

Summary

This paper investigates the impact of labor income tax policies on wage inequality. More specifically, it explores whether progressivity can explain the significantly higher wage inequality in the US compared to continental European countries (CEU) since the 1970s, as well as the widening of this wage inequality gap between the US and CEU over the past few decades. The research is motivated by two empirical relationships between progressivity and wage inequality the authors documented: countries with more progressive labor income taxes not only have significantly lower wage inequality at different points in time, but also see smaller rises in wage inequality over time. To understand the mechanisms underlying these patterns, the authors constructed a life cycle model where in each period, the agent could choose to go to school, work, or enjoy leisure. The idea behind the model is that, a progressive tax scheme compresses the after-tax wage structure by more drastically lowering before-tax wages in the higher tail of the wage distribution, which discourages the accumulation of human capital and reduces the inequality in before-tax wages. This study contributes to the literature by providing a quantitative assessment of the extent to which wage inequality can be attributed to the tax structure when a major contributor to wage dispersion is human capital.

In the model the authors constructed, a key determinant of wage inequality is the systematic divergence of wage profiles, with human capital as the mediator. Individuals enter the economy with an initial stock of human capital and can accumulate additional human capital using a Ben-Porath style technology combining learning ability, time invested, and existing human capital. Individuals can invest part of their working time or enroll in full-time education to acquire more human capital. Given different levels of learning ability, individuals differ systematically in how much they invest in human capital and thus how fast their wages grow over the life cycle. The impact of progressive labor income taxes is then magnified by endogenous labor supply and average tax rates: the higher taxes in the CEU suppress labor supply, which in turn reduces the return to investment in human capital and further reduces wage inequality. In summary, the model predicts that countries with more progressive tax systems and higher average tax rates will have lower wage inequality.

To explain the wage inequality gap between the US and CEU, the authors calibrated the model to US data and kept the parameters fixed for all the other countries. They assumed the countries have the same innate ability distribution but different labor market structures, such as labor income tax schemes. The model explains 48 percent of the observed gap in wage inequality, measured by the log 90-10 wage differential, between the US and CEU, and 84 percent of the observed difference in the upper half of the wage distribution. However, the model struggles when it comes to the lower tail, explaining only 24 percent of the wage inequality gap seen in the actual data. These findings align with the assumption that the impact of human capital on wages is greater for high-ability individuals – those above the median of the wage distribution. A decomposition of the

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effects of different market structure components – including average income tax rate, consumption taxes, and pension system design – shows that progressivity is the predominant factor in explaining the observed wage inequality gap, contributing approximately two-thirds of the model’s explanatory power.

The authors further explored whether human capital is also the underlying mechanism for the widening wage inequality gap between the US and CEU since the late 1970s. For this analysis, only the US and Germany is considered due to data availability. After accounting for progressivity and skill-biased technical change (SBTC), the model slightly overestimated the larger rise in wage inequality in the US compared to Germany between 1983 and 2003.

Assessment of the Paper and Suggestions for Improvement

Overall, this is a strong paper. The model constructed demonstrates decent explanatory power and is particularly effective in explaining the wage inequality in the upper half of the wage distribution. The authors further establish the model’s reliability through additional analyses, such as comparisons of within-cohort wage inequality over the life cycle in the US and Germany using PSID and GSOEP data. The paper itself is well-structured with a clear progression.

However, relying solely on data from eight developed countries, with a particular focus on the US and Germany in certain sections, raises concerns about the robustness of the results, especially since the UK appears an outlier throughout the paper. Limiting the scope to highly developed countries poses threats to the generalizability of the findings, a problem mirroring the model’s struggle in explaining the wage inequality among low-earners. Additionally, the strong assumptions made to simplify computation, like the assumption of complete markets, could render the findings impractical.

Expanding the study to include more countries is necessary for a comprehensive understanding of tax policies, wage inequality, and human capital accumulation. Additional mechanisms should be considered. For instance, differences in education financing and regulations between the US and CEU could provide an alternative explanation for the relationship between wage inequality and tax schemes. Europe’s reliance on government funding, in contrast to the market-oriented US approach, could have broad economic implications, potentially affecting GDP and wage inequality. The fact that top ranked universities are mostly located in the US and UK, countries identified as low-tax in the study, suggests that the funding mechanisms and quality of the education system may also be playing a substantial role and could challenge the proposed causal relationship between progressivity and wage inequality. The free-market schooling system in these countries could enhance education quality, attracting and creating a concentration of high-achieving individuals in the labor market. This, in turn, may lead to higher GDP and increased wage inequality. To substantiate this proposed relationship, future research could delve deeper using methods of causal inference like regression discontinuity or difference-in-differences approach. It would explore the interplay between education financing, system quality, and human capital accumulation, with initiatives in the schooling system or tax schedule changes as potential treatments. Despite identification challenges, such research may provide a more credible approach to understanding these dynamics.

References

GUVENEN, F., B. KURUSCU, AND S. OZKAN (2014): “Taxation of Human Capital and Wage Inequality: A Cross-Country Analysis,” *The Review of Economic Studies*, 81, 818–850.