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The evolution of wealth inequality over half a century: The role of taxes, transfers and technology ☆

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ABSTRACT

Over the last 50 years the U.S. tax system went through a striking transformation that reduced the effective tax rates for top income groups and raised transfers to seniors. This paper investigates the macroeconomic repercussions of this change in policy, particularly for the distributions of income, wealth and consumption. Changes in taxes and transfers account for nearly half of the rise in wealth concentration. Nonetheless, their impact on the distributions of income and consumption has been minor due to changes in equilibrium prices and the offsetting effects of tax cuts and transfers on the dispersion of consumption. Results highlight the role of increasing wage dispersion during this period as the main driver of trends in inequality.

1. Introduction

Over the last 50 years, the U.S. economy experienced a notable increase in income and wealth inequality. The discussions regarding the causes and consequences of these trends are at the forefront of academic and public debate. An important element of the debate has been the relative role of market-based explanations and institutional factors. In this paper, we aim to contribute to this debate by evaluating the impact of changes in the U.S. tax and transfer policy on wealth inequality relative to the role of technological changes that have led to higher wage dispersion during this period.

Following a long secular reduction, wealth became increasingly concentrated during the second half of the 20th century. Using capitalization methods based on extensive data from tax records, Saez and Zucman (2014) report a dramatic increase in wealth concentration since 1970. The share of the wealthiest 1% increased from 27.6% in 1970 to 41.8% in 2012. A similar, but nuanced picture appears in data from Survey of Consumer Finances, where the share of the wealthiest 10% increased from 67% in 1983, the earliest year available, to 75% in 2013.[1]

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[1] The two data sources disagree on the exact source of the increase in the concentration ratios: the SCF shows that the increase in wealth inequality was driven primarily by those in 90th to 99th percentile of the wealth distribution, therefore excluding the top 1%, while the tax records attribute the higher wealth inequality to the rise in the wealth holdings of the top 0.1% of the distribution (see Kopczuk (2015) for a discussion of different methods and data sources). In our quantitative analysis we utilize the figures in Saez and Zucman (2014) to calibrate our model for 1960, as data are not available in the SCF prior to 1983.

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The U.S. economy went through several institutional and technological changes during this period that could potentially explain the rising wealth dispersion observed in the data. In particular, there were substantial changes in the tax system that reduced taxes on top income earners, an expansion of government transfers, and a significant increase in wage inequality.

The progressivity of the U.S. federal tax system hits a record high during the mid-twentieth century and has declined considerably ever since following a series of reforms that reduced the tax rates applied to top income groups. The decline in the progressivity of the tax system was mainly driven by major reductions in taxes levied on corporations and estates. Over the years, more generous allowances and exemptions, combined with a decline in marginal tax rates, especially those at the top, led to a significant drop in the share of tax revenue collected from corporations and estates. Since the ownership of wealth and financial assets in the U.S. is highly concentrated, these policies disproportionately favored top wealth and income groups. The redistributive effects of lower corporate and estate taxes were further intensified by a secular decline in the federal income tax rates applied to highest income groups. In their survey of tax records, Piketty and Saez (2007) report that the average effective tax rate decreased from 45% in 1960 to 33% in 2004 for the top 1% of the income distribution and from 71% to 34% for the top 0.1%, primarily due to cuts in corporate and estate taxes. Meanwhile, the average rate for all taxpayers went up slightly from 20% to 23%, implying an increase in the tax rates applied to other income groups.

However, the changes in tax policy have to be analyzed in connection with the corresponding changes in transfer policy. During the same period, the share of total transfer payments in GDP increased from 4.1% to 11.9%. The rise in transfer spending was driven by two major programs: Social Security and Medicare, both of which target senior citizens. By subsidizing income and healthcare expenditures for the elderly, these programs curb incentives to save for retirement, a major source of wealth accumulation over the life-cycle. Furthermore, since both programs are redistributive by design, they have a stronger effect on the savings of low and middle income groups. By contrast, those at the top of the income distribution have little to gain from these programs. We argue that the redistributive nature of transfer payments was instrumental in curbing wealth accumulation for income groups outside the top 10% and, consequently, amplified wealth concentration in the U.S.

While changes in both taxes and transfers might have increased the share of wealth held by the wealthiest, distinguishing between the two is crucial for understanding the potential implications of rising wealth inequality for welfare. A less progressive tax system raises the dispersion of disposable income, and, hence, consumption, whereas larger transfers redistribute disposable income, reducing consumption inequality. Whether public policy circles should be alarmed by the rising dispersion in wealth holdings therefore depends critically on its underlying causes.

The changes in the tax and transfer system occurred against a backdrop of changes in production technologies that favor skilled labor, leading to a greater dispersion in labor productivity, and, hence, wages. It is plausible that higher earnings inequality translates into larger consumption and wealth inequality over time. In fact, earnings have become an increasingly important source of income for top groups in recent decades, suggesting that wage dispersion may well be the dominant force behind wealth inequality (Piketty and Saez, 2003). Our aim is, therefore, to compare the effect of changes in policy with the role technological factors played as a driver of wealth dispersion.

We conduct our analysis using a dynamic model of consumption and savings with uninsurable idiosyncratic income risk and endogenous labor supply building on Aiyagari (1994), Bewley (1986), and Huggett (1993). We make two modifications to the standard model in the spirit of Castaneda et al. (2003). First, we combine dynastic and life-cycle elements of decision-making at the household level: households in the model go through two stages of the life-cycle: the work stage, where they face idiosyncratic income risk, and the retirement stage, where they live off their pension income and private wealth. Upon death, they are replaced by their descendants, towards whom they are perfectly altruistic. Second, we introduce a persistent but rarely visited state, where an individual is exceptionally productive. These modifications allow us to generate realistic distributions of income and wealth by combining three fundamental motives for wealth accumulation: a precautionary savings motive to insure against life-cycle income risk, a consumption smoothing motive to save for retirement, and a bequest motive to endow estates for their offsprings. The relative strength of each motive depends on a household's productivity and wealth.

To this setting, we introduce a progressive income tax system, estate taxation, corporate income taxation and a tax-financed pay-as-you-go social security system. The presence of a social security system helps account for the bottom-tail of the wealth distribution. The progressive income tax-system is crucial for translating the pre-tax earnings distribution to consumption and wealth inequality. The estate and corporate income taxes are particularly essential to our purpose as the two tax components account for much of the decline in tax progressivity in the U.S.

The model parameters are calibrated to replicate the income and wealth distributions in the 1960s, while matching the life-cycle and intergenerational transitions in income. Then we introduce the yearly changes to the tax and transfer policies and to the distribution of labor productivity observed in the U.S., and compute the resulting long-run equilibrium as well as the associated transitional dynamics. Combined, these changes capture the observed evolution in income and wealth inequality well. To highlight the contribution of each factor separately, we return to the 1960 economy and simulate counterfactual transition paths for economies where different factors are introduced individually or in different combinations. This also allows us to discern potential interactions between changes in institutions and technology.

The results indicate that the changes in the tax and transfer system made a significant contribution to the rise in wealth inequality in the U.S. Between 1960 and 2010, they explain nearly half the rise in wealth concentration, with each of these components accounting for a similar share. Counterfactual simulations also show that higher wage dispersion due to skill biased technical change is the dominant factor, explaining 50–60% of the rise in wealth inequality.

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