977-1981

The Carter economy was a time when the oil price shock adversely disturbed the economy, in addition, the Federal Reserve began to follow a tight monetary policy to fight inflation. The growth was small and the oil recession created an economy with severe inflation, yet the LWI (see Appendix, Figure 18) did not change at all. As long as the economy employs workers, and they receive their fair share of what they create, they sustain their share of the nation's wealth. One would have imagined that workers would have lost relative to capital income and profits during this time, but Figure 18 (see Appendix) indicates that this it is not true.

One must pause here to understand that from 1944-1980, workers were receiving four times the surplus value as was capital due to high tax levels. The level of income and wealth inequality from the 1920's was, year by year, changed to favor worker's wages rather than return on capital. This is a period of time that created the American middle class, firmly established the modern standard of living, and grew the American economy into one of the best economies of all time. Also, during this time, capital wealth grew dramatically, but based upon real profits from demand rather than taking from the level of wages.

Reagan Era: 1981-1989

With the passage of the Economic Recovery Tax Act of 1981 and the Tax Equity and Fiscal Responsibility Act of 1982, the highest marginal tax rates were reduced from seventy-percent down to fifty-percent, while the lowest marginal tax rates were lowered from fourteen-percent to eleven-percent. A modified accelerated recovery system was established to speed up the ability of corporations to expense depreciation. Other provisions included, but not limited to, reducing windfall profit taxes, reducing capital gains tax from twenty-eight-percent to twenty-percent, and indexing tax brackets to inflation. The Tax Reform Act of 1986 reduced the highest marginal tax rates from 50% to 38.5% in the first year and decreased the marginal tax rate down to 28% in the second year, but increased the capital gains tax back to twenty-eight-percent, closed loopholes, and eliminated the investment tax credit.

From 1944 to 1981, the American worker has received about 80% of the value created in our economy (see Appendix, Figures 15, 16, 17, 18, 19, & 20). Marginal tax rates were lowered in 1981 and 1983. The reduced taxes increased the wealth from wage income to capital income. The LWI began to rise as the wealth flowed to capital income. By the end of the Reagan era, the Nixon era low of 0.20 has been increased to 0.331 (see Appendix, Figure 19 & 20).

Figures 19 & 20 (see Appendix) indicate the first change toward capital that the surplus value added has seen since the 1920s. This was a 50% change, that by 1989 following the last tax cuts of 1988, had established a new level of capital growth. From 1934-1981 marginal rates had been sustained above 60%, reaching 90% or more for 35 years until 1981. As soon as the marginal rates were cut, the change in where the surplus value of the economy was distributed changed dramatically. This change was from 0.214 to 0.331, a change that was 54.7%. The era of the economy favoring wages was over, while capital began the climb toward equality of gain that would last to this day.

George H.W. Bush Era: 1989-1993

The Bush economy was struggling and this began a decline in the LWI (see Appendix, Figure 21). This was the result of corporate profits going down as consumer

demand slowed. Money flowed from the tax cuts to non-wage and investment areas and away from consumer spending. By 1990, reduced consumer spending, lower aggregate consumer demand, and lower growth led to lower profits. This resulted in the LWI declining during this period (see Appendix, Figure 21). Unlike other presidential eras, it was not wage improvement that caused the decline, instead it was capital decline. However, rather than returning to historical rates observed since 1945 (in the middle to low 0.2's) the LWI only declined to 0.306. This meant that while the economy for wages and wealth was now over $5 trillion, the wealthy were gaining each year $1.2 trillion of the value added to the economy. The larger the economy becomes the more the wealth disparity begins to influence not only behavior, but also economic growth. In 1990, 1991, and in 1993, the marginal tax rates were increased (Omnibus Budget Reconciliation Act of 1990; Tax Extension Act of 1991; Omnibus Budget Reconciliation Act of 1993). Though tax rates were increased to 39.6%, revenues actually fell to 7.7% of Gross Domestic Product after the tax increases (OMB, 2019).

The Bush era must recognize the effects of the Reagan era due to the substantial tax cuts during the 1981-1988 period that preceded Bush which influenced the 1989-1992 period. However, Bush had to increase taxes, this stabilized the change toward capital which could have continued expanding and thus increased the recession decline. Instead the tax increases stopped the movement of money toward capital which created a new level for the LWI above 0.3.

Clinton Era: 1993-2001

During the Clinton years, taxes were increased, and the economy expanded. President Clinton signed the Omnibus Budget Reconciliation Act of 1993. The act raised taxes in several areas, including more taxes on Social Security income, higher Medicare taxes, higher fuel taxes, higher cigarette taxes as well as establishing marginal tax rates at 36 percent and 39.6 percent. In addition, President Clinton reduced the capital gains tax from 28% to 20%. Thus taxes on capital were cut even while various consumption taxes were increased.

As one can see from Figure 22 (see Appendix), while some taxes were increased, the overall effect of the Reagan era tax cuts were still changing the focus of the economy to favor capital over wages. If one goes back to the 1981 valuation of the LWI, it was 0.214, by 2000 it was 0.43. While the Clinton era created jobs and grew the economy, that growth became more oriented toward aggregate capital rather than wages. Historically the 1934-1981 period of approxiately70% of surplus value toward wages had been changed to 57%.

George W. Bush Era: 2001-2009

By 2005, the LWI indicator had increased to 0.44 and by 2007 it was 0.49, such that the value added in the economy was flowing to capital at levels of almost 50% (see Appendix, Figure 23). It means the surplus value added to the economy was going into speculation money that resulted in the following:

- The capital increases flowed first to banking deposits, and was removed from both the wage growth demand economy and governmental spending economy.
- Money flowed to speculation causing banks to lend to less worthy borrowers.
- Speculation investments had an imbalance in supply of money.
- Workers could not sustain demand growth.
- Jobs would have to be cut causing further declines.

- The combination was very similar to what had happened in the 1920's pre-Depression.

In March 2001, the economy began an eight month recession. As all recessions see a decline in profits, and thus capital, there is a brief period of decline in the LWI value. Once the recession ended there was a rapid increase in the LWI to 0.49 valuation or a virtual equality of disbursements. The 2005 LWI levels had not been seen in America since the President Roosevelt Era. By 2007, the LWI (see Appendix, Figure 23) had achieved a high (0.49) level that could not be sustained to grow an economy much less sustain an economy.

Barack Obama Era: 2009-2017

The beginning of this era was considered the greatest economic decline since the Great Depression. Taxes were raised in 2010, and the LWI continued to be at levels (see Appendix, Figure 24) far in excess of the 0.2 values of higher growth periods. The valuation indicated that wages were only gaining about 56% of the surplus value in the economy (see Appendix, Figure 24). While the overall economy was growing very slowly during this time, the growth created was benefiting aggregate capital and creating a larger inequality. What is interesting is that as marginal tax levels remained the same until 2013 at which time they were increased to 39.5%. The LWI was stable during this period ranging from 0.34 in 2009 to 0.44 (2012, 2014) and 0.42 in 2016.

As one can see from Figures 23 & 24 (see Appendix), the LWI ended 2007 at over 0.49 which is historically high. Wages were receiving historic low levels from the surplus value created in the economy, and thus not able to sustain the economy. In 2009, because of the immense decline in profits, the LWI had returned to 0.34, but increased after that because of the various stimulus measures that were put into place. However, after the economic recovery the LWI went over 0.44 providing an unsustainable flow of the economy toward capital as the highest marginal rate was 39.6%. Thus, one finds that this began a period of very low, growth that expanded inequality as the recovery benefited those at the top during the Obama Administration, as Figure 24 indicates (see Appendix).

Donald Trump Era: 2017-2021

The Tax Cuts & Jobs Act was signed into law by President Trump in December 2017 and became effective the first of January 2018. The law was the most significant change to U.S. tax law for thirty-two years. The last major change to the tax laws was the Tax Reform Act of 1986 and the Economic Recovery Tax Act of 1981. Prior to the new law, the United States marginal tax rate was one of the highest of any OECD country, and adding state taxes, the United States marginal tax rate was one of the highest of any developed country (PwC, 2016; OECD, 2016; Lyon & McBride, 2018).The following are important conditions of the new tax law:

- "Individual tax rates are cut for the period 2018 to 2025" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).
- "Almost doubling the standard deduction and doubling the Child Tax Credit" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).

- "On a temporary basis, the standard deduction is increased, personal exemptions are repealed and the state and local tax deduction is limited to $10,000" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).
- "The threshold for the estate tax is doubled, to $11 million, temporarily" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).
- "On a temporary basis, 20% of pass-through business income is no longer taxable for some pass-through businesses" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).
- "The corporate tax rate is cut permanently, from 35% to 21%" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).
- "Foreign income of corporations is permanently exempt from taxation, subject to some base protection measures. Previously, foreign income was taxed at the domestic tax rate (35%) upon repatriation, with foreign tax credits for tax paid abroad" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).
- "Eliminated the Alternative Minimum Tax (AMT) for corporations, but not for individuals" (The Tax Cuts and Jobs Act of 2017; Auerbach, 2018; Lyon & McBride, 2018; Slemrod, 2018).

President Trump has also focused on reducing burdensome, onerous, and bureaucratic regulations on businesses that stifle economic growth, productivity, and prosperity. President Trump's January 30, 2017 Executive Order 13,771 (one of his first) required that "for every new regulation issued, at least two prior regulations must be identified for elimination."

The IRS data set is not yet available for the entire Trump era, thus to measure the relationship between capital and aggregate wages the Bureau of Economic Analysis (BEA) data is used. The BEA data differs from the IRS statistics as it includes items related to capital that are not provided in a tax situation. Thus, there is a different, though similar, pattern that emerges. The authors provide the same capital to wage index valuation, but use the BEA data from 2000-2020. This will establish the pattern to provide the continuation from the last Obama year of 2016 (see Appendix, Figure 25).

What is interesting when viewed from 2000 to 2019, is the pattern that began with the tax cuts in 2001-2004 that increased the LWI valuation until it was virtually an equality of 50% toward capital, and this has not been seen since the 1920s. Prior to the corona virus, the median household income increased during the Trump administration. The Census Bureau data showed household income was $64,324 in 2018, an increase of $2,545 from 2016 after adjusting for inflation and it reached $68,703 in 2019. According to the Census Bureau, changes in the way the median income is calculated resulted in more income being counted than in previous years. The recent impact of the corona virus has had a major impact on unemployment, incomes, and economic growth which is an important topic for future analysis.

ANALYSIS AND CONCLUSIONS

Tax policy has influenced economic activity since the 1913 ratification of the 16th amendment to the Constitution that permitted the establishment of an income tax by the federal government without apportioning it among the states on the basis of population. Government tax policy has had a major impact upon inequality, wages, capital, and growth patterns. The approval of the Revenue Act of 1913 set the highest marginal tax rates at 7%, and since 1913, the highest marginal tax rates have varied from 7% to 94%. There are more

than one-hundred years of income tax data and the economic impact of taxes on capital and labor income shares. The LWI index was used to analyze the aggregate capital income relative to the aggregate labor income during different presidential periods (since 1913) and tax regimes and how the level of marginal tax rates impacted inequality and the capital labor income shares. The LWI valuation index provides one type of measure of the income and wealth disparity in a nation. Taxation levels influence economic behavior that causes jobs, demand from labor and wage levels to either be growing or declining.

There are a couple of relationships to identify from the examination of the individual presidential economies regarding capital income increases compared to wage income increases. During tax increase presidential economies, the LWI value declines, except under Clinton, indicating a greater increase in wages, rather than capital income. The highest marginal tax rates and the LWI are inversely related; as the highest marginal tax rate increases, the LWI tends to go down, and as the highest marginal tax rate goes down, the LWI tends to increase.

President Wilson raised taxes dramatically and there was a big change in the LWI in favor of wages. During tax cuts, the LWI index typically increases as more income flows to capital. The LWI was 2.74 in 1921, the highest level to date indicating the flow of income was mostly received by capital income. From 1913-1921, taxes were increased under President Wilson and subsequently the LWI declined (indicating an increase in the aggregate wages relative to aggregate capital income) and falling to a level close to an equal share of wage and capital income at the end of 1920. From 1921 through 1924, taxes were lowered under President Harding, subsequently, during this period, the LWI began to increase (increasing to 1.5 by the end of 1928) indicating aggregate capital income was increasing relative to aggregate labor income. The collapse of the stock market in 1929 resulted in a decline in wealth. During the Hoover Administration, the LWI was declining from 1.5 in 1929 to a level of 0.4 in 1932. Throughout the Roosevelt Administration, from 1933 to 1945, marginal tax rates were increased from 24% to 63%, and the LWI first went up from 0.52 in 1933 to 0.74 in 1936, and then decreased to 0.35 by1941, and by the end of 1944, the LWI was at 0.28, indicating that capital wealth was receiving only about 28% of the economic surplus value added in the economy, while labor income was receiving the majority of the income created. In the Truman Era, the LWI value went up slightly in 1956 to 0.233, but generally was stable during this period around this same level.

Looking at the Eisenhower's era (1953-1961), marginal tax rates were still at 91%, and the LWI was fairly constant ranging from 0.218 in 1953, to 0.24 in 1961. While in the Kennedy-Johnson era, marginal tax rates were cut, and the LWI held steady for the whole period. However, in 1969, taxes were increased, and the LWI fell to 0.210, indicating a significant increase in the share of income going to labor. During the Nixon-Ford Era, the LWI levels held steady, ranging from 0.210 in 1969, to 0.215 at the end of 1976. Even in the face of economic disruptions, oil shocks, and inflation, as well as the winding down of the Vietnam War, the LWI remained low and stable. The Carter Administration (1977-1981) saw no economic growth; the oil recession created an economy with severe inflation, and the LWI did not change at all. The Reagan Administration lowered marginal tax rates in 1981 and 1983, and the lower taxes saw a movement in the relative income from labor to capital, leading to a higher LWI. By the end of the Reagan era, the Nixon era LWI low of 0.20 increased to 0.331. From 1989 to 1993, after the Bush Administration's tax increase, the LWI decreased to 0.30. The Clinton Administration, increased taxes, and the LWI increased every year of his presidency from 0.3 in 1993 to 0.43 in 2000. By 2007, under the Bush Administration, the LWI increased to 0.49, a value last seen in the 1940's. Again, in the Obama Administration, from 2009 to 2017, taxes were raised, the LWI did not decrease, but increased from 0.34 in 2008 to 0.42 in 2016, and there was not an increase in the flow of

income to labor during this period but a slight movement toward capital. The Trump Administration lowered taxes, from 2017 to 2020, the LWI remained stable at just under 0.5; with strong economic growth, decreasing unemployment, thriving housing market, and a booming stock market, capital incomes, labor incomes, corporate profits were increasing with no signs of slowing, until the corona virus appeared and economic shut-downs took place.

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APPENDIX

Figure 1: The Income Level Money Behavior Pyramid

Figure 2: Top Marginal Federal Tax Rates: 1916-2020

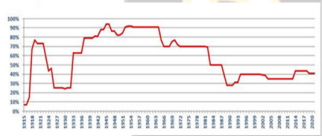

Figure 3: The Wealth Transfer Mechanism Model

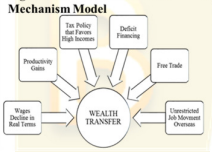

Figure 4: Tax Cuts & Speculation Model

Figure 5: Illustrates the patterns that have been in place for the last 40 years.

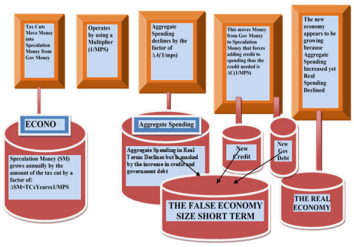

Figure 6: Money Multiplier 1980-2015

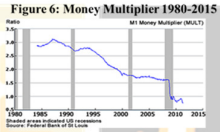

Figure 7: Velocity of Money (M2).

Figure 8: Money Behavior Model

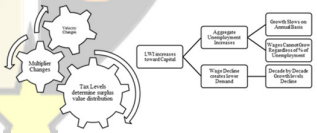

Figure 9: LWI, Wilson 1917-1920

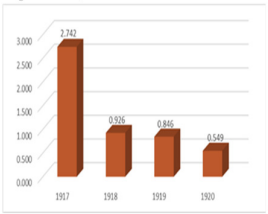

Figure 10: LWI Index, Harding-Coolidge Era: 1921-1928

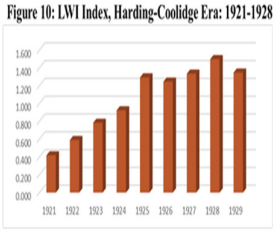

Table 1: Level of Wages and Wealth after Tax Cut

	Wages	Wealth
1922	$150,708	$62,889
1925	$108,751	$140,560
1929	$129,892	$174,959
Tax change difference	-$20,816	+$112,070

Figure 11: LWI Index, Hoover Era: 1929-1932

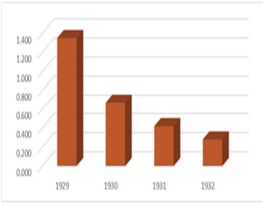

Figure 12: LWI Index, FDR Recovery Years: 1933-1937

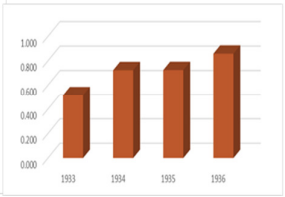

Figure 13: Private Employment Numbers not including Various Government Programs; Employment 1929-1940

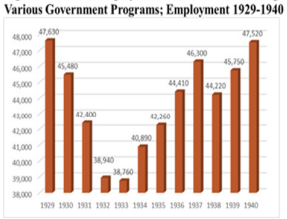

Table 2: The Roosevelt Economy 1931-1941

Year	Tax Rates	Wages Billions	Capital Billions	LWI Ratio	Employment
1931	23%	$110,897	$102,057	0.92	42,400,000
1932	63%	$119,119	$71,990	0.60	38,940,000
1933	63%	$113,650	$72,036	0.64	38,760,000
1934	63%	$126,522	$75,482	0.60	40,890,000
1935	63%	$142,156	$73,216	0.51	42,260,000
1936	79%	$164,642	$115,845	0.70	44,410,000
1937	79%	$192,669	$103,565	0.54	46,300,000
1938	79%	$184,316	$ 82,816	0.45	44,220.000
1939	79%	$231,704	$103,565	0.45	45,750,000
1940	81.1%	$386,513	$135,887	0.35	47,520,000
1941	81%	$626,289	$175,544	0.28	50,350,000
Change		$515,392	$ 73,487	0.14	
Rate		465%	72%		

Figure 14: LWI Index, Truman Era: 1945-1953

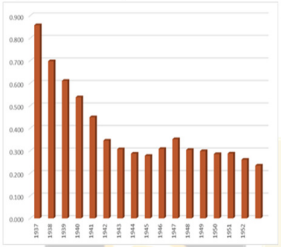

Figure 15: LWI Index, Eisenhower Era: 1953-1960

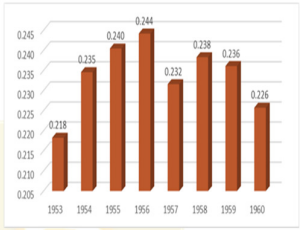

Figure 16: LWI Index, Kennedy-Johnson Era: 1961-1969

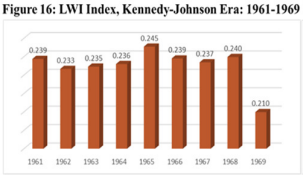

Figure 17: LWI Index, Nixon-Ford Era: 1969-1976

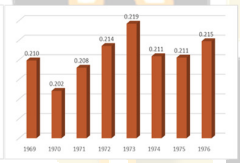

Figure 18: LWI Index, Carter Era: 1977-1980

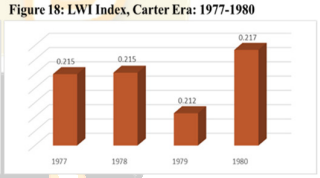

Figure 19: LWI Index, Reagan Era: 1981-1988

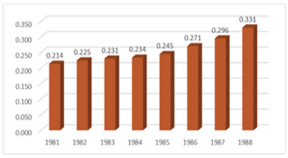

Figure 20: % Change Wages-Debt Increase Index

Figure 21: LWI Index, George H.W. Bush Era: 1989-1992

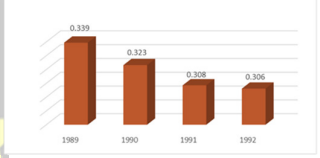

Figure 22: LWI Index, Clinton Era: 1993-2000

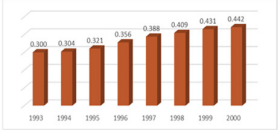

Figure 23: LWI Index, George W. Bush Era: 2001-2009

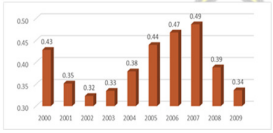

Figure 24: LWI Index, Barack Obama Era: 2009-2016

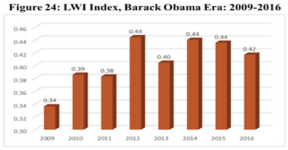

Figure 25: LWI Index 2000-2019